Baseline Tests for Arc Melter Vitrification of INEL Buried Wastes

Volume II: Baseline Test Data Appendices

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Volume II: Baseline Test Data Appendices

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ABSTRACT

This report presents field results and raw data from the Buried Waste Integrated Demonstration (BWID) Arc Melter Vittrification Project Phase 1 baseline test series conducted by the Idaho National Engineering Laboratory (INEL) in cooperation with the U.S. Bureau of Mines (USBM). The baseline test series was conducted using the electric arc melter facility at the USBM Albany Research Center in Albany, Oregon. Five different surrogate waste feed mixtures were tested that simulated thermally-oxidized, buried, TRU-contaminated, mixed wastes and soils present at the INEL. Additional waste application and system modification tests are planned for later phases.

The USBM Arc Furnace Integrated Waste Processing Test Facility includes a continuous feed system, the arc melting furnace, an offgas control system, and utilities. The melter is a sealed, 3-phase alternating current (ac) furnace approximately 2 m high and 1.3 m wide. The furnace has a capacity of 1 metric ton of steel. With a power input rate of up to 800 kW, the melter can process as much as 1,500 lb/h of soil-type waste materials.

The surrogate feed materials included five mixtures designed to simulate incinerated TRU-contaminated buried waste materials mixed with INEL soil. The waste types that were simulated included (a) cemented sludges with absorbed organic oils and solvents, (b) solidified evaporator salts containing potassium and sodium nitrates and (c) contaminated metals. Mixtures of surrogate waste materials (a) and (b) were processed both with and without small additions of zirconium oxide and titanium oxide to investigate processing properties of a tailored glass ceramic final waste form material. In order to reduce molten slag viscosities to facilitate continuous slag tapping, some of the surrogate feed mixtures were further modified with additions of calcium oxide, calcium carbonate, and non-oxides during the baseline tests. Cerium oxide was included as a surrogate for plutonium oxide to investigate behavior and partitioning of TRU elements in the melting furnace.

Process samples, melter system operations data and offgas composition data were obtained during the baseline tests to evaluate the melter performance and meet test objectives. Samples and data gathered during this program included (a) automatically and manually logged melter systems operations data, (b) process samples of slag, metal and fume solids, and (c) offgas composition, temperature, velocity, flowrate, moisture content, particulate loading and metals content. Sample analyses have been completed to plan for the process slag, metal and fume samples, and the offgas samples. Analytical results will be used with the process and offgas measurements to (a) characterize melter operation, (b) evaluate the composition and leachability of the fume, slag and metal phases, (c) evaluate the fate and partitioning of key elements in the feed mixtures, and (d) perform mass balances.

This report consists of 2 volumes: Volume I summarizes the baseline test operations. It includes an executive summary, system and facility description, review of the surrogate waste mixtures, and a description of the baseline test activities, measurements, and sample collection. Volume II contains the raw test data and sample analyses from samples collected during the baseline tests.

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Baseline Tests for Arc Melter Vitrification of INEL Buried Wastes

Volume II: Baseline Test Field Data Appendices

1. OVERVIEW TO THE APPENDICES

This volume of the report contains the currently available raw data organized in appendices. The facility process operations data was automatically logged using a data acquisition system (DAS) and manually recorded using eight different logs and data sheets. The output from the DAS printer is provided for each test day in Appendix A. The manually recorded data is provided in Appendix B.

The offgas monitoring and sample collection for the baseline tests included measurements used to characterize the gaseous and particulate emissions from the melter. Measurements were performed during the initial shakedown test conducted on June 3, 1993 and during the baseline tests. The measurements performed during the shakedown test were much more limited than the measurements performed for the baseline tests. Measurements were performed during the shakedown tests primarily to (a) verify suitability of recently installed sample ports and (b) obtain preliminary information about the offgas temperature, velocity and particulate levels in the offgas. An added benefit of the shakedown test measurements is that they provide limited offgas data when the melter is processing INEL soil, with only some mill scale (Fe_2O_3 and Fe_3O_4) added to reduce slag viscosity. These measurements were preliminary and preparatory to the baseline test program. Measurements and samples collected during the shakedown tests included (a) 3 modified, non-isokinetic particulate sample collection tests, (b) velocity, temperature, swirl angle and flowrate and (c) minimal gaseous CO and NO_x measurements.

Key offgas data from the continuous emissions monitoring system (CEMS) data was partially reduced and compiled each test day during the baseline tests. This was done to better understand the averages, maximum and minimum values, and trends from test to test and from day to day. These summary data are provided in Appendix C. The raw CEMS calibration and measurement data for each test day is provided in Appendix D.

The offgas measurements performed during the baseline tests essentially complied with EPA-promulgated sampling procedures. Few deviations were made to the standard EPA procedures for velocity measurements, gaseous measurements and particulate and metals sampling. The particulate and metals sample collection included measurements of stack gas velocity, flowrate, temperature, and moisture content during the sample collection periods. There were two valid sample periods per test day. The samples collected will be analyzed gravimetrically for determining the total amount of particulate matter entrained in the offgas. The samples will also be analyzed for the metals evaluated in the baseline tests to determine the degree of metals partitioning to the offgas and to evaluate metals mass balance closure over the melter system.

The multiple Metals Train control chart is provided in Appendix E. The Multiple Metals Train Control Chart was used each day during the field tests to record key parameters that pertain to the particulate/metals sample collection. This chart was also referred to in order to track the variations in selected offgas and furnace operating parameters.

Offgas measurement activities categorized as manual sample collection and measurement procedures included the Multiple Metals Train sampling, pretest and post-test velocity, temperature and flowrate measurements, wet/dry bulb measurements, and swirl angle measurements. Data recorded during these activities is provided in Appendix F.

Appendices G through J include raw analysis results from samples collected during the test series. The elemental results of the slag, fume trap, baghouse and metal product samples are provided in Appendix G. The same analyses, computed using the assumption that the elements (except for chlorine) exist in the samples as oxides, are shown in Appendix H. The elemental and gravimetric analytical results of the Multiple Metals Train samples are provided in Appendices I and J.

Appendix A

Facility DAS Printer Output

Appendix A-1

**Facility DAS Printer Output
18 July 1993, CaO/SiO₂ Melt**

Appendix A-1

Facility DAS Printer output 18 July 1993, CaO/SiO₂ Melt

Hydra Printer Output 07/18/93 07:13:28 Cpu Clock ~~445~~
Skipping 5 Scans Between Outputs 30 min. slow 7:43:28

07/18/93 07:13:37

Inst. Number = 1

0: 148.45000 MxB	1: 16.90000 xC	2: 14.80000 xC
3: 16.60000 xC	4: 47.10000 xC	5: 29.00000 xC
6: 16.90000 xC	7: 18.50000 xC	8: 18.30000 xC
9: 340.32001 MxB	10: -0.03000 MxB	11: 1.13000 MxB
12: 9.07000 MxB	13: 9.98000 MxB	14: 0.83000 MxB
15: 435.75000 MxB	16: 0.62000 MxB	17: -152.69000 MxB
18: -462.66000 MxB	19: -300.54999 MxB	20: -4.62520 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 07:19:37

Inst. Number = 1

0: 122.21000 MxB	1: 17.00000 xC	2: 14.90000 xC
3: 16.80000 xC	4: 49.70000 xC	5: 31.30000 xC
6: 16.90000 xC	7: 18.60000 xC	8: 18.30000 xC
9: 517.47998 MxB	10: -0.01500 MxB	11: 1.24000 MxB
12: 8.97000 MxB	13: 9.87000 MxB	14: 0.83000 MxB
15: 448.13000 MxB	16: 0.64000 MxB	17: -152.67999 MxB
18: -462.70999 MxB	19: -300.53000 MxB	20: -4.62490 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 07:25:37

Inst. Number = 1

0: 126.27000 MxB	1: 17.30000 xC	2: 14.90000 xC
3: 16.90000 xC	4: 52.30000 xC	5: 33.60000 xC
6: 16.80000 xC	7: 18.50000 xC	8: 18.20000 xC
9: -187.55000 MxB	10: -0.00800 MxB	11: 1.13000 MxB
12: 8.92000 MxB	13: 9.82000 MxB	14: 0.83000 MxB
15: 451.81000 MxB	16: 0.62000 MxB	17: -152.67000 MxB
18: -462.70999 MxB	19: -300.56000 MxB	20: -4.62460 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 07:31:37

Inst. Number = 1

0: -0.06000 MxB	1: 17.40000 xC	2: 14.90000 xC
3: 17.10000 xC	4: 54.10000 xC	5: 35.70000 xC
6: 16.70000 xC	7: 18.50000 xC	8: 18.30000 xC
9: 549.82001 MxB	10: 0.00000 MxB	11: 1.23000 MxB
12: 9.22000 MxB	13: 10.20000 MxB	14: 0.87000 MxB
15: 464.04999 MxB	16: 0.65000 MxB	17: -152.69000 MxB
18: -462.82999 MxB	19: -300.57999 MxB	20: -4.62550 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 07:37:37

Inst. Number = 1

0: 0.23000 MxB	1: 17.70000 xC	2: 15.10000 xC
3: 17.40000 xC	4: 54.80000 xC	5: 37.60000 xC
6: 16.70000 xC	7: 18.50000 xC	8: 18.20000 xC
9: 337.23001 MxB	10: 0.00100 MxB	11: 1.23000 MxB
12: 9.19000 MxB	13: 10.13000 MxB	14: 0.86000 MxB
15: 467.01999 MxB	16: 0.66000 MxB	17: -152.71001 MxB
-462.79999 MxB	19: -300.56000 MxB	20: -4.62590 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 07:43:37

Inst. Number = 1

0: 1.05000 MxB	1: 17.90000 xC	2: 15.10000 xC
3: 17.50000 xC	4: 55.80000 xC	5: 39.30000 xC
6: 16.60000 xC	7: 18.40000 xC	8: 18.20000 xC
9: 382.06000 MxB	10: 0.00100 MxB	11: 1.15000 MxB
12: 9.20000 MxB	13: 10.15000 MxB	14: 0.86000 MxB
15: 421.66000 MxB	16: 0.64000 MxB	17: -152.59000 MxB
18: -462.45001 MxB	19: -300.35999 MxB	20: -4.62160 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 07:49:37

Inst. Number = 1

0: 1.28000 MxB	1: 18.10000 xC	2: 15.20000 xC
3: 17.70000 xC	4: 56.30000 xC	5: 40.70000 xC
6: 16.50000 xC	7: 18.40000 xC	8: 18.10000 xC
9: 399.01001 MxB	10: 0.00100 MxB	11: 1.16000 MxB
12: 9.11000 MxB	13: 10.06000 MxB	14: 0.86000 MxB
15: 460.94000 MxB	16: 0.62000 MxB	17: -152.59000 MxB
18: -462.48001 MxB	19: -300.38000 MxB	20: -4.62170 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 07:55:37

Inst. Number = 1

0: 1.62000 MxB	1: 18.00000 xC	2: 15.40000 xC
3: 17.70000 xC	4: 56.70000 xC	5: 41.80000 xC
6: 16.60000 xC	7: 18.40000 xC	8: 18.10000 xC
9: -141.36000 MxB	10: 0.00100 MxB	11: 1.15000 MxB
12: 9.09000 MxB	13: 10.04000 MxB	14: 0.86000 MxB
15: 478.84000 MxB	16: 0.65000 MxB	17: -152.59000 MxB
18: -462.41000 MxB	19: -300.37000 MxB	20: -4.62150 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 08:01:37

Inst. Number = 1

0: 1.62000 MxB	1: 18.20000 xC	2: 15.40000 xC
3: 17.80000 xC	4: 56.90000 xC	5: 42.90000 xC
6: 16.60000 xC	7: 18.30000 xC	8: 18.00000 xC
9: 588.65997 MxB	10: 0.00000 MxB	11: 1.10000 MxB
12: 9.03000 MxB	13: 9.99000 MxB	14: 0.87000 MxB
15: 417.56000 MxB	16: 0.66000 MxB	17: -152.63000 MxB
18: -462.42999 MxB	19: -300.38000 MxB	20: -4.62250 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

3/93 08:07:37

Inst. Number = 1

0: 1.92000 MxB	1: 18.50000 xC	2: 15.60000 xC
3: 18.10000 xC	4: 57.10000 xC	5: 43.90000 xC
6: 16.50000 xC	7: 18.30000 xC	8: 18.10000 xC
9: -128.73000 MxB	10: -0.02400 MxB	11: 1.24000 MxB

18: -462.38000 MxB
ALMs: 0{HHHH}3

19: -300.35001 MxB
DI/O: 0{HHHHHHHH}7

20: -4.62110 kMxB
Total: 0

07/18/93 08:13:37

Inst. Number = 1
1: 1.75000 MxB
2: 18.20000 xC
3: 16.50000 xC
4: 109.18000 MxB
5: 9.02000 MxB
6: 441.12000 MxB
7: -462.53000 MxB
ALMs: 0{HHHH}3

1: 18.60000 xC
2: 57.50000 xC
3: 18.20000 xC
4: -0.04700 MxB
5: 9.98000 MxB
6: 0.64000 MxB
7: -300.45001 MxB
DI/O: 0{HHHHHHHH}7

2: 15.70000 xC
3: 44.60000 xC
4: 18.00000 xC
5: 1.24000 MxB
6: 0.87000 MxB
7: -152.62000 MxB
8: -4.62260 kMxB
Total: 0

07/18/93 08:19:37

Inst. Number = 1
0: -1.85000 MxB
1: 18.30000 xC
2: 16.40000 xC
3: 583.51001 MxB
4: 8.95000 MxB
5: 442.32999 MxB
6: -462.39001 MxB
ALMs: 0{HHHH}3

1: 18.30000 xC
2: 57.60000 xC
3: 18.30000 xC
4: -0.03600 MxB
5: 9.90000 MxB
6: 0.64000 MxB
7: -300.29999 MxB
DI/O: 0{HHHHHHHH}7

2: 15.90000 xC
3: 45.30000 xC
4: 18.00000 xC
5: 1.18000 MxB
6: 0.86000 MxB
7: -152.57001 MxB
8: -4.62100 kMxB
Total: 0

07/18/93 08:25:37

Inst. Number = 1
0: -1.26000 MxB
1: 18.30000 xC
2: 16.30000 xC
3: 649.40997 MxB
4: 9.44000 MxB
5: 450.10999 MxB
6: -462.41000 MxB
ALMs: 0{HHHH}3

1: 18.40000 xC
2: 57.80000 xC
3: 18.20000 xC
4: -0.13200 MxB
5: 10.40000 MxB
6: 0.68000 MxB
7: -300.32001 MxB
DI/O: 0{HHHHHHHH}7

2: 15.80000 xC
3: 45.90000 xC
4: 18.00000 xC
5: 1.37000 MxB
6: 0.90000 MxB
7: -152.57001 MxB
8: -4.62110 kMxB
Total: 0

07/18/93 08:31:37

Inst. Number = 1
0: -1.87000 MxB
1: 18.50000 xC
2: 16.40000 xC
3: 926.73999 MxB
4: 9.37000 MxB
5: 427.67999 MxB
6: -462.29999 MxB
ALMs: 0{HHHH}3

1: 18.40000 xC
2: 57.80000 xC
3: 18.30000 xC
4: -0.12900 MxB
5: 10.36000 MxB
6: 0.67000 MxB
7: -300.29001 MxB
DI/O: 0{HHHHHHHH}7

2: 15.90000 xC
3: 46.50000 xC
4: 18.10000 xC
5: 1.26000 MxB
6: 0.89000 MxB
7: -142.71001 MxB
8: -4.62100 kMxB
Total: 0

07/18/93 08:37:37

Inst. Number = 1
0: -1.09000 MxB
1: 18.60000 xC
2: 16.50000 xC
3: 834.03998 MxB
4: 9.31000 MxB
5: 451.88000 MxB
6: -462.29001 MxB
ALMs: 0{HHHH}3

1: 18.60000 xC
2: 57.80000 xC
3: 18.30000 xC
4: -0.11500 MxB
5: 10.31000 MxB
6: 0.67000 MxB
7: -300.28000 MxB
DI/O: 0{HHHHHHHH}7

2: 16.00000 xC
3: 47.00000 xC
4: 17.90000 xC
5: 1.33000 MxB
6: 0.89000 MxB
7: -141.67000 MxB
8: -4.62120 kMxB
Total: 0

07/18/93 08:43:37

Inst. Number = 1

0: 0.78000 MxB	1: 18.80000 xC	2: 15.90000 xC
3: 18.60000 xC	4: 58.00000 xC	5: 47.60000 xC
6: 16.40000 xC	7: 18.10000 xC	8: 17.90000 xC
9: 806.91998 MxB	10: 0.00000 MxB	11: 1.21000 MxB
12: 9.25000 MxB	13: 10.24000 MxB	14: 0.89000 MxB
15: 461.01001 MxB	16: 0.66000 MxB	17: -152.62000 MxB
-462.35999 MxB	19: -300.34000 MxB	20: -4.62190 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 08:49:37

Inst. Number = 1

0: -1.89000 MxB	1: 18.30000 xC	2: 16.00000 xC
3: 18.50000 xC	4: 58.10000 xC	5: 48.10000 xC
6: 16.40000 xC	7: 18.20000 xC	8: 17.90000 xC
9: 830.50000 MxB	10: 0.00000 MxB	11: 1.21000 MxB
12: 9.27000 MxB	13: 10.30000 MxB	14: 0.89000 MxB
15: 465.54001 MxB	16: 0.67000 MxB	17: -152.58000 MxB
18: -462.44000 MxB	19: -300.34000 MxB	20: -4.62150 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 08:55:37

Inst. Number = 1

0: -1.30000 MxB	1: 18.70000 xC	2: 16.20000 xC
3: 18.80000 xC	4: 58.20000 xC	5: 48.50000 xC
6: 16.40000 xC	7: 18.20000 xC	8: 17.80000 xC
9: 109.24000 MxB	10: -0.07400 MxB	11: 1.26000 MxB
12: 9.22000 MxB	13: 10.22000 MxB	14: 0.89000 MxB
15: 460.44000 MxB	16: 0.67000 MxB	17: -152.57001 MxB
18: -462.35999 MxB	19: -300.32999 MxB	20: -4.62100 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 09:01:37

Inst. Number = 1

0: -1.77000 MxB	1: 19.00000 xC	2: 16.30000 xC
3: 18.90000 xC	4: 58.30000 xC	5: 48.90000 xC
6: 16.40000 xC	7: 18.20000 xC	8: 17.90000 xC
9: 789.20001 MxB	10: -0.10000 MxB	11: 1.34000 MxB
12: 9.22000 MxB	13: 10.23000 MxB	14: 0.89000 MxB
15: 437.79999 MxB	16: 0.67000 MxB	17: -152.58000 MxB
18: -462.45001 MxB	19: -300.32999 MxB	20: -4.62150 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 09:07:37

Inst. Number = 1

0: 47.11000 MxB	1: 19.40000 xC	2: 85.80000 xC
3: 200.39999 xC	4: 107.70000 xC	5: 57.10000 xC
6: 35.60000 xC	7: 18.10000 xC	8: 17.80000 xC
9: +OL	10: 0.39800 MxB	11: 1.17000 MxB
12: 9.70000 MxB	13: 10.71000 MxB	14: 0.84000 MxB
15: 461.14999 MxB	16: 0.61000 MxB	17: -142.84000 MxB
18: -392.59000 MxB	19: -283.59000 MxB	20: -4.61930 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

8/93 09:13:37

Inst. Number = 1

0: 48.29000 MxB	1: 19.50000 xC	2: 93.90000 xC
3: 104.60000 xC	4: 95.40000 xC	5: 62.50000 xC
6: 44.00000 xC	7: 17.90000 xC	8: 17.70000 xC
9: +OL	10: -0.08700 MxB	11: 1.38000 MxB

13: 473.37000 MxB
18: -420.00000 MxB
ALMs: 0(HHHH)3

16: 0.70000 MxB
19: -294.28000 MxB
DI/O: 0(HHHHHHHH)7

17: -142.67000 MxB
20: -4.61980 kMxB
Total: 0

07/18/93 09:19:37

Inst. Number = 1
32.83000 MxB
58.00000 xC
6: 45.10000 xC
9: +OL
12: 9.70000 MxB
15: 451.88000 MxB
18: -425.48001 MxB
ALMs: 0(HHHH)3

1: 19.00000 xC
4: 82.80000 xC
7: 18.10000 xC
10: -0.12600 MxB
13: 10.94000 MxB
16: 0.72000 MxB
19: -295.81000 MxB
DI/O: 0(HHHHHHHH)7

2: 65.90000 xC
5: 64.10000 xC
8: 17.70000 xC
11: 1.37000 MxB
14: 0.95000 MxB
17: -142.66000 MxB
20: -4.61950 kMxB
Total: 0

07/18/93 09:25:37

Inst. Number = 1
0: 32.38000 MxB
3: 46.60000 xC
6: 49.70000 xC
9: 171.92000 MxB
12: 9.58000 MxB
15: 469.78000 MxB
18: -423.47000 MxB
ALMs: 0(HHHH)3

1: 19.70000 xC
4: 76.30000 xC
7: 19.60000 xC
10: -0.15500 MxB
13: 10.84000 MxB
16: 0.70000 MxB
19: -296.13000 MxB
DI/O: 0(HHHHHHHH)7

2: 49.40000 xC
5: 63.90000 xC
8: 17.70000 xC
11: 1.35000 MxB
14: 0.95000 MxB
17: -142.67999 MxB
20: -4.62020 kMxB
Total: 0

07/18/93 09:31:37

Inst. Number = 1
0: 27.19000 MxB
3: 40.30000 xC
6: 53.60000 xC
9: +OL
12: 9.15000 MxB
15: 488.54001 MxB
18: -421.35999 MxB
ALMs: 0(HHHH)3

1: 20.10000 xC
4: 71.80000 xC
7: 23.50000 xC
10: -0.05900 MxB
13: 10.34000 MxB
16: 0.69000 MxB
19: -294.60999 MxB
DI/O: 0(HHHHHHHH)7

2: 39.90000 xC
5: 62.90000 xC
8: 17.70000 xC
11: 1.20000 MxB
14: 0.92000 MxB
17: -142.66000 MxB
20: -4.61940 kMxB
Total: 0

07/18/93 09:37:37

Inst. Number = 1
0: 29.56000 MxB
3: 37.70000 xC
6: 58.90000 xC
9: 922.69000 MxB
12: 9.13000 MxB
15: 465.89001 MxB
18: -426.45001 MxB
ALMs: 0(HHHH)3

1: 20.10000 xC
4: 69.30000 xC
7: 31.30000 xC
10: -0.08200 MxB
13: 10.38000 MxB
16: 0.67000 MxB
19: -296.91000 MxB
DI/O: 0(HHHHHHHH)7

2: 35.70000 xC
5: 62.00000 xC
8: 17.60000 xC
11: 1.27000 MxB
14: 0.92000 MxB
17: -141.64999 MxB
20: -4.62040 kMxB
Total: 0

07/18/93 09:43:37

Inst. Number = 1
0: 27.92000 MxB
3: 36.20000 xC
6: 63.70000 xC
9: 834.75000 MxB
12: 9.19000 MxB
15: 486.48001 MxB
18: -424.57999 MxB
ALMs: 0(HHHH)3

1: 20.40000 xC
4: 67.90000 xC
7: 39.20000 xC
10: -0.09500 MxB
13: 10.47000 MxB
16: 0.66000 MxB
19: -293.14001 MxB
DI/O: 0(HHHHHHHH)7

2: 32.90000 xC
5: 61.10000 xC
8: 17.70000 xC
11: 1.41000 MxB
14: 0.91000 MxB
17: -141.80000 MxB
20: -4.61990 kMxB
Total: 0

07/18/93 09:49:37

Inst. Number = 1

0: 25.92000 MxB	1: 20.70000 xC	2: 31.90000 xC
3: 48.40000 xC	4: 68.60000 xC	5: 60.20000 xC
6: 73.80000 xC	7: 48.20000 xC	8: 17.60000 xC
9: +OL	10: 0.49700 MxB	11: -0.01000 MxB
12: 8.62000 MxB	13: 9.71000 MxB	14: 0.92000 MxB
15: 412.39001 MxB	16: 0.71000 MxB	17: -141.48000 MxB
-432.91000 MxB	19: -295.41000 MxB	20: -4.62030 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 09:55:37

Inst. Number = 1

0: 0.99000 MxB	1: 20.70000 xC	2: 32.30000 xC
3: 36.90000 xC	4: 67.00000 xC	5: 60.00000 xC
6: 80.50000 xC	7: 59.70000 xC	8: 17.50000 xC
9: +OL	10: -0.06100 MxB	11: 1.30000 MxB
12: 9.34000 MxB	13: 10.41000 MxB	14: 0.93000 MxB
15: 458.95999 MxB	16: 0.67000 MxB	17: -141.80000 MxB
18: -412.82001 MxB	19: -292.41000 MxB	20: -4.61460 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 10:01:37

Inst. Number = 1

0: 0.97000 MxB	1: 22.60000 xC	2: 34.30000 xC
3: 40.80000 xC	4: 67.70000 xC	5: 59.80000 xC
6: 86.50000 xC	7: 64.00000 xC	8: 17.50000 xC
9: +OL	10: -0.14000 MxB	11: 1.41000 MxB
12: 9.25000 MxB	13: 10.09000 MxB	14: 0.93000 MxB
15: 420.73999 MxB	16: 0.72000 MxB	17: -141.64999 MxB
18: -414.22000 MxB	19: -292.41000 MxB	20: -4.61470 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 10:07:37

Inst. Number = 1

0: -0.59000 MxB	1: 25.90000 xC	2: 32.10000 xC
3: 39.80000 xC	4: 67.60000 xC	5: 59.50000 xC
6: 90.80000 xC	7: 66.60000 xC	8: 17.60000 xC
9: +OL	10: -0.04700 MxB	11: 1.26000 MxB
12: 8.96000 MxB	13: 9.98000 MxB	14: 0.89000 MxB
15: 482.23999 MxB	16: 0.63000 MxB	17: -141.48000 MxB
18: -416.60001 MxB	19: -292.81000 MxB	20: -4.61570 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 10:13:37

Inst. Number = 1

0: 45.24000 MxB	1: 26.40000 xC	2: 31.40000 xC
3: 40.10000 xC	4: 67.60000 xC	5: 59.60000 xC
6: 95.00000 xC	7: 70.70000 xC	8: 17.50000 xC
9: +OL	10: -0.02200 MxB	11: 0.93000 MxB
12: 8.99000 MxB	13: 9.99000 MxB	14: 0.89000 MxB
15: 484.29001 MxB	16: 0.65000 MxB	17: -140.62000 MxB
18: -429.45001 MxB	19: -292.79001 MxB	20: -4.61550 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

8/93 10:24:01

Inst. Number = 1

0: 49.11000 MxB	1: 27.20000 xC	2: 30.90000 xC
3: 41.30000 xC	4: 68.10000 xC	5: 59.70000 xC
6: 100.70000 xC	7: 81.30000 xC	8: 17.50000 xC
9: +OL	10: 0.03000 MxB	11: 1.07000 MxB

18: -385.06000 MxB
ALMs: 0{HHHH}3

19: -291.35001 MxB
DI/O: 0{HHHHHHHH}7

20: -4.61540 kMxB
Total: 0

Hydra Printer Output 07/18/93 10:55:02
Skipping 5 Scans Between Outputs

07/18/93 10:55:11

Inst. Number = 1

0: 6.99000 MxB
3: 45.60000 xC
6: 125.40000 xC
9: 141.25000 MxB
12: 8.85000 MxB
15: 547.70001 MxB
18: -393.28000 MxB
ALMs: 0{HHHH}3

1: 28.00000 xC
4: 69.30000 xC
7: 129.60001 xC
10: 0.11700 MxB
13: 9.88000 MxB
16: 0.65000 MxB
19: -291.29999 MxB
DI/O: 0{HHHHHHHH}7

2: 32.10000 xC
5: 60.40000 xC
8: 18.00000 xC
11: 1.25000 MxB
14: 0.90000 MxB
17: -142.17000 MxB
20: -4.61010 kMxB
Total: 0

07/18/93 11:01:11

Inst. Number = 1

0: -1.39000 MxB
3: 50.30000 xC
6: 135.60001 xC
9: 61.09000 MxB
12: 8.89000 MxB
15: 490.59000 MxB
18: -409.76001 MxB
ALMs: 0{HHHH}3

1: 27.70000 xC
4: 70.40000 xC
7: 161.39999 xC
10: 0.03600 MxB
13: 9.96000 MxB
16: 0.63000 MxB
19: -292.09000 MxB
DI/O: 0{HHHHHHHH}7

2: 33.10000 xC
5: 60.60000 xC
8: 18.30000 xC
11: 1.23000 MxB
14: 0.89000 MxB
17: -141.84000 MxB
20: -4.61030 kMxB
Total: 0

07/18/93 11:07:11

Inst. Number = 1

0: -1.66000 MxB
3: 55.40000 xC
6: 149.20000 xC
9: 57.14000 MxB
12: 8.90000 MxB
15: 457.97000 MxB
18: -412.34000 MxB
ALMs: 0{HHHH}3

1: 24.60000 xC
4: 72.20000 xC
7: 195.60001 xC
10: 0.11000 MxB
13: 9.92000 MxB
16: 0.64000 MxB
19: -293.14001 MxB
DI/O: 0{HHHHHHHH}7

2: 36.70000 xC
5: 61.30000 xC
8: 18.60000 xC
11: 1.04000 MxB
14: 0.89000 MxB
17: -143.05000 MxB
20: -4.61020 kMxB
Total: 0

07/18/93 11:13:11

Inst. Number = 1

0: -0.13000 MxB
3: 43.90000 xC
6: 154.80000 xC
9: 57.15000 MxB
12: 8.66000 MxB
15: 460.94000 MxB
18: -413.20001 MxB
ALMs: 0{HHHH}3

1: 24.20000 xC
4: 69.90000 xC
7: 230.89999 xC
10: -0.04700 MxB
13: 9.78000 MxB
16: 0.70000 MxB
19: -294.10001 MxB
DI/O: 0{HHHHHHHH}7

2: 33.50000 xC
5: 61.30000 xC
8: 18.90000 xC
11: 1.25000 MxB
14: 0.95000 MxB
17: -143.38000 MxB
20: -4.60990 kMxB
Total: 0

07/18/93 11:19:11

Inst. Number = 1

0: -1.64000 MxB
3: 40.30000 xC
6: 158.39999 xC
9: 57.14000 MxB
12: 9.19000 MxB
15: 469.78000 MxB
18: -462.57999 MxB

1: 23.70000 xC
4: 68.90000 xC
7: 269.29999 xC
10: -0.08900 MxB
13: 10.23000 MxB
16: 0.66000 MxB
19: -300.45999 MxB

2: 31.60000 xC
5: 61.30000 xC
8: 19.40000 xC
11: 1.22000 MxB
14: 0.92000 MxB
17: -152.64000 MxB
20: -4.61180 kMxB

Hydra Printer Output 07/18/93 11:56:45
Skipping 5 Scans Between Outputs

07/18/93 11:57:41

Inst. Number = 1

1.28000 MxB	1: 24.50000 xC	2: 31.30000 xC
39.80000 xC	4: 65.20000 xC	5: 59.10000 xC
6: 159.60001 xC	7: 353.20001 xC	8: 20.70000 xC
9: 59.91000 MxB	10: -0.05900 MxB	11: 1.32000 MxB
12: 9.11000 MxB	13: 10.22000 MxB	14: 0.93000 MxB
15: 496.04001 MxB	16: 0.67000 MxB	17: -152.67000 MxB
18: -462.72000 MxB	19: -300.51999 MxB	20: -4.61300 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 12:03:41

Inst. Number = 1

0: -0.57000 MxB	1: 24.70000 xC	2: 29.40000 xC
3: 37.10000 xC	4: 65.40000 xC	5: 59.20000 xC
6: 160.10001 xC	7: 381.70001 xC	8: 21.30000 xC
9: 59.94000 MxB	10: -0.01900 MxB	11: 1.19000 MxB
12: 9.07000 MxB	13: 10.16000 MxB	14: 0.93000 MxB
15: 494.84000 MxB	16: 0.66000 MxB	17: -152.69000 MxB
18: -462.70999 MxB	19: -300.50000 MxB	20: -4.61320 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 12:09:41

Inst. Number = 1

0: 1.62000 MxB	1: 25.10000 xC	2: 28.80000 xC
37.30000 xC	4: 66.30000 xC	5: 59.60000 xC
163.20000 xC	7: 405.50000 xC	8: 22.00000 xC
60.24000 MxB	10: -0.07200 MxB	11: 0.84000 MxB
12: 8.73000 MxB	13: 9.88000 MxB	14: 0.95000 MxB
15: 498.87000 MxB	16: 0.72000 MxB	17: -143.44000 MxB
18: -416.45999 MxB	19: -294.23001 MxB	20: -4.61220 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 12:15:41

Inst. Number = 1

0: -1.91000 MxB	1: 25.00000 xC	2: 29.30000 xC
3: 40.10000 xC	4: 67.20000 xC	5: 59.60000 xC
6: 172.50000 xC	7: 425.70001 xC	8: 22.80000 xC
9: 60.13000 MxB	10: -0.01700 MxB	11: 1.25000 MxB
12: 9.03000 MxB	13: 10.12000 MxB	14: 0.93000 MxB
15: 472.97000 MxB	16: 0.64000 MxB	17: -144.09000 MxB
18: -406.89999 MxB	19: -293.12000 MxB	20: -4.60360 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 12:21:41

Inst. Number = 1

0: -1.49000 MxB	1: 24.30000 xC	2: 30.40000 xC
3: 42.50000 xC	4: 67.90000 xC	5: 60.00000 xC
183.20000 xC	7: 442.89999 xC	8: 23.70000 xC
60.09000 MxB	10: 0.05000 MxB	11: 1.14000 MxB
15: 8.99000 MxB	13: 10.07000 MxB	14: 0.93000 MxB
15: 493.00000 MxB	16: 0.69000 MxB	17: -143.52000 MxB
18: -403.12000 MxB	19: -292.32999 MxB	20: -4.60200 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 12:27:41

Inst. Number = 1

0: -1.12000 MxB
3: 44.20000 xC
6: 200.60001 xC
9: 60.14000 MxB
12: 8.93000 MxB
15: 510.76001 MxB
-412.70999 MxB
ALMs: 0{HHHH}3

1: 25.50000 xC
4: 68.60000 xC
7: 457.79999 xC
10: -0.01900 MxB
13: 10.05000 MxB
16: 0.67000 MxB
19: -293.04999 MxB
DI/O: 0{HHHHHHHH}7

2: 32.10000 xC
5: 60.40000 xC
8: 24.60000 xC
11: 1.25000 MxB
14: 0.94000 MxB
17: -142.63000 MxB
20: -4.60190 kMxB
Total: 0

07/18/93 12:33:41

Inst. Number = 1

0: -0.06000 MxB
3: 47.10000 xC
6: 212.30000 xC
9: 60.82000 MxB
12: 8.91000 MxB
15: 483.94000 MxB
18: -411.16000 MxB
ALMs: 0{HHHH}3

1: 25.50000 xC
4: 69.80000 xC
7: 471.39999 xC
10: -0.00700 MxB
13: 10.01000 MxB
16: 0.67000 MxB
19: -293.42001 MxB
DI/O: 0{HHHHHHHH}7

2: 34.90000 xC
5: 60.90000 xC
8: 25.70000 xC
11: 1.14000 MxB
14: 0.93000 MxB
17: -143.55000 MxB
20: -4.60250 kMxB
Total: 0

07/18/93 12:39:41

Inst. Number = 1

0: 1.68000 MxB
3: 53.00000 xC
6: 223.00000 xC
9: 60.66000 MxB
12: 8.78000 MxB
15: 488.60999 MxB
18: -383.45001 MxB
ALMs: 0{HHHH}3

1: 25.60000 xC
4: 71.40000 xC
7: 484.20001 xC
10: 0.02700 MxB
13: 9.78000 MxB
16: 0.69000 MxB
19: -291.59000 MxB
DI/O: 0{HHHHHHHH}7

2: 37.00000 xC
5: 61.50000 xC
8: 26.90000 xC
11: 1.17000 MxB
14: 0.94000 MxB
17: -144.94000 MxB
20: -4.59990 kMxB
Total: 0

07/18/93 12:45:41

Inst. Number = 1

0: 1.72000 MxB
3: 57.10000 xC
6: 234.80000 xC
9: 60.62000 MxB
12: 8.88000 MxB
15: 480.19000 MxB
18: -413.45999 MxB
ALMs: 0{HHHH}3

1: 25.60000 xC
4: 73.00000 xC
7: 496.39999 xC
10: 0.02500 MxB
13: 10.00000 MxB
16: 0.66000 MxB
19: -291.95001 MxB
DI/O: 0{HHHHHHHH}7

2: 41.00000 xC
5: 62.30000 xC
8: 28.10000 xC
11: 1.23000 MxB
14: 0.94000 MxB
17: -142.28000 MxB
20: -4.60170 kMxB
Total: 0

07/18/93 12:51:41

Inst. Number = 1

0: 53.03000 MxB
3: 65.80000 xC
6: 246.80000 xC
9: 167.05000 MxB
12: 8.80000 MxB
15: 453.44000 MxB
18: -412.16000 MxB
ALMs: 0{HHHH}3

1: 30.20000 xC
4: 75.20000 xC
7: 508.29999 xC
10: 0.07300 MxB
13: 9.90000 MxB
16: 0.68000 MxB
19: -291.56000 MxB
DI/O: 0{HHHHHHHH}7

2: 43.60000 xC
5: 63.00000 xC
8: 29.40000 xC
11: 1.12000 MxB
14: 0.94000 MxB
17: -142.08000 MxB
20: -4.60160 kMxB
Total: 0

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Inst. Number = 1

0: 52.42000 MxB
3: 64.40000 xC
6: 253.80000 xC
9: 66.98000 MxB

1: 30.30000 xC
4: 76.10000 xC
7: 519.90002 xC
10: 0.02400 MxB

2: 43.90000 xC
5: 63.80000 xC
8: 30.90000 xC
11: 1.11000 MxB

13: 531.48777 MxB
18: -407.98999 MxB
ALMs: 0{HHHH}3

15: 0.65000 MxB
19: -291.44000 MxB
DI/O: 0{HHHHHHHH}7

17: -142.28000 MxB
20: -4.59600 kMxB
Total: 0

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Inst. Number = 1

45.58000 MxB
61.00000 xC
6: 259.89999 xC
9: 154.56000 MxB
12: 8.76000 MxB
15: 505.87000 MxB
18: -409.70999 MxB
ALMs: 0{HHHH}3

1: 30.20000 xC
4: 76.00000 xC
7: 531.29999 xC
10: 0.03700 MxB
13: 9.93000 MxB
16: 0.66000 MxB
19: -292.26999 MxB
DI/O: 0{HHHHHHHH}7

2: 42.40000 xC
5: 64.70000 xC
8: 32.30000 xC
11: 0.99000 MxB
14: 0.94000 MxB
17: -142.66000 MxB
20: -4.59660 kMxB
Total: 0

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Inst. Number = 1

0: 49.97000 MxB
3: 60.70000 xC
6: 266.70001 xC
9: 204.34000 MxB
12: 8.80000 MxB
15: 526.46997 MxB
18: -405.82001 MxB
ALMs: 0{HHHH}3

1: 31.50000 xC
4: 76.00000 xC
7: 542.79999 xC
10: -0.02300 MxB
13: 9.91000 MxB
16: 0.66000 MxB
19: -292.29999 MxB
DI/O: 0{HHHHHHHH}7

2: 41.20000 xC
5: 64.90000 xC
8: 34.00000 xC
11: 1.25000 MxB
14: 0.93000 MxB
17: -142.10001 MxB
20: -4.59620 kMxB
Total: 0

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Inst. Number = 1

0: 44.67000 MxB
59.30000 xC
270.60001 xC
9: 169.35001 MxB
12: 13.57000 MxB
15: 525.62000 MxB
18: -410.73001 MxB
ALMs: 0{HHHH}3

1: 28.60000 xC
4: 75.70000 xC
7: 554.29999 xC
10: -0.27600 MxB
13: 15.20000 MxB
16: 0.93000 MxB
19: -291.97000 MxB
DI/O: 0{HHHHHHHH}7

2: 40.40000 xC
5: 65.30000 xC
8: 35.60000 xC
11: 2.78000 MxB
14: 1.22000 MxB
17: -141.62000 MxB
20: -4.59750 kMxB
Total: 0

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Inst. Number = 1

0: 47.66000 MxB
3: 55.20000 xC
6: 278.29999 xC
9: 178.06000 MxB
12: 8.38000 MxB
15: 488.10999 MxB
18: -410.16000 MxB
ALMs: 0{HHHH}3

1: 27.20000 xC
4: 74.80000 xC
7: 566.70001 xC
10: -0.07200 MxB
13: 9.80000 MxB
16: 0.75000 MxB
19: -291.53000 MxB
DI/O: 0{HHHHHHHH}7

2: 38.80000 xC
5: 65.50000 xC
8: 37.30000 xC
11: 0.45000 MxB
14: 1.02000 MxB
17: -141.67000 MxB
20: -4.59580 kMxB
Total: 0

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Inst. Number = 1

0: 25.10000 MxB
3: 59.80000 xC
284.89999 xC
178.52000 MxB
12: 9.25000 MxB
15: 501.06000 MxB
18: -411.07999 MxB
ALMs: 0{HHHH}3

1: 31.10000 xC
4: 75.60000 xC
7: 579.40002 xC
10: -0.00300 MxB
13: 10.41000 MxB
16: 0.67000 MxB
19: -292.28000 MxB
DI/O: 0{HHHHHHHH}7

2: 40.30000 xC
5: 65.70000 xC
8: 39.20000 xC
11: 1.11000 MxB
14: 0.96000 MxB
17: -142.12000 MxB
20: -4.59710 kMxB
Total: 0

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Inst. Number = 1

0: 31.21000 MxB	1: 33.10000 xC	2: 41.00000 xC
3: 63.90000 xC	4: 76.70000 xC	5: 66.20000 xC
6: 292.10001 xC	7: 593.20001 xC	8: 41.20000 xC
9: 128.91000 MxB	10: 0.01500 MxB	11: 1.27000 MxB
12: 9.18000 MxB	13: 10.35000 MxB	14: 0.96000 MxB
15: 501.20001 MxB	16: 0.69000 MxB	17: -142.00000 MxB
18: -404.73001 MxB	19: -291.13000 MxB	20: -4.59540 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 27.14000 MxB	1: 30.70000 xC	2: 43.40000 xC
3: 69.90000 xC	4: 78.40000 xC	5: 66.80000 xC
6: 299.60001 xC	7: 607.59998 xC	8: 43.00000 xC
9: 117.94000 MxB	10: 0.13400 MxB	11: 1.04000 MxB
12: 9.07000 MxB	13: 10.26000 MxB	14: 0.97000 MxB
15: 527.17999 MxB	16: 0.68000 MxB	17: -141.22000 MxB
18: -409.17999 MxB	19: -291.51999 MxB	20: -4.59020 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 35.50000 MxB	1: 30.80000 xC	2: 46.20000 xC
3: 77.00000 xC	4: 80.40000 xC	5: 67.60000 xC
6: 304.29999 xC	7: 622.29999 xC	8: 45.10000 xC
9: 132.89000 MxB	10: 0.04900 MxB	11: 1.05000 MxB
12: 9.17000 MxB	13: 10.35000 MxB	14: 0.96000 MxB
15: 522.28998 MxB	16: 0.68000 MxB	17: -141.20000 MxB
18: -412.89001 MxB	19: -293.94000 MxB	20: -4.58970 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 33.58000 MxB	1: 28.00000 xC	2: 49.70000 xC
3: 80.60000 xC	4: 82.20000 xC	5: 68.50000 xC
6: 312.29999 xC	7: 637.59998 xC	8: 47.10000 xC
9: 57.15000 MxB	10: 0.09900 MxB	11: 0.98000 MxB
12: 9.09000 MxB	13: 10.28000 MxB	14: 0.96000 MxB
15: 461.79001 MxB	16: 0.66000 MxB	17: -142.03000 MxB
18: -410.17001 MxB	19: -292.29001 MxB	20: -4.58980 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 31.62000 MxB	1: 28.60000 xC	2: 52.60000 xC
3: 86.90000 xC	4: 84.40000 xC	5: 69.70000 xC
6: 325.39999 xC	7: 653.50000 xC	8: 49.10000 xC
9: 57.15000 MxB	10: 0.07800 MxB	11: 1.18000 MxB
12: 9.20000 MxB	13: 10.33000 MxB	14: 0.96000 MxB
15: 529.22998 MxB	16: 0.65000 MxB	17: -141.89999 MxB
18: -407.42001 MxB	19: -292.73001 MxB	20: -4.59020 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 24.60000 MxB	1: 28.30000 xC	2: 52.80000 xC
3: 82.70000 xC	4: 84.40000 xC	5: 70.70000 xC
6: 338.50000 xC	7: 669.59998 xC	8: 51.30000 xC
9: 57.15000 MxB	10: 0.12200 MxB	11: 0.86000 MxB

18: 301.28000 MxB
18: -397.35001 MxB
ALMs: 0{HHHH}3

18: 0.70000 MxB
19: -289.82999 MxB
DI/O: 0{HHHHHHHH}7

17: -141.37777 MxB
20: -4.58990 kMxB
Total: 0

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Inst. Number = 1

23.40000 MxB
88.70000 xC
6: 352.39999 xC
9: 57.15000 MxB
12: 9.07000 MxB
15: 498.94000 MxB
18: -397.31000 MxB
ALMs: 0{HHHH}3

1: 28.30000 xC
4: 86.20000 xC
7: 686.29999 xC
10: 0.21100 MxB
13: 10.24000 MxB
16: 0.69000 MxB
19: -288.48001 MxB
DI/O: 0{HHHHHHHH}7

2: 55.30000 xC
5: 71.80000 xC
8: 53.70000 xC
11: 1.17000 MxB
14: 0.96000 MxB
17: -140.71001 MxB
20: -4.58990 kMxB
Total: 0

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Inst. Number = 1

0: -0.82000 MxB
3: 96.60000 xC
6: 367.89999 xC
9: 125.41000 MxB
12: 9.11000 MxB
15: 577.21002 MxB
18: -399.89999 MxB
ALMs: 0{HHHH}3

1: 34.10000 xC
4: 88.50000 xC
7: 701.79999 xC
10: 0.04200 MxB
13: 10.32000 MxB
16: 0.69000 MxB
19: -290.00000 MxB
DI/O: 0{HHHHHHHH}7

2: 56.90000 xC
5: 72.80000 xC
8: 56.00000 xC
11: 1.37000 MxB
14: 0.95000 MxB
17: -141.73000 MxB
20: -4.59010 kMxB
Total: 0

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Inst. Number = 1

0: 33.67000 MxB
3: 100.20000 xC
6: 378.79999 xC
9: 57.15000 MxB
12: 9.00000 MxB
15: 490.51999 MxB
18: -399.91000 MxB
ALMs: 0{HHHH}3

1: 31.30000 xC
4: 89.80000 xC
7: 718.20001 xC
10: 0.07800 MxB
13: 10.21000 MxB
16: 0.68000 MxB
19: -290.44000 MxB
DI/O: 0{HHHHHHHH}7

2: 57.90000 xC
5: 73.70000 xC
8: 58.40000 xC
11: 1.18000 MxB
14: 0.96000 MxB
17: -141.71001 MxB
20: -4.58390 kMxB
Total: 0

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Inst. Number = 1

0: 32.68000 MxB
3: 92.90000 xC
6: 388.20001 xC
9: 57.15000 MxB
12: 8.81000 MxB
15: 519.03998 MxB
18: -389.60999 MxB
ALMs: 0{HHHH}3

1: 28.90000 xC
4: 89.10000 xC
7: 736.20001 xC
10: 0.21300 MxB
13: 10.01000 MxB
16: 0.70000 MxB
19: -288.54001 MxB
DI/O: 0{HHHHHHHH}7

2: 59.50000 xC
5: 74.60000 xC
8: 60.90000 xC
11: 0.88000 MxB
14: 0.97000 MxB
17: -140.89999 MxB
20: -4.58450 kMxB
Total: 0

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Inst. Number = 1

0: 31.02000 MxB
3: 99.80000 xC
6: 402.89999 xC
9: 104.79000 MxB
12: 9.42000 MxB
15: 533.53998 MxB
18: -397.38000 MxB
ALMs: 0{HHHH}3

1: 32.00000 xC
4: 90.70000 xC
7: 755.00000 xC
10: -0.01400 MxB
13: 10.66000 MxB
16: 0.69000 MxB
19: -288.51001 MxB
DI/O: 0{HHHHHHHH}7

2: 61.60000 xC
5: 75.30000 xC
8: 63.20000 xC
11: 1.34000 MxB
14: 0.98000 MxB
17: -140.30000 MxB
20: -4.58410 kMxB
Total: 0

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Inst. Number = 1

0: 31.04000 MxB	1: 32.60000 xC	2: 64.00000 xC
3: 98.70000 xC	4: 91.50000 xC	5: 76.40000 xC
6: 416.60001 xC	7: 773.40002 xC	8: 65.70000 xC
9: 121.18000 MxB	10: 0.08400 MxB	11: 1.18000 MxB
12: 9.01000 MxB	13: 10.17000 MxB	14: 0.95000 MxB
15: 492.64001 MxB	16: 0.64000 MxB	17: -140.89000 MxB
18: -401.64001 MxB	19: -290.37000 MxB	20: -4.58410 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 27.98000 MxB	1: 32.80000 xC	2: 63.60000 xC
3: 100.20000 xC	4: 91.90000 xC	5: 77.00000 xC
6: 426.60001 xC	7: 791.70001 xC	8: 68.20000 xC
9: 92.09000 MxB	10: -0.00600 MxB	11: 1.27000 MxB
12: 9.17000 MxB	13: 10.39000 MxB	14: 0.97000 MxB
15: 515.28998 MxB	16: 0.67000 MxB	17: -141.52000 MxB
18: -405.06000 MxB	19: -290.73999 MxB	20: -4.58360 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 33.23000 MxB	1: 31.60000 xC	2: 62.90000 xC
3: 97.00000 xC	4: 91.80000 xC	5: 77.60000 xC
6: 432.89999 xC	7: 809.29999 xC	8: 70.90000 xC
9: 57.14000 MxB	10: 0.02900 MxB	11: 1.33000 MxB
12: 9.10000 MxB	13: 10.33000 MxB	14: 0.98000 MxB
15: 506.01999 MxB	16: 0.69000 MxB	17: -141.03999 MxB
18: -400.23999 MxB	19: -289.63000 MxB	20: -4.57880 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 27.44000 MxB	1: 29.70000 xC	2: 63.10000 xC
3: 97.40000 xC	4: 91.90000 xC	5: 78.30000 xC
6: 441.79999 xC	7: 825.90002 xC	8: 73.30000 xC
9: 57.15000 MxB	10: 0.04800 MxB	11: 1.30000 MxB
12: 9.08000 MxB	13: 10.23000 MxB	14: 0.98000 MxB
15: 470.98999 MxB	16: 0.71000 MxB	17: -141.00999 MxB
18: -401.17999 MxB	19: -289.63000 MxB	20: -4.57870 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 34.74000 MxB	1: 28.40000 xC	2: 63.10000 xC
3: 96.60000 xC	4: 91.60000 xC	5: 78.40000 xC
6: 450.60001 xC	7: 841.40002 xC	8: 75.90000 xC
9: 57.15000 MxB	10: 0.08200 MxB	11: 0.97000 MxB
12: 9.37000 MxB	13: 10.61000 MxB	14: 0.97000 MxB
15: 472.04999 MxB	16: 0.68000 MxB	17: -140.87000 MxB
18: -395.32999 MxB	19: -289.60999 MxB	20: -4.57830 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 29.73000 MxB	1: 32.50000 xC	2: 62.60000 xC
3: 99.40000 xC	4: 92.10000 xC	5: 79.00000 xC
6: 460.10001 xC	7: 856.20001 xC	8: 78.40000 xC
9: 154.72000 MxB	10: -0.05400 MxB	11: 1.02000 MxB

18: -409.14001 MxB
ALMs: 0{HHHH}3

18: -291.87000 MxB
DI/O: 0{HHHHHHHH}7

17: -141.88000 MxB
20: -4.57830 kMxB
Total: 0

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Inst. Number = 1

28.13000 MxB
95.20000 xC
6: 462.29999 xC
9: 138.87000 MxB
12: 9.31000 MxB
15: 479.54999 MxB
18: -408.13000 MxB
ALMs: 0{HHHH}3

1: 31.80000 xC
4: 91.30000 xC
7: 872.59998 xC
10: 0.00600 MxB
13: 10.56000 MxB
16: 0.68000 MxB
19: -291.82999 MxB
DI/O: 0{HHHHHHHH}7

2: 60.90000 xC
5: 79.40000 xC
8: 80.90000 xC
11: 1.36000 MxB
14: 0.98000 MxB
17: -141.92000 MxB
20: -4.57870 kMxB
Total: 0

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Inst. Number = 1

0: 31.33000 MxB
3: 97.60000 xC
6: 462.79999 xC
9: 57.15000 MxB
12: 9.16000 MxB
15: 476.51001 MxB
18: -400.64999 MxB
ALMs: 0{HHHH}3

1: 29.60000 xC
4: 92.70000 xC
7: 891.70001 xC
10: 0.09400 MxB
13: 10.40000 MxB
16: 0.71000 MxB
19: -289.98001 MxB
DI/O: 0{HHHHHHHH}7

2: 62.30000 xC
5: 80.00000 xC
8: 83.40000 xC
11: 1.02000 MxB
14: 0.99000 MxB
17: -141.17000 MxB
20: -4.57840 kMxB
Total: 0

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Inst. Number = 1

0: 43.96000 MxB
3: 97.20000 xC
6: 468.70001 xC
9: 57.15000 MxB
12: 9.07000 MxB
15: 447.20999 MxB
18: -398.51999 MxB
ALMs: 0{HHHH}3

1: 29.20000 xC
4: 92.10000 xC
7: 911.70001 xC
10: 0.09100 MxB
13: 10.37000 MxB
16: 0.66000 MxB
19: -289.26999 MxB
DI/O: 0{HHHHHHHH}7

2: 62.50000 xC
5: 80.10000 xC
8: 86.00000 xC
11: 0.88000 MxB
14: 1.00000 MxB
17: -141.00999 MxB
20: -4.57890 kMxB
Total: 0

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Inst. Number = 1

0: 55.91000 MxB
3: 103.50000 xC
6: 470.00000 xC
9: 57.15000 MxB
12: 9.64000 MxB
15: 494.69000 MxB
18: -402.85999 MxB
ALMs: 0{HHHH}3

1: 29.30000 xC
4: 93.60000 xC
7: 927.29999 xC
10: 0.03500 MxB
13: 10.93000 MxB
16: 0.69000 MxB
19: -290.35001 MxB
DI/O: 0{HHHHHHHH}7

2: 64.20000 xC
5: 80.70000 xC
8: 88.60000 xC
11: 1.51000 MxB
14: 1.02000 MxB
17: -141.33000 MxB
20: -4.57240 kMxB
Total: 0

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Inst. Number = 1

0: 53.32000 MxB
3: 102.10000 xC
6: 473.10001 xC
9: 156.21001 MxB
12: 9.42000 MxB
15: 479.82999 MxB
18: -396.79001 MxB
ALMs: 0{HHHH}3

1: 31.20000 xC
4: 93.10000 xC
7: 933.09998 xC
10: -0.08400 MxB
13: 10.75000 MxB
16: 0.74000 MxB
19: -289.29999 MxB
DI/O: 0{HHHHHHHH}7

2: 63.70000 xC
5: 80.90000 xC
8: 90.90000 xC
11: 1.14000 MxB
14: 1.02000 MxB
17: -140.69000 MxB
20: -4.57230 kMxB
Total: 0

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Inst. Number = 1

0: 52.56000 MxB	1: 33.10000 xC	2: 62.10000 xC
3: 103.90000 xC	4: 93.70000 xC	5: 81.50000 xC
6: 473.10001 xC	7: 945.59998 xC	8: 92.70000 xC
9: 143.05000 MxB	10: -0.08800 MxB	11: 1.03000 MxB
12: 9.53000 MxB	13: 10.85000 MxB	14: 1.02000 MxB
15: 500.57001 MxB	16: 0.70000 MxB	17: -141.34000 MxB
18: -405.45999 MxB	19: -290.70001 MxB	20: -4.57200 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 49.07000 MxB	1: 33.30000 xC	2: 61.90000 xC
3: 112.20000 xC	4: 95.30000 xC	5: 81.70000 xC
6: 481.00000 xC	7: 960.90002 xC	8: 94.30000 xC
9: 111.61000 MxB	10: -0.05100 MxB	11: 0.85000 MxB
12: 9.55000 MxB	13: 10.86000 MxB	14: 1.01000 MxB
15: 504.10999 MxB	16: 0.69000 MxB	17: -141.39000 MxB
18: -403.28000 MxB	19: -290.35001 MxB	20: -4.57260 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 50.94000 MxB	1: 30.30000 xC	2: 63.90000 xC
3: 100.40000 xC	4: 93.80000 xC	5: 81.90000 xC
6: 480.70001 xC	7: 979.59998 xC	8: 96.70000 xC
9: 57.15000 MxB	10: -0.04800 MxB	11: 1.23000 MxB
12: 9.57000 MxB	13: 10.86000 MxB	14: 1.01000 MxB
15: 520.38000 MxB	16: 0.71000 MxB	17: -140.84000 MxB
18: -400.32001 MxB	19: -288.84000 MxB	20: -4.57190 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 46.38000 MxB	1: 34.00000 xC	2: 64.20000 xC
3: 110.60000 xC	4: 95.10000 xC	5: 82.40000 xC
6: 483.29999 xC	7: 995.79999 xC	8: 98.80000 xC
9: 151.16000 MxB	10: -0.08300 MxB	11: 1.42000 MxB
12: 9.58000 MxB	13: 10.92000 MxB	14: 1.02000 MxB
15: 508.28000 MxB	16: 0.69000 MxB	17: -141.50999 MxB
18: -404.51001 MxB	19: -290.72000 MxB	20: -4.56610 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 16:09:41

Inst. Number = 1

0: 53.78000 MxB	1: 35.40000 xC	2: 67.70000 xC
3: 114.70000 xC	4: 96.70000 xC	5: 82.80000 xC
6: 487.29999 xC	7: 1.00960 kxC	8: 96.60000 xC
9: 154.58000 MxB	10: -0.07200 MxB	11: 1.52000 MxB
12: 9.67000 MxB	13: 10.96000 MxB	14: 1.01000 MxB
15: 525.76001 MxB	16: 0.70000 MxB	17: -141.72000 MxB
18: -410.62000 MxB	19: -291.45001 MxB	20: -4.56710 kMxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/18/93 16:15:41

Inst. Number = 1

0: 54.50000 MxB	1: 37.20000 xC	2: 68.40000 xC
3: 115.80000 xC	4: 97.30000 xC	5: 83.30000 xC
6: 491.50000 xC	7: 1.02230 kxC	8: 94.20000 xC
9: 148.59000 MxB	10: -0.12700 MxB	11: 1.37000 MxB

15: 556.26001 MxB
18: -404.51001 MxB
ALMs: 0{HHHH}3

16: 0.70000 MxB
19: -291.10001 MxB
DI/O: 0{HHHHHHHH}7

17: -141.6777 MxB
20: -4.56720 kMxB
Total: 0

07/18/93 16:21:41

Inst. Number = 1

0: 57.46000 MxB
3: 112.80000 xC
6: 491.10001 xC
9: 128.24001 MxB
12: 9.58000 MxB
15: 556.83002 MxB
18: -402.28000 MxB
ALMs: 0{HHHH}3

1: 34.40000 xC
4: 97.20000 xC
7: 1.03230 kxC
10: -0.06000 MxB
13: 10.94000 MxB
16: 0.70000 MxB
19: -290.35001 MxB
DI/O: 0{HHHHHHHH}7

2: 69.40000 xC
5: 83.90000 xC
8: 93.60000 xC
11: 1.38000 MxB
14: 1.01000 MxB
17: -141.37000 MxB
20: -4.56680 kMxB
Total: 0

07/18/93 16:27:41

Inst. Number = 1

0: 50.58000 MxB
3: 116.30000 xC
6: 495.10001 xC
9: 145.73000 MxB
12: 9.61000 MxB
15: 511.82001 MxB
18: -408.60999 MxB
ALMs: 0{HHHH}3

1: 35.70000 xC
4: 97.50000 xC
7: 1.04160 kxC
10: -0.14600 MxB
13: 10.91000 MxB
16: 0.56000 MxB
19: -291.51999 MxB
DI/O: 0{HHHHHHHH}7

2: 68.50000 xC
5: 84.00000 xC
8: 93.80000 xC
11: 1.58000 MxB
14: 1.01000 MxB
17: -141.16000 MxB
20: -4.56730 kMxB
Total: 0

07/18/93 16:33:41

Inst. Number = 1

0: 53.97000 MxB
3: 114.10000 xC
6: 497.79999 xC
9: 129.72000 MxB
12: 9.67000 MxB
15: 535.23999 MxB
18: -404.98001 MxB
ALMs: 0{HHHH}3

1: 35.70000 xC
4: 97.50000 xC
7: 1.05030 kxC
10: -0.06600 MxB
13: 10.96000 MxB
16: 0.70000 MxB
19: -290.76001 MxB
DI/O: 0{HHHHHHHH}7

2: 69.10000 xC
5: 84.40000 xC
8: 94.50000 xC
11: 1.62000 MxB
14: 1.01000 MxB
17: -140.91000 MxB
20: -4.56800 kMxB
Total: 0

07/18/93 16:39:41

Inst. Number = 1

0: 45.45000 MxB
3: 119.40000 xC
6: 500.20001 xC
9: 61.36000 MxB
12: 9.47000 MxB
15: 556.60999 MxB
18: -400.09000 MxB
ALMs: 0{HHHH}3

1: 33.40000 xC
4: 98.60000 xC
7: 1.05380 kxC
10: 0.00200 MxB
13: 10.86000 MxB
16: 0.68000 MxB
19: -289.60999 MxB
DI/O: 0{HHHHHHHH}7

2: 70.00000 xC
5: 85.10000 xC
8: 97.20000 xC
11: 1.30000 MxB
14: 0.98000 MxB
17: -141.59000 MxB
20: -4.56120 kMxB
Total: 0

07/18/93 16:45:41

Inst. Number = 1

0: 49.41000 MxB
3: 118.00000 xC
6: 505.60001 xC
9: 57.15000 MxB
12: 9.42000 MxB
15: 546.07001 MxB
18: -403.60999 MxB
ALMs: 0{HHHH}3

1: 30.40000 xC
4: 98.80000 xC
7: 1.06230 kxC
10: 0.05100 MxB
13: 10.82000 MxB
16: 0.72000 MxB
19: -290.41000 MxB
DI/O: 0{HHHHHHHH}7

2: 70.70000 xC
5: 85.40000 xC
8: 103.30000 xC
11: 1.27000 MxB
14: 1.02000 MxB
17: -140.20000 MxB
20: -4.56210 kMxB
Total: 0

07/18/93 16:51:41

Inst. Number = 1

0: 51.17000 MxB
3: 127.80000 xC
6: 512.20001 xC
9: 57.14000 MxB
12: 9.72000 MxB
15: 547.27002 MxB
-402.75000 MxB
ALMs: 0{HHHH}3

1: 31.00000 xC
4: 100.80000 xC
7: 1.07570 kxC
10: -0.00400 MxB
13: 11.21000 MxB
16: 0.71000 MxB
19: -290.72000 MxB
DI/O: 0{HHHHHHHH}7

2: 71.90000 xC
5: 86.00000 xC
8: 108.00000 xC
11: 1.69000 MxB
14: 0.97000 MxB
17: -141.66000 MxB
20: -4.56090 kMxB
Total: 0

07/18/93 16:57:41

Inst. Number = 1

0: 48.35000 MxB
3: 123.80000 xC
6: 513.59998 xC
9: 163.22000 MxB
12: 9.73000 MxB
15: 540.62000 MxB
18: -400.64999 MxB
ALMs: 0{HHHH}3

1: 37.60000 xC
4: 100.50000 xC
7: 1.09550 kxC
10: 0.06300 MxB
13: 11.12000 MxB
16: 0.72000 MxB
19: -290.70001 MxB
DI/O: 0{HHHHHHHH}7

2: 72.20000 xC
5: 86.30000 xC
8: 111.90000 xC
11: 1.84000 MxB
14: 1.03000 MxB
17: -142.67999 MxB
20: -4.56150 kMxB
Total: 0

07/18/93 17:03:41

Inst. Number = 1

0: 67.54000 MxB
3: 130.39999 xC
6: 514.79999 xC
9: 119.09000 MxB
12: 9.78000 MxB
15: 516.56000 MxB
18: -393.82999 MxB
ALMs: 0{HHHH}3

1: 35.90000 xC
4: 102.30000 xC
7: 1.11630 kxC
10: -0.05300 MxB
13: 11.20000 MxB
16: 0.72000 MxB
19: -289.17999 MxB
DI/O: 0{HHHHHHHH}7

2: 72.60000 xC
5: 87.00000 xC
8: 115.20000 xC
11: 1.33000 MxB
14: 0.97000 MxB
17: -142.16000 MxB
20: -4.56090 kMxB
Total: 0

07/18/93 17:09:41

Inst. Number = 1

0: 64.14000 MxB
3: 128.80000 xC
6: 514.40002 xC
9: 57.15000 MxB
12: 9.60000 MxB
15: 550.88000 MxB
18: -388.48001 MxB
ALMs: 0{HHHH}3

1: 31.60000 xC
4: 102.40000 xC
7: 1.13450 kxC
10: 0.01300 MxB
13: 11.00000 MxB
16: 0.75000 MxB
19: -287.67001 MxB
DI/O: 0{HHHHHHHH}7

2: 78.30000 xC
5: 87.80000 xC
8: 118.20000 xC
11: 1.41000 MxB
14: 1.04000 MxB
17: -137.83000 MxB
20: -4.56040 kMxB
Total: 0

07/18/93 17:15:41

Inst. Number = 1

0: 65.25000 MxB
3: 121.10000 xC
6: 512.59998 xC
9: 142.00000 MxB
12: 9.61000 MxB
15: 461.79001 MxB
18: -401.37000 MxB
ALMs: 0{HHHH}3

1: 31.40000 xC
4: 100.90000 xC
7: 1.14870 kxC
10: -0.05100 MxB
13: 11.02000 MxB
16: 0.73000 MxB
19: -291.23001 MxB
DI/O: 0{HHHHHHHH}7

2: 79.20000 xC
5: 88.10000 xC
8: 121.10000 xC
11: 1.33000 MxB
14: 0.96000 MxB
17: -142.07001 MxB
20: -4.55510 kMxB
Total: 0

8/93 17:21:41

Inst. Number = 1

0: 92.04000 MxB
3: 119.50000 xC
6: 509.20001 xC
9: 150.55000 MxB

1: 37.30000 xC
4: 100.30000 xC
7: 1.15300 kxC
10: -0.16200 MxB

2: 77.70000 xC
5: 88.20000 xC
8: 115.80000 xC
11: 1.36000 MxB

18: -400.06000 MxB
ALMs: 0{HHHH}3

07/18/93 17:27:41

Inst. Number = 1

0: 165.83000 MxB
1: 114.40000 xC
6: 506.29999 xC
9: 149.06000 MxB
12: 9.67000 MxB
15: 524.20001 MxB
18: -397.50000 MxB
ALMs: 0{HHHH}3

19: -289.38000 MxB
DI/O: 0{HHHHHHHH}7

1: 37.80000 xC
4: 99.00000 xC
7: 187.10001 xC
10: -0.16900 MxB
13: 11.04000 MxB
16: 0.67000 MxB
19: -289.92999 MxB
DI/O: 0{HHHHHHHH}7

20: -4.55520 kMxB
Total: 0

2: 75.40000 xC
5: 88.20000 xC
8: 113.10000 xC
11: 1.59000 MxB
14: 0.99000 MxB
17: -142.17000 MxB
20: -4.55400 kMxB
Total: 0

07/18/93 17:33:47

Inst. Number = 1

0: 167.39000 MxB
3: 123.10000 xC
6: 512.79999 xC
9: 58.68000 MxB
12: 9.08000 MxB
15: 567.15997 MxB
18: -431.45001 MxB
ALMs: 0{HHHH}3

1: 35.10000 xC
4: 100.80000 xC
7: 1.17660 kxC
10: -0.10600 MxB
13: 10.70000 MxB
16: 0.76000 MxB
19: -295.63000 MxB
DI/O: 0{HHHHHHHH}7

2: 74.70000 xC
5: 88.30000 xC
8: 119.30000 xC
11: 1.53000 MxB
14: 1.05000 MxB
17: -140.47000 MxB
20: -4.55550 kMxB
Total: 0

07/18/93 17:39:48

Inst. Number = 1

0: 166.10001 MxB
1: 106.80000 xC
5: 526.09998 xC
9: 160.84000 MxB
12: 9.61000 MxB
15: 538.14001 MxB
18: -424.45999 MxB
ALMs: 0{HHHH}3

1: 30.80000 xC
4: 97.40000 xC
7: +OL
10: -0.08400 MxB
13: 10.94000 MxB
16: 0.71000 MxB
19: -294.85001 MxB
DI/O: 0{HHHHHHHH}7

2: 74.60000 xC
5: 88.10000 xC
8: 124.20000 xC
11: 1.61000 MxB
14: 1.04000 MxB
17: -140.97000 MxB
20: -4.55430 kMxB
Total: 0

07/18/93 17:45:47

Inst. Number = 1

0: 171.28000 MxB
3: 97.80000 xC
6: 538.09998 xC
9: 151.24001 MxB
12: 9.51000 MxB
15: 528.02002 MxB
18: -422.91000 MxB
ALMs: 0{HHHH}3

1: 35.70000 xC
4: 94.20000 xC
7: +OL
10: -0.25200 MxB
13: 10.68000 MxB
16: 0.74000 MxB
19: -294.42001 MxB
DI/O: 0{HHHHHHHH}7

2: 69.90000 xC
5: 87.30000 xC
8: 128.20000 xC
11: 1.86000 MxB
14: 1.05000 MxB
17: -140.85001 MxB
20: -4.55440 kMxB
Total: 0

07/18/93 17:51:48

Inst. Number = 1

0: 1.66000 MxB
3: 97.60000 xC
5: 541.90002 xC
14: 143.50000 MxB
12: 8.85000 MxB
15: 579.04999 MxB
18: -396.23001 MxB
ALMs: 0{HHHH}3

1: 43.00000 xC
4: 93.00000 xC
7: +OL
10: -0.05500 MxB
13: 10.03000 MxB
16: 0.64000 MxB
19: -288.47000 MxB
DI/O: 0{HHHHHHHH}7

2: 67.10000 xC
5: 86.40000 xC
8: 131.50000 xC
11: 1.57000 MxB
14: 0.97000 MxB
17: -141.78000 MxB
20: -4.55440 kMxB
Total: 0

07/18/93 17:57:48

Inst. Number = 1

0: 1.11000 MxB
3: 97.50000 xC
6: 533.79999 xC
9: 42.70000 MxB
12: 1.15000 MxB
15: 115.24000 MxB
18: -462.69000 MxB

ALMs: 0{HHHH}3

1: 37.10000 xC
4: 92.00000 xC
7: +DL
10: -0.27600 MxB
13: 1.14000 MxB
16: -0.01000 MxB
19: -300.51999 MxB
DI/O: 0{HHHHHHHH}7

2: 68.40000 xC
5: 85.50000 xC
8: 135.10001 xC
11: 0.41000 MxB
14: 0.21000 MxB
17: -152.70000 MxB
20: -4.56130 kMxB
Total: 0

07/18/93 18:03:47

Inst. Number = 1

0: 1.18000 MxB
3: 83.30000 xC
6: 519.90002 xC
9: 29.53000 MxB
12: -0.17000 MxB
15: -2.23000 MxB
18: -462.72000 MxB
ALMs: 0{HHHH}3

1: 40.60000 xC
4: 78.30000 xC
7: +DL
10: -0.02000 MxB
13: -0.40000 MxB
16: -0.02000 MxB
19: -300.53000 MxB
DI/O: 0{HHHHHHHH}7

2: 62.10000 xC
5: 77.40000 xC
8: 138.20000 xC
11: -0.09000 MxB
14: 0.02000 MxB
17: -152.66000 MxB
20: -4.56060 kMxB
Total: 0

07/18/93 18:09:48

Inst. Number = 1

0: 1.66000 MxB
3: 72.80000 xC
6: 506.89999 xC
9: 41.96000 MxB
12: -0.17000 MxB
15: -2.23000 MxB
18: -462.70999 MxB
ALMs: 0{HHHH}3

1: 40.20000 xC
4: 74.70000 xC
7: +DL
10: -0.01900 MxB
13: -0.40000 MxB
16: -0.02000 MxB
19: -300.51001 MxB
DI/O: 0{HHHHHHHH}7

2: 56.70000 xC
5: 72.50000 xC
8: 141.20000 xC
11: -0.09000 MxB
14: 0.01000 MxB
17: -152.70000 MxB
20: -4.56110 kMxB
Total: 0

Appendix A-2

Facility DAS Printer Output 19 July 1993, S60 Melt

MONDAY 7/19/93

Hydra Printer Output 07/19/93 07:39:26
Skipping 5 Scans Between Outputs

Hydra Printer Output 07/19/93 07:48:27
Skipping 5 Scans Between Outputs

07/19/93 07:48:35

Inst. Number = 1

0: -1.86000 MxB	1: 18.30000 xC	2: 21.50000 xC
3: 19.10000 xC	4: 55.20000 xC	5: 35.20000 xC
6: 66.80000 xC	7: +OL	8: 102.30000 xC
13: 05000 MxB	10: -0.02500 MxB	11: 1.26000 MxB
12: 9.11000 MxB	13: 10.14000 MxB	14: 0.89000 MxB
15: 429.59000 MxB	16: 0.65000 MxB	17: -1.14000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: -0.41000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 07:55:42

Inst. Number = 1

0: -0.67000 MxB	1: 18.70000 xC	2: 21.70000 xC
3: 19.30000 xC	4: 55.40000 xC	5: 38.50000 xC
6: 66.00000 xC	7: 24.80000 xC	8: 101.50000 xC
9: -21.54000 MxB	10: -0.00600 MxB	11: 1.27000 MxB
12: 9.03000 MxB	13: 10.04000 MxB	14: 0.89000 MxB
15: 456.34000 MxB	16: 0.65000 MxB	17: -1.18000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: -0.40000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 08:01:42

Inst. Number = 1

0: -1.86000 MxB	1: 19.80000 xC	2: 21.90000 xC
3: 19.50000 xC	4: 55.70000 xC	5: 40.30000 xC
6: 65.20000 xC	7: -OL	8: 100.70000 xC
13: 54.52000 MxB	10: 0.02400 MxB	11: 1.18000 MxB
14: 8.88000 MxB	13: 9.94000 MxB	14: 0.90000 MxB
15: 486.91000 MxB	16: 0.64000 MxB	17: -1.18000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: -0.40000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 08:07:42

3: 18.90000 xC	4: 55.80000 xC	5: 41.60000 xC
6: 64.40000 xC	7: -0L	8: 99.90000 xC
9: 28.77000 MxB	10: 0.01400 MxB	11: 1.27000 MxB
12: 8.76000 MxB	13: 9.85000 MxB	14: 0.89000 MxB
15: 460.01999 MxB	16: 0.63000 MxB	17: -1.14000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: -0.41000 MxB
: 0{HHHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 08:13:42

Inst. Number = 1

0: 1.45000 MxB	1: 19.60000 xC	2: 22.60000 xC
3: 19.40000 xC	4: 55.80000 xC	5: 43.00000 xC
6: 63.80000 xC	7: -0L	8: 99.00000 xC
9: 39.32000 MxB	10: -0.15800 MxB	11: 1.56000 MxB
12: 9.69000 MxB	13: 10.80000 MxB	14: 0.95000 MxB
15: 478.42001 MxB	16: 0.67000 MxB	17: -1.18000 MxB
18: -0.93000 MxB	19: -0.14000 MxB	20: -0.41000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 08:19:42

Inst. Number = 1

0: 32.53000 MxB	1: 18.40000 xC	2: 684.79999 xC
3: 233.39999 xC	4: 115.90000 xC	5: 53.80000 xC
6: 84.70000 xC	7: 3.70000 xC	8: 98.30000 xC
9: 236.69000 MxB	10: 0.37600 MxB	11: 0.96000 MxB
12: 10.74000 MxB	13: 11.95000 MxB	14: 0.86000 MxB
15: 418.20001 MxB	16: 0.66000 MxB	17: 131.86000 MxB
18: 62.81000 MxB	19: 7.92000 MxB	20: -0.43000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

9/93 08:25:42

Inst. Number = 1

0: 36.12000 MxB	1: 18.90000 xC	2: 145.60001 xC
3: 79.80000 xC	4: 88.40000 xC	5: 59.00000 xC
6: 84.70000 xC	7: -0L	8: 97.50000 xC
9: 171.28999 MxB	10: -0.06100 MxB	11: 1.50000 MxB
12: 10.71000 MxB	13: 12.00000 MxB	14: 1.00000 MxB
15: 437.01999 MxB	16: 0.72000 MxB	17: 131.86000 MxB
18: 86.30000 MxB	19: 11.45000 MxB	20: -0.41000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 08:31:42

Inst. Number = 1

0: 39.22000 MxB	1: 18.90000 xC	2: 141.60001 xC
3: 51.70000 xC	4: 76.80000 xC	5: 59.90000 xC
6: 83.90000 xC	7: -0L	8: 96.80000 xC
9: 189.47000 MxB	10: 0.00400 MxB	11: 1.45000 MxB
12: 10.16000 MxB	13: 11.48000 MxB	14: 1.00000 MxB
15: 471.06000 MxB	16: 0.74000 MxB	17: 131.91000 MxB
18: 106.76000 MxB	19: 13.97000 MxB	20: -0.43000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 08:37:42

Inst. Number = 1

0: 77.51000 MxB	1: 18.50000 xC	2: 156.20000 xC
3: 48.10000 xC	4: 73.00000 xC	5: 59.70000 xC
6: 84.20000 xC	7: -23.70000 xC	8: 96.00000 xC
9: 206.83000 MxB	10: 0.02200 MxB	11: 1.26000 MxB
12: 10.12000 MxB	13: 11.36000 MxB	14: 1.01000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 08:45:56

Inst. Number = 1

0: 77.97000 MxB
 49.40000 xC
 85.20000 xC
 9: 199.41000 MxB
 12: 10.24000 MxB
 15: 462.35001 MxB
 18: 100.90000 MxB

1: 19.50000 xC
 4: 71.10000 xC
 7: 109.60000 xC
 10: 0.03000 MxB
 13: 11.42000 MxB
 16: 0.71000 MxB
 19: 13.46000 MxB

2: 176.20000 xC
 5: 59.60000 xC
 8: 95.00000 xC
 11: 1.66000 MxB
 14: 1.01000 MxB
 17: 131.91000 MxB
 20: -0.43000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 08:51:56

Inst. Number = 1

0: 75.88000 MxB
 3: 52.20000 xC
 6: 87.40000 xC
 9: 129.97000 MxB
 12: 10.29000 MxB
 15: 442.60999 MxB
 18: 107.90000 MxB

1: 19.80000 xC
 4: 71.20000 xC
 7: 114.50000 xC
 10: 0.00000 MxB
 13: 11.47000 MxB
 16: 0.73000 MxB
 19: 14.48000 MxB

2: 190.20000 xC
 5: 59.70000 xC
 8: 94.30000 xC
 11: 1.57000 MxB
 14: 1.00000 MxB
 17: 134.39999 MxB
 20: 0.37000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 08:57:56

Inst. Number = 1

0: 75.46000 MxB
 3: 52.40000 xC
 6: 89.80000 xC
 9: 184.37000 MxB
 12: 10.27000 MxB
 15: 461.85999 MxB
 18: 109.46000 MxB

1: 19.10000 xC
 4: 71.20000 xC
 7: 115.30000 xC
 10: 0.02700 MxB
 13: 11.44000 MxB
 16: 0.66000 MxB
 19: 14.98000 MxB

2: 192.39999 xC
 5: 60.30000 xC
 8: 93.60000 xC
 11: 1.34000 MxB
 14: 1.00000 MxB
 17: 134.39999 MxB
 20: 0.36000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 09:03:57

Inst. Number = 1

0: 59.77000 MxB
 3: 55.60000 xC
 6: 90.80000 xC
 9: 128.53999 MxB
 12: 10.51000 MxB
 15: 449.82999 MxB
 18: 102.45000 MxB

1: 19.60000 xC
 4: 71.80000 xC
 7: 122.20000 xC
 10: 0.04700 MxB
 13: 11.70000 MxB
 16: 0.73000 MxB
 19: 12.97000 MxB

2: 213.70000 xC
 5: 60.40000 xC
 8: 93.10000 xC
 11: 1.82000 MxB
 14: 1.02000 MxB
 17: 124.19000 MxB
 20: 0.37000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 09:09:56

Inst. Number = 1

0: 34.78000 MxB
 3: 62.10000 xC
 6: 94.40000 xC
 9: 145.92000 MxB
 12: 10.67000 MxB
 15: 432.56000 MxB
 18: 104.79000 MxB

1: 19.70000 xC
 4: 73.90000 xC
 7: 143.70000 xC
 10: -0.00300 MxB
 13: 11.86000 MxB
 16: 0.75000 MxB
 19: 12.97000 MxB

2: 244.80000 xC
 5: 61.40000 xC
 8: 92.60000 xC
 11: 1.78000 MxB
 14: 1.04000 MxB
 17: 124.24000 MxB
 20: 0.36000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 09:15:56

3: 66.10000 xC	4: 75.40000 xC	5: 62.20000 xC
6: 96.80000 xC	7: 183.60001 xC	8: 92.10000 xC
9: 95.92000 MxB	10: 0.01700 MxB	11: 1.66000 MxB
12: 10.68000 MxB	13: 11.91000 MxB	14: 1.03000 MxB
15: 474.67001 MxB	16: 0.76000 MxB	17: 129.28000 MxB
18: 100.90000 MxB	19: 12.97000 MxB	20: 0.37000 MxB
/ : 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 09:21:57

Inst. Number = 1		
0: 34.23000 MxB	1: 19.70000 xC	2: 254.30000 xC
3: 68.60000 xC	4: 76.40000 xC	5: 62.90000 xC
6: 99.60000 xC	7: 240.00000 xC	8: 91.70000 xC
9: 77.71000 MxB	10: 0.06400 MxB	11: 1.75000 MxB
12: 10.82000 MxB	13: 12.02000 MxB	14: 1.03000 MxB
15: 482.17001 MxB	16: 0.76000 MxB	17: 131.91000 MxB
18: 101.67000 MxB	19: 13.47000 MxB	20: 1.14000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 09:27:56

Inst. Number = 1		
0: 52.96000 MxB	1: 20.00000 xC	2: 263.60001 xC
3: 66.10000 xC	4: 76.50000 xC	5: 63.80000 xC
6: 103.10000 xC	7: 312.39999 xC	8: 91.40000 xC
9: 57.09000 MxB	10: -0.02500 MxB	11: 1.89000 MxB
12: 10.69000 MxB	13: 11.91000 MxB	14: 1.02000 MxB
15: 513.87000 MxB	16: 0.72000 MxB	17: 129.32001 MxB
18: 100.91000 MxB	19: 12.96000 MxB	20: 1.14000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

9/93 09:33:56

Inst. Number = 1		
0: 60.02000 MxB	1: 21.70000 xC	2: 273.89999 xC
3: 68.40000 xC	4: 77.20000 xC	5: 64.30000 xC
6: 108.80000 xC	7: 392.10001 xC	8: 91.10000 xC
9: 127.24000 MxB	10: 0.00600 MxB	11: 1.77000 MxB
12: 10.67000 MxB	13: 11.90000 MxB	14: 1.02000 MxB
15: 487.32999 MxB	16: 0.77000 MxB	17: 129.32001 MxB
18: 98.56000 MxB	19: 12.96000 MxB	20: 1.14000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 09:39:57

Inst. Number = 1		
0: 58.20000 MxB	1: 21.20000 xC	2: 262.79999 xC
3: 68.60000 xC	4: 77.50000 xC	5: 64.80000 xC
6: 113.30000 xC	7: 471.89999 xC	8: 90.80000 xC
9: 57.15000 MxB	10: 0.07100 MxB	11: 2.15000 MxB
12: 10.73000 MxB	13: 11.97000 MxB	14: 1.00000 MxB
15: 445.37000 MxB	16: 0.71000 MxB	17: 131.86000 MxB
18: 100.95000 MxB	19: 13.47000 MxB	20: 1.16000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 09:45:56

Inst. Number = 1		
0: 55.10000 MxB	1: 20.00000 xC	2: 196.20000 xC
3: 60.20000 xC	4: 75.70000 xC	5: 65.10000 xC
6: 115.20000 xC	7: 551.79999 xC	8: 90.70000 xC
9: 57.15000 MxB	10: 0.13200 MxB	11: 1.80000 MxB
12: 10.60000 MxB	13: 11.82000 MxB	14: 1.04000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 09:51:56

Inst. Number = 1

0: 48.83000 MxB
 67.10000 xC
 119.50000 xC
 9: 57.15000 MxB
 12: 10.52000 MxB
 15: 427.39001 MxB
 18: 98.55000 MxB

1: 18.50000 xC
 4: 76.70000 xC
 7: 630.00000 xC
 10: 0.27900 MxB
 13: 11.73000 MxB
 16: 0.77000 MxB
 19: 12.96000 MxB

2: 224.89999 xC
 5: 65.20000 xC
 8: 90.80000 xC
 11: 1.93000 MxB
 14: 1.04000 MxB
 17: 129.32001 MxB
 20: 1.14000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 09:57:57

Inst. Number = 1

0: 41.71000 MxB
 3: 62.10000 xC
 6: 123.20000 xC
 9: 132.31000 MxB
 12: 10.62000 MxB
 15: 461.07999 MxB
 18: 90.00000 MxB

1: 21.10000 xC
 4: 76.20000 xC
 7: 699.20001 xC
 10: -0.12500 MxB
 13: 11.81000 MxB
 16: 0.73000 MxB
 19: 14.99000 MxB

2: 180.80000 xC
 5: 65.50000 xC
 8: 90.90000 xC
 11: 1.99000 MxB
 14: 1.03000 MxB
 17: 167.67999 MxB
 20: 1.16000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 10:03:56

Inst. Number = 1

0: 139.81000 MxB
 3: 74.00000 xC
 6: 124.90000 xC
 9: 148.69000 MxB
 12: 10.77000 MxB
 15: 502.04999 MxB
 18: 130.42999 MxB

1: 24.20000 xC
 4: 77.90000 xC
 7: 760.20001 xC
 10: 0.12100 MxB
 13: 11.94000 MxB
 16: 0.73000 MxB
 19: 25.07000 MxB

2: 214.50000 xC
 5: 65.90000 xC
 8: 91.30000 xC
 11: 1.95000 MxB
 14: 1.02000 MxB
 17: 190.74001 MxB
 20: 1.93000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 10:09:56

Inst. Number = 1

0: 141.28000 MxB
 3: 98.30000 xC
 6: 126.40000 xC
 9: 74.77000 MxB
 12: 11.38000 MxB
 15: 492.35999 MxB
 18: 119.56000 MxB

1: 24.70000 xC
 4: 86.30000 xC
 7: 949.90002 xC
 10: 0.08200 MxB
 13: 12.68000 MxB
 16: 0.79000 MxB
 19: 24.57000 MxB

2: 310.10001 xC
 5: 68.40000 xC
 8: 91.70000 xC
 11: 2.17000 MxB
 14: 1.09000 MxB
 17: 200.99001 MxB
 20: 1.93000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 10:17:04

Inst. Number = 1

0: 157.91000 MxB
 3: 81.30000 xC
 6: 129.10001 xC
 9: 29.43000 MxB
 12: 10.97000 MxB
 15: 489.32001 MxB
 18: 111.77000 MxB

1: 25.30000 xC
 4: 84.10000 xC
 7: 1.32520 kxC
 10: -0.10300 MxB
 13: 12.33000 MxB
 16: 0.81000 MxB
 19: 22.05000 MxB

2: 204.50000 xC
 5: 70.10000 xC
 8: 92.50000 xC
 11: 1.68000 MxB
 14: 1.12000 MxB
 17: 195.86000 MxB
 20: 1.93000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 10:23:03

Inst. Number = 1

3: 92.30000 xC	4: 86.10000 xC	5: 71.20000 xC
6: 130.89999 xC	7: 1.29050 kxC	8: 93.30000 xC
9: 87.33000 MxB	10: 0.08800 MxB	11: 1.62000 MxB
12: 11.00000 MxB	13: 12.30000 MxB	14: 1.11000 MxB
15: 471.76999 MxB	16: 0.80000 MxB	17: 188.14999 MxB
18: 111.77000 MxB	19: 21.04000 MxB	20: 2.70000 MxB
f : 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 10:29:03

Inst. Number = 1		
0: 161.28999 MxB	1: 26.00000 xC	2: 168.80000 xC
3: 84.50000 xC	4: 86.00000 xC	5: 72.30000 xC
6: 133.10001 xC	7: 1.30420 kxC	8: 94.30000 xC
9: 203.60001 MxB	10: 0.01600 MxB	11: 1.64000 MxB
12: 10.73000 MxB	13: 12.13000 MxB	14: 1.12000 MxB
15: 498.37000 MxB	16: 0.82000 MxB	17: 195.82001 MxB
18: 97.75000 MxB	19: 19.02000 MxB	20: 2.68000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 10:35:03

Inst. Number = 1		
0: 151.48000 MxB	1: 25.40000 xC	2: 145.60001 xC
3: 81.10000 xC	4: 85.20000 xC	5: 72.70000 xC
6: 134.89999 xC	7: 1.30930 kxC	8: 95.50000 xC
9: 199.85001 MxB	10: 0.00600 MxB	11: 1.50000 MxB
12: 10.70000 MxB	13: 12.07000 MxB	14: 1.13000 MxB
15: 462.42001 MxB	16: 0.80000 MxB	17: 200.95000 MxB
18: 91.52000 MxB	19: 18.24000 MxB	20: 2.70000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

9/93 10:41:03

Inst. Number = 1		
0: 94.63000 MxB	1: 23.90000 xC	2: 114.90000 xC
3: 76.20000 xC	4: 83.70000 xC	5: 72.90000 xC
6: 136.70000 xC	7: 1.31650 kxC	8: 97.00000 xC
9: 141.59000 MxB	10: 0.49100 MxB	11: 0.72000 MxB
12: 10.26000 MxB	13: 11.71000 MxB	14: 1.16000 MxB
15: 405.39001 MxB	16: 0.85000 MxB	17: 175.35001 MxB
18: 92.31000 MxB	19: 16.50000 MxB	20: 2.68000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 10:47:03

Inst. Number = 1		
0: 99.93000 MxB	1: 24.40000 xC	2: 92.70000 xC
3: 72.50000 xC	4: 82.00000 xC	5: 72.50000 xC
6: 137.80000 xC	7: 1.34210 kxC	8: 98.70000 xC
9: 155.22000 MxB	10: -0.16900 MxB	11: 2.16000 MxB
12: 10.79000 MxB	13: 12.16000 MxB	14: 1.12000 MxB
15: 487.69000 MxB	16: 0.66000 MxB	17: 195.86000 MxB
18: 96.97000 MxB	19: 19.02000 MxB	20: 3.48000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 10:53:03

Inst. Number = 1		
0: 89.39000 MxB	1: 23.60000 xC	2: 89.10000 xC
3: 75.70000 xC	4: 82.30000 xC	5: 72.70000 xC
6: 138.70000 xC	7: 1.35810 kxC	8: 100.60000 xC
9: 137.02000 MxB	10: -0.09900 MxB	11: 1.87000 MxB
12: 10.82000 MxB	13: 12.15000 MxB	14: 1.12000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 10:59:03

Inst. Number = 1

0: 104.97000 MxB	1: 23.60000 xC	2: 85.40000 xC
77.80000 xC	4: 82.90000 xC	5: 72.80000 xC
139.89999 xC	7: 1.36940 kxC	8: 102.90000 xC
9: 146.63000 MxB	10: -0.18000 MxB	11: 1.47000 MxB
12: 10.45000 MxB	13: 11.87000 MxB	14: 1.16000 MxB
15: 461.01001 MxB	16: 0.86000 MxB	17: 201.44000 MxB
18: 83.77000 MxB	19: 17.50000 MxB	20: 3.47000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 11:05:03

Inst. Number = 1

0: 103.15000 MxB	1: 25.40000 xC	2: 82.20000 xC
3: 78.40000 xC	4: 83.10000 xC	5: 72.80000 xC
6: 141.70000 xC	7: 1.39080 kxC	8: 105.20000 xC
9: 146.45000 MxB	10: -0.27700 MxB	11: 2.04000 MxB
12: 10.70000 MxB	13: 12.08000 MxB	14: 1.12000 MxB
15: 509.91000 MxB	16: 0.79000 MxB	17: 195.86000 MxB
18: 100.10000 MxB	19: 19.52000 MxB	20: 3.47000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 11:11:03

Inst. Number = 1

0: 116.14000 MxB	1: 26.50000 xC	2: 79.10000 xC
3: 76.10000 xC	4: 82.70000 xC	5: 73.20000 xC
6: 143.70000 xC	7: 1.39550 kxC	8: 107.80000 xC
9: 145.74001 MxB	10: -0.17300 MxB	11: 1.64000 MxB
12: 10.48000 MxB	13: 11.77000 MxB	14: 1.12000 MxB
15: 510.19000 MxB	16: 0.81000 MxB	17: 177.94000 MxB
18: 93.48000 MxB	19: 18.01000 MxB	20: 4.24000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 11:17:03

Inst. Number = 1

0: 115.74000 MxB	1: 26.60000 xC	2: 75.00000 xC
3: 73.10000 xC	4: 82.10000 xC	5: 73.00000 xC
6: 145.50000 xC	7: 1.39420 kxC	8: 110.50000 xC
9: 144.02000 MxB	10: -0.17500 MxB	11: 1.63000 MxB
12: 10.25000 MxB	13: 11.58000 MxB	14: 1.10000 MxB
15: 506.37000 MxB	16: 0.77000 MxB	17: 190.74001 MxB
18: 107.59000 MxB	19: 20.53000 MxB	20: 4.24000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 11:23:03

Inst. Number = 1

0: 125.92000 MxB	1: 26.80000 xC	2: 72.20000 xC
3: 73.50000 xC	4: 82.10000 xC	5: 72.90000 xC
6: 147.00000 xC	7: 1.38310 kxC	8: 113.40000 xC
9: 139.25999 MxB	10: 0.02300 MxB	11: 1.47000 MxB
9.98000 MxB	13: 11.27000 MxB	14: 1.10000 MxB
12: 463.48999 MxB	16: 0.77000 MxB	17: 195.86000 MxB
18: 89.20000 MxB	19: 17.50000 MxB	20: 4.24000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 11:29:03

3: 78.40000 xC	4: 82.80000 xC	5: 73.10000 xC
6: 148.20000 xC	7: 1.38290 kxC	8: 116.30000 xC
9: 137.56000 MxB	10: -0.10800 MxB	11: 1.45000 MxB
12: 9.56000 MxB	13: 10.79000 MxB	14: 1.06000 MxB
15: 513.45001 MxB	16: 0.72000 MxB	17: 198.41000 MxB
18: 100.89000 MxB	19: 20.03000 MxB	20: 4.25000 MxB
A : 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 11:35:03

Inst. Number = 1		
0: 127.75000 MxB	1: 27.90000 xC	2: 71.60000 xC
3: 74.80000 xC	4: 82.40000 xC	5: 73.20000 xC
6: 148.50000 xC	7: 1.37840 kxC	8: 119.50000 xC
9: 143.14999 MxB	10: -0.01100 MxB	11: 1.52000 MxB
12: 9.61000 MxB	13: 10.82000 MxB	14: 1.05000 MxB
15: 561.91998 MxB	16: 0.72000 MxB	17: 188.19000 MxB
18: 91.54000 MxB	19: 16.56000 MxB	20: 5.01000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 11:41:03

Inst. Number = 1		
0: 120.71000 MxB	1: 30.60000 xC	2: 72.20000 xC
3: 77.90000 xC	4: 83.10000 xC	5: 73.50000 xC
6: 149.00000 xC	7: 1.38060 kxC	8: 122.90000 xC
9: 145.53999 MxB	10: 0.15300 MxB	11: 1.36000 MxB
12: 8.59000 MxB	13: 10.28000 MxB	14: 1.09000 MxB
15: 513.22998 MxB	16: 0.76000 MxB	17: 200.95000 MxB
18: 88.42000 MxB	19: 17.50000 MxB	20: 5.02000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

7/93 11:47:03

Inst. Number = 1		
0: 128.46001 MxB	1: 29.80000 xC	2: 69.20000 xC
3: 76.40000 xC	4: 82.90000 xC	5: 73.60000 xC
6: 149.39999 xC	7: 1.38530 kxC	8: 126.30000 xC
9: 144.10001 MxB	10: -0.10700 MxB	11: 1.61000 MxB
12: 9.56000 MxB	13: 10.77000 MxB	14: 1.06000 MxB
15: 540.40997 MxB	16: 0.72000 MxB	17: 195.86000 MxB
18: 97.75000 MxB	19: 19.52000 MxB	20: 5.02000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 11:53:03

Inst. Number = 1		
0: 115.76000 MxB	1: 29.80000 xC	2: 68.10000 xC
3: 74.00000 xC	4: 82.20000 xC	5: 73.50000 xC
6: 150.39999 xC	7: 1.41140 kxC	8: 129.70000 xC
9: 144.97000 MxB	10: -0.11100 MxB	11: 1.86000 MxB
12: 9.27000 MxB	13: 10.57000 MxB	14: 1.09000 MxB
15: 501.35001 MxB	16: 0.77000 MxB	17: 190.69000 MxB
18: 96.20000 MxB	19: 18.52000 MxB	20: 5.02000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 11:59:03

Inst. Number = 1		
0: 120.41000 MxB	1: 28.90000 xC	2: 67.40000 xC
3: 76.70000 xC	4: 82.80000 xC	5: 73.60000 xC
6: 151.39999 xC	7: 1.47060 kxC	8: 133.30000 xC
9: 141.13000 MxB	10: -0.08900 MxB	11: 1.60000 MxB
12: 9.55000 MxB	13: 10.81000 MxB	14: 1.06000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 12:05:03

Inst. Number = 1

0: 109.98000 MxB	1: 31.80000 xC	2: 65.00000 xC
71.70000 xC	4: 82.50000 xC	5: 73.90000 xC
152.39999 xC	7: 1.55350 kxC	8: 136.70000 xC
9: 137.87000 MxB	10: -0.27700 MxB	11: 1.93000 MxB
12: 9.43000 MxB	13: 10.69000 MxB	14: 1.07000 MxB
15: 569.84998 MxB	16: 0.73000 MxB	17: -1.14000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: 5.81000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 12:11:03

Inst. Number = 1

0: 101.39000 MxB	1: 29.10000 xC	2: 64.60000 xC
3: 83.80000 xC	4: 84.30000 xC	5: 74.20000 xC
6: 154.20000 xC	7: +0L	8: 140.10001 xC
9: 144.95000 MxB	10: 0.01800 MxB	11: 1.86000 MxB
12: 9.58000 MxB	13: 10.88000 MxB	14: 1.09000 MxB
15: 570.90997 MxB	16: 0.74000 MxB	17: 198.36000 MxB
18: 104.01000 MxB	19: 20.47000 MxB	20: 5.79000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 12:17:03

Inst. Number = 1

0: 113.65000 MxB	1: 30.50000 xC	2: 63.70000 xC
3: 88.00000 xC	4: 85.90000 xC	5: 74.90000 xC
154.89999 xC	7: 248.70000 xC	8: 143.60001 xC
141.24001 MxB	10: 0.13800 MxB	11: 1.59000 MxB
9.61000 MxB	13: 10.88000 MxB	14: 1.08000 MxB
15: 557.82001 MxB	16: 0.74000 MxB	17: 193.32001 MxB
18: 96.97000 MxB	19: 19.02000 MxB	20: 5.79000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

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Inst. Number = 1

0: 113.69000 MxB	1: 28.40000 xC	2: 58.70000 xC
3: 82.80000 xC	4: 85.40000 xC	5: 75.30000 xC
6: 156.00000 xC	7: +0L	8: 146.89999 xC
9: 141.03999 MxB	10: -0.18600 MxB	11: 1.99000 MxB
12: 9.39000 MxB	13: 10.69000 MxB	14: 1.10000 MxB
15: 559.22998 MxB	16: 0.72000 MxB	17: 198.45000 MxB
18: 104.78000 MxB	19: 21.04000 MxB	20: 6.58000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

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Inst. Number = 1

0: 101.71000 MxB	1: 28.40000 xC	2: +0L
3: 83.90000 xC	4: 85.70000 xC	5: 75.80000 xC
6: 157.50000 xC	7: +0L	8: 150.00000 xC
140.57001 MxB	10: -0.13100 MxB	11: 1.84000 MxB
9.28000 MxB	13: 10.63000 MxB	14: 1.11000 MxB
646.90997 MxB	16: 0.76000 MxB	17: 195.82001 MxB
18: 96.20000 MxB	19: 19.02000 MxB	20: 6.59000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

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3: 87.20000 xC
 6: 159.30000 xC
 9: 139.13000 MxB
 12: 8.63000 MxB
 15: 665.03003 MxB
 18: 100.12000 MxB
 :: 0{HHHH}3

4: 86.80000 xC
 7: +0L
 10: -0.02000 MxB
 13: 10.11000 MxB
 16: 0.82000 MxB
 19: 19.02000 MxB
 DI/O: 0{HHHHHHHH}7

5: 76.30000 xC
 8: 153.20000 xC
 11: 1.40000 MxB
 14: 1.12000 MxB
 17: 190.74001 MxB
 20: 6.58000 MxB
 Total: 0

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Inst. Number = 1

0: 116.41000 MxB
 3: 93.30000 xC
 6: 161.30000 xC
 9: 138.35001 MxB
 12: 9.22000 MxB
 15: 751.92999 MxB
 18: 94.64000 MxB
 ALMs: 0{HHHH}3

1: 29.50000 xC
 4: 88.00000 xC
 7: +0L
 10: 0.07900 MxB
 13: 10.51000 MxB
 16: 0.74000 MxB
 19: 18.01000 MxB
 DI/O: 0{HHHHHHHH}7

2: 69.80000 xC
 5: 76.40000 xC
 8: 156.39999 xC
 11: 1.48000 MxB
 14: 1.07000 MxB
 17: 188.19000 MxB
 20: 6.58000 MxB
 Total: 0

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Inst. Number = 1

0: 111.59000 MxB
 3: 94.60000 xC
 6: 164.30000 xC
 9: 138.85001 MxB
 12: 9.09000 MxB
 15: 735.71997 MxB
 18: 100.12000 MxB
 ALMs: 0{HHHH}3

1: 29.50000 xC
 4: 88.60000 xC
 7: +0L
 10: 0.03400 MxB
 13: 10.41000 MxB
 16: 0.74000 MxB
 19: 20.04000 MxB
 DI/O: 0{HHHHHHHH}7

2: 70.40000 xC
 5: 77.20000 xC
 8: 159.50000 xC
 11: 1.70000 MxB
 14: 1.09000 MxB
 17: 198.41000 MxB
 20: 7.35000 MxB
 Total: 0

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Inst. Number = 1

0: 115.28000 MxB
 3: 95.70000 xC
 6: 166.80000 xC
 9: 139.92000 MxB
 12: 9.22000 MxB
 15: 816.75000 MxB
 18: 99.33000 MxB
 ALMs: 0{HHHH}3

1: 29.70000 xC
 4: 89.30000 xC
 7: +0L
 10: 0.02000 MxB
 13: 10.53000 MxB
 16: 0.73000 MxB
 19: 20.03000 MxB
 DI/O: 0{HHHHHHHH}7

2: 66.40000 xC
 5: 77.40000 xC
 8: 162.60001 xC
 11: 1.83000 MxB
 14: 1.07000 MxB
 17: 200.99001 MxB
 20: 7.35000 MxB
 Total: 0

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Inst. Number = 1

0: 112.81000 MxB
 3: 95.80000 xC
 6: 169.50000 xC
 9: 143.64000 MxB
 12: 8.95000 MxB
 15: 826.09003 MxB
 18: 99.91000 MxB
 ALMs: 0{HHHH}3

1: 31.80000 xC
 4: 89.50000 xC
 7: +0L
 10: -0.02600 MxB
 13: 10.28000 MxB
 16: 0.75000 MxB
 19: 19.52000 MxB
 DI/O: 0{HHHHHHHH}7

2: 65.40000 xC
 5: 77.80000 xC
 8: 166.00000 xC
 11: 1.57000 MxB
 14: 1.09000 MxB
 17: 193.32001 MxB
 20: 7.35000 MxB
 Total: 0

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Inst. Number = 1

0: 111.45000 MxB
 3: 97.20000 xC
 6: 172.39999 xC
 9: 141.56000 MxB
 12: 8.99000 MxB

1: 31.50000 xC
 4: 89.90000 xC
 7: +0L
 10: -0.14300 MxB
 13: 10.35000 MxB

2: 62.30000 xC
 5: 78.10000 xC
 8: 169.39999 xC
 11: 1.74000 MxB
 14: 1.09000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

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Inst. Number = 1

0: 109.31000 MxB	1: 32.10000 xC	2: 61.20000 xC
96.80000 xC	4: 90.00000 xC	5: 78.60000 xC
175.20000 xC	7: +DL	8: 172.89999 xC
9: 143.73000 MxB	10: -0.09100 MxB	11: 1.75000 MxB
12: 9.03000 MxB	13: 10.33000 MxB	14: 1.08000 MxB
15: -2.30000 MxB	16: 0.76000 MxB	17: 193.00999 MxB
18: 107.11000 MxB	19: 20.53000 MxB	20: 8.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 107.22000 MxB	1: 33.30000 xC	2: 61.20000 xC
3: 93.40000 xC	4: 90.10000 xC	5: 79.00000 xC
6: 178.89999 xC	7: +DL	8: 176.50000 xC
9: 143.80000 MxB	10: -0.17200 MxB	11: 1.74000 MxB
12: 8.65000 MxB	13: 9.99000 MxB	14: 1.08000 MxB
15: -2.30000 MxB	16: 0.63000 MxB	17: 193.28000 MxB
18: 98.55000 MxB	19: 19.02000 MxB	20: 8.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 109.44000 MxB	1: 34.50000 xC	2: 141.60001 xC
3: 87.20000 xC	4: 88.00000 xC	5: 78.80000 xC
182.20000 xC	7: +DL	8: 180.30000 xC
147.75000 MxB	10: -0.27700 MxB	11: 1.85000 MxB
8.37000 MxB	13: 9.71000 MxB	14: 1.09000 MxB
15: -261.94000 MxB	16: 0.74000 MxB	17: 198.45000 MxB
18: 96.20000 MxB	19: 19.02000 MxB	20: 8.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

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0: 105.10000 MxB	1: 34.30000 xC	2: 115.10000 xC
3: 86.50000 xC	4: 87.50000 xC	5: 78.50000 xC
6: 185.39999 xC	7: +DL	8: 183.89999 xC
9: 146.71001 MxB	10: 0.03800 MxB	11: 1.10000 MxB
12: 7.95000 MxB	13: 9.35000 MxB	14: 1.11000 MxB
15: 525.47998 MxB	16: 0.75000 MxB	17: 188.14999 MxB
18: 97.74000 MxB	19: 18.52000 MxB	20: 8.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 113.40000 MxB	1: 33.30000 xC	2: 93.90000 xC
3: 81.80000 xC	4: 86.10000 xC	5: 78.40000 xC
6: 187.20000 xC	7: +DL	8: 187.50000 xC
144.46001 MxB	10: -0.23400 MxB	11: 1.74000 MxB
8.29000 MxB	13: 9.60000 MxB	14: 1.07000 MxB
581.38000 MxB	16: 0.72000 MxB	17: 195.86000 MxB
18: 91.54000 MxB	19: 17.57000 MxB	20: 8.89000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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T-1 M-1-1-1-1-1

3: 80.00000 xC	4: 85.30000 xC	5: 78.00000 xC
6: 188.50000 xC	7: +DL	8: 191.20000 xC
9: 137.98000 MxB	10: -0.02300 MxB	11: 1.56000 MxB
12: 8.31000 MxB	13: 9.61000 MxB	14: 1.08000 MxB
15: 555.40997 MxB	16: 0.72000 MxB	17: 200.99001 MxB
18: 94.28000 MxB	19: 19.52000 MxB	20: 8.89000 MxB
f : 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 98.59000 MxB	1: 30.60000 xC	2: 70.00000 xC
3: 76.60000 xC	4: 84.30000 xC	5: 77.30000 xC
6: 189.20000 xC	7: +DL	8: 194.80000 xC
9: 57.15000 MxB	10: 0.11400 MxB	11: 1.38000 MxB
12: 8.56000 MxB	13: 9.82000 MxB	14: 1.05000 MxB
15: 489.53000 MxB	16: 0.74000 MxB	17: 198.41000 MxB
18: 105.56000 MxB	19: 21.04000 MxB	20: 8.90000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 94.06000 MxB	1: 28.60000 xC	2: 65.00000 xC
3: 75.50000 xC	4: 83.40000 xC	5: 76.90000 xC
6: 189.39999 xC	7: +DL	8: 198.30000 xC
9: 57.15000 MxB	10: 0.07200 MxB	11: 1.61000 MxB
12: 8.25000 MxB	13: 9.56000 MxB	14: 1.08000 MxB
15: 494.34000 MxB	16: 0.73000 MxB	17: 193.28000 MxB
18: 104.78000 MxB	19: 20.54000 MxB	20: 8.90000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 95.09000 MxB	1: 33.90000 xC	2: 64.90000 xC
3: 79.80000 xC	4: 84.20000 xC	5: 76.60000 xC
6: 190.10001 xC	7: +DL	8: 201.80000 xC
9: 148.13000 MxB	10: -0.06400 MxB	11: 1.60000 MxB
12: 8.69000 MxB	13: 9.88000 MxB	14: 1.05000 MxB
15: 523.14001 MxB	16: 0.70000 MxB	17: 200.95000 MxB
18: 92.31000 MxB	19: 18.52000 MxB	20: 9.68000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 88.36000 MxB	1: 31.00000 xC	2: 61.30000 xC
3: 75.80000 xC	4: 83.10000 xC	5: 76.20000 xC
6: 190.50000 xC	7: +DL	8: 205.39999 xC
9: 141.86000 MxB	10: -0.05100 MxB	11: 1.69000 MxB
12: 8.47000 MxB	13: 9.77000 MxB	14: 1.06000 MxB
15: 521.94000 MxB	16: 0.72000 MxB	17: 193.28000 MxB
18: 104.78000 MxB	19: 20.54000 MxB	20: 9.68000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 14:11:04

Inst. Number = 1		
0: 101.92000 MxB	1: 29.70000 xC	2: 61.60000 xC
3: 80.60000 xC	4: 83.90000 xC	5: 75.90000 xC
6: 191.10001 xC	7: +DL	8: 209.20000 xC
9: 140.94000 MxB	10: 0.07600 MxB	11: 1.39000 MxB
12: 8.68000 MxB	13: 9.96000 MxB	14: 1.04000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

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Inst. Number = 1

0: 98.25000 MxB	1: 30.30000 xC	2: 61.00000 xC
3: 75.90000 xC	4: 83.30000 xC	5: 76.00000 xC
6: 191.20000 xC	7: +0L	8: 213.00000 xC
9: 141.13000 MxB	10: 0.02100 MxB	11: 1.54000 MxB
12: 8.70000 MxB	13: 9.95000 MxB	14: 1.05000 MxB
15: 500.20999 MxB	16: 0.70000 MxB	17: 190.74001 MxB
18: 96.98000 MxB	19: 18.52000 MxB	20: 9.67000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 96.24000 MxB	1: 31.50000 xC	2: 59.50000 xC
3: 80.00000 xC	4: 84.00000 xC	5: 75.90000 xC
6: 191.89999 xC	7: +0L	8: 216.80000 xC
9: 141.06000 MxB	10: 0.00900 MxB	11: 1.60000 MxB
12: 8.75000 MxB	13: 9.99000 MxB	14: 1.04000 MxB
15: 538.57001 MxB	16: 0.69000 MxB	17: 200.95000 MxB
18: 100.89000 MxB	19: 20.53000 MxB	20: 10.45000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 97.12000 MxB	1: 31.10000 xC	2: 57.80000 xC
3: 79.60000 xC	4: 84.10000 xC	5: 76.30000 xC
6: 192.70000 xC	7: +0L	8: 220.70000 xC
9: 134.73000 MxB	10: -0.09900 MxB	11: 1.78000 MxB
12: 8.42000 MxB	13: 9.68000 MxB	14: 1.07000 MxB
15: 465.25000 MxB	16: 0.71000 MxB	17: 190.78000 MxB
18: 96.98000 MxB	19: 18.52000 MxB	20: 10.44000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 90.96000 MxB	1: 31.40000 xC	2: 56.10000 xC
3: 79.20000 xC	4: 84.00000 xC	5: 76.20000 xC
6: 193.60001 xC	7: +0L	8: 224.50000 xC
9: 141.03000 MxB	10: -0.09500 MxB	11: 1.72000 MxB
12: 8.27000 MxB	13: 9.57000 MxB	14: 1.08000 MxB
15: 533.46997 MxB	16: 0.71000 MxB	17: 195.86000 MxB
18: 96.20000 MxB	19: 19.03000 MxB	20: 10.44000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1

0: 89.70000 MxB	1: 31.10000 xC	2: 61.90000 xC
3: 83.80000 xC	4: 84.70000 xC	5: 76.10000 xC
6: 194.39999 xC	7: +0L	8: 228.39999 xC
9: 138.42999 MxB	10: 0.14000 MxB	11: 1.41000 MxB
12: 8.31000 MxB	13: 9.64000 MxB	14: 1.07000 MxB
15: 517.69000 MxB	16: 0.72000 MxB	17: 193.32001 MxB
18: 102.44000 MxB	19: 20.04000 MxB	20: 10.45000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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3: 89.60000 xC
 6: 194.80000 xC
 9: 138.24001 MxB
 12: 8.48000 MxB
 15: 505.23999 MxB
 18: 96.20000 MxB
 / : 0{HHHH}3

4: 86.60000 xC
 7: +DL
 10: 0.11100 MxB
 13: 9.73000 MxB
 16: 0.71000 MxB
 19: 19.03000 MxB
 DI/O: 0{HHHHHHHH}7

5: 76.40000 xC
 8: 232.30000 xC
 11: 1.41000 MxB
 14: 1.06000 MxB
 17: 194.57001 MxB
 20: 11.21000 MxB
 Total: 0

07/19/93 14:53:03

Inst. Number = 1

0: 96.74000 MxB
 3: 83.40000 xC
 6: 196.00000 xC
 9: 138.92000 MxB
 12: 8.31000 MxB
 15: 507.42999 MxB
 18: 106.34000 MxB
 ALMs: 0{HHHH}3

1: 31.30000 xC
 4: 85.40000 xC
 7: +DL
 10: 0.24500 MxB
 13: 9.61000 MxB
 16: 0.72000 MxB
 19: 21.04000 MxB
 DI/O: 0{HHHHHHHH}7

2: 67.90000 xC
 5: 76.50000 xC
 8: 236.10001 xC
 11: 1.35000 MxB
 14: 1.07000 MxB
 17: 198.41000 MxB
 20: 11.21000 MxB
 Total: 0

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Inst. Number = 1

0: 100.64000 MxB
 3: 88.70000 xC
 6: 198.50000 xC
 9: 137.66000 MxB
 12: 8.35000 MxB
 15: 529.51001 MxB
 18: 102.44000 MxB
 ALMs: 0{HHHH}3

1: 31.20000 xC
 4: 86.80000 xC
 7: +DL
 10: -0.05900 MxB
 13: 9.69000 MxB
 16: 0.73000 MxB
 19: 20.55000 MxB
 DI/O: 0{HHHHHHHH}7

2: 69.00000 xC
 5: 76.90000 xC
 8: 240.00000 xC
 11: 1.68000 MxB
 14: 1.10000 MxB
 17: 198.41000 MxB
 20: 11.22000 MxB
 Total: 0

9/93 15:05:04

Inst. Number = 1

0: 102.80000 MxB
 3: 85.50000 xC
 6: 200.80000 xC
 9: 148.19000 MxB
 12: 8.23000 MxB
 15: 555.97998 MxB
 18: 100.87000 MxB
 ALMs: 0{HHHH}3

1: 32.00000 xC
 4: 86.40000 xC
 7: +DL
 10: 0.00000 MxB
 13: 9.57000 MxB
 16: 0.70000 MxB
 19: 19.52000 MxB
 DI/O: 0{HHHHHHHH}7

2: 68.00000 xC
 5: 77.50000 xC
 8: 244.10001 xC
 11: 1.72000 MxB
 14: 1.10000 MxB
 17: 190.74001 MxB
 20: 11.22000 MxB
 Total: 0

07/19/93 15:11:03

Inst. Number = 1

0: 102.02000 MxB
 3: 85.90000 xC
 6: 203.20000 xC
 9: 145.28999 MxB
 12: 8.22000 MxB
 15: 520.09998 MxB
 18: 100.89000 MxB
 ALMs: 0{HHHH}3

1: 32.90000 xC
 4: 86.40000 xC
 7: +DL
 10: -0.09500 MxB
 13: 9.62000 MxB
 16: 0.74000 MxB
 19: 19.53000 MxB
 DI/O: 0{HHHHHHHH}7

2: 68.00000 xC
 5: 77.50000 xC
 8: 248.10001 xC
 11: 1.78000 MxB
 14: 1.10000 MxB
 17: 193.32001 MxB
 20: 11.98000 MxB
 Total: 0

07/19/93 15:17:04

Inst. Number = 1

0: 95.63000 MxB
 3: 81.40000 xC
 6: 205.80000 xC
 9: 144.81000 MxB
 12: 8.10000 MxB

1: 32.90000 xC
 4: 85.60000 xC
 7: +DL
 10: -0.15700 MxB
 13: 9.55000 MxB

2: 65.20000 xC
 5: 77.50000 xC
 8: 252.30000 xC
 11: 1.65000 MxB
 14: 1.11000 MxB

ALMs: 0(HHHH)3

DI/O: 0(HHHHHHHH)7

Total: 0

07/19/93 15:23:04

Inst. Number = 1

0: 96.62000 MxB	1: 33.30000 xC	2: 60.30000 xC
81.50000 xC	4: 84.80000 xC	5: 77.30000 xC
208.50000 xC	7: +0L	8: 256.70001 xC
9: 145.31000 MxB	10: -0.14300 MxB	11: 1.90000 MxB
12: 8.10000 MxB	13: 9.55000 MxB	14: 1.11000 MxB
15: 498.59000 MxB	16: 0.72000 MxB	17: 193.28000 MxB
18: 95.86000 MxB	19: 18.53000 MxB	20: 12.00000 MxB

Total: 0

07/19/93 15:29:03

Inst. Number = 1

0: 110.74000 MxB	1: 31.40000 xC	2: 58.40000 xC
3: 86.20000 xC	4: 85.80000 xC	5: 77.00000 xC
6: 211.50000 xC	7: +0L	8: 261.20001 xC
9: 139.42000 MxB	10: -0.20200 MxB	11: 1.89000 MxB
12: 8.35000 MxB	13: 9.72000 MxB	14: 1.11000 MxB
15: 527.03003 MxB	16: 0.73000 MxB	17: 193.32001 MxB
18: 97.74000 MxB	19: 19.02000 MxB	20: 12.00000 MxB

Total: 0

07/19/93 15:35:04

Inst. Number = 1

0: 1.89000 MxB	1: 29.80000 xC	2: 60.60000 xC
3: 98.20000 xC	4: 87.70000 xC	5: 77.30000 xC
217.39999 xC	7: +0L	8: 265.89999 xC
130.50999 MxB	10: -0.22800 MxB	11: 1.96000 MxB
8.43000 MxB	13: 9.85000 MxB	14: 1.09000 MxB
15: 540.76001 MxB	16: 0.73000 MxB	17: 190.74001 MxB
18: 102.44000 MxB	19: 18.53000 MxB	20: 12.78000 MxB

Total: 0

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Inst. Number = 1

0: -1.36000 MxB	1: 31.30000 xC	2: 76.10000 xC
3: 74.70000 xC	4: 86.20000 xC	5: 78.20000 xC
6: 223.80000 xC	7: +0L	8: 270.70001 xC
9: 67.02000 MxB	10: -0.27600 MxB	11: 1.79000 MxB
12: 8.00000 MxB	13: 9.53000 MxB	14: 1.11000 MxB
15: 538.14001 MxB	16: 0.73000 MxB	17: -1.14000 MxB
18: -0.95000 MxB	19: -0.14000 MxB	20: 12.79000 MxB

Total: 0

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Inst. Number = 1

0: 1.74000 MxB	1: 28.60000 xC	2: 61.70000 xC
3: 67.60000 xC	4: 83.10000 xC	5: 77.70000 xC
6: 232.10001 xC	7: +0L	8: 275.29999 xC
57.15000 MxB	10: -0.27600 MxB	11: 1.94000 MxB
7.91000 MxB	13: 9.46000 MxB	14: 1.10000 MxB
508.85001 MxB	16: 0.66000 MxB	17: -1.14000 MxB
18: -0.94000 MxB	19: -0.13000 MxB	20: 12.78000 MxB

Total: 0

07/19/93 15:53:04

3: 78.50000 xC	4: 83.80000 xC	5: 77.20000 xC
6: 236.70000 xC	7: +0L	8: 280.00000 xC
9: 57.15000 MxB	10: -0.04600 MxB	11: 1.85000 MxB
12: 8.21000 MxB	13: 9.60000 MxB	14: 1.09000 MxB
15: 493.70001 MxB	16: 0.72000 MxB	17: 183.11000 MxB
18: 104.80000 MxB	19: 14.99000 MxB	20: 12.77000 MxB
(: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 15:59:04

Inst. Number = 1		
0: 4.65000 MxB	1: 29.10000 xC	2: 69.80000 xC
3: 79.00000 xC	4: 84.20000 xC	5: 77.00000 xC
6: 239.10001 xC	7: +0L	8: 284.60001 xC
9: 57.15000 MxB	10: -0.24000 MxB	11: 2.23000 MxB
12: 8.38000 MxB	13: 9.80000 MxB	14: 1.09000 MxB
15: 578.97998 MxB	16: 0.54000 MxB	17: 206.08000 MxB
18: 104.78000 MxB	19: 21.04000 MxB	20: 12.77000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 16:05:04

Inst. Number = 1		
0: -2.09000 MxB	1: 28.30000 xC	2: 75.80000 xC
3: 88.00000 xC	4: 87.20000 xC	5: 77.40000 xC
6: 249.50000 xC	7: +0L	8: 289.60001 xC
9: 57.15000 MxB	10: -0.27700 MxB	11: 2.02000 MxB
12: 8.15000 MxB	13: 9.71000 MxB	14: 1.10000 MxB
15: 549.67999 MxB	16: 0.74000 MxB	17: 165.17999 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: 12.77000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

(9/93 16:11:04

Inst. Number = 1		
0: -0.04000 MxB	1: 27.70000 xC	2: 68.80000 xC
3: 67.00000 xC	4: 83.40000 xC	5: 75.80000 xC
6: 276.70001 xC	7: +0L	8: 294.70001 xC
9: 57.15000 MxB	10: 0.51500 MxB	11: -0.50000 MxB
12: -1.06000 MxB	13: -1.55000 MxB	14: 0.28000 MxB
15: 229.32001 MxB	16: 0.02000 MxB	17: -1.14000 MxB
18: -0.94000 MxB	19: -0.13000 MxB	20: 13.56000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 16:17:04

Inst. Number = 1		
0: 1.82000 MxB	1: 28.00000 xC	2: 61.70000 xC
3: 62.10000 xC	4: 80.70000 xC	5: 75.50000 xC
6: 293.50000 xC	7: +0L	8: 299.70001 xC
9: 57.15000 MxB	10: -0.27600 MxB	11: 1.55000 MxB
12: 7.26000 MxB	13: 8.73000 MxB	14: 1.05000 MxB
15: 702.60999 MxB	16: 0.70000 MxB	17: -1.14000 MxB
18: -0.94000 MxB	19: -0.13000 MxB	20: 13.55000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 16:23:04

Inst. Number = 1		
0: 98.38000 MxB	1: 27.90000 xC	2: 56.80000 xC
3: 76.90000 xC	4: 81.80000 xC	5: 74.80000 xC
6: 298.89999 xC	7: +0L	8: 305.10001 xC
9: 57.15000 MxB	10: -0.03800 MxB	11: 1.42000 MxB
12: 7.23000 MxB	13: 8.67000 MxB	14: 1.05000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 16:29:04

Inst. Number = 1

0: 101.33000 MxB
 126.30000 xC
 296.10001 xC

9: 57.15000 MxB
 12: 7.86000 MxB
 15: 989.07001 MxB
 18: -0.94000 MxB

ALMs: 0{HHHH}3

1: 27.90000 xC
 4: 92.10000 xC
 7: +0L

10: -0.27600 MxB
 13: 9.26000 MxB
 16: 0.71000 MxB
 19: -0.13000 MxB

DI/O: 0{HHHHHHHH}7

2: 59.90000 xC
 5: 76.40000 xC
 8: 310.70001 xC

11: 1.57000 MxB
 14: 1.05000 MxB
 17: -1.14000 MxB
 20: 13.56000 MxB

Total: 0

07/19/93 16:35:04

Inst. Number = 1

0: -1.89000 MxB
 3: 71.90000 xC
 6: 295.60001 xC

9: 57.15000 MxB
 12: 8.10000 MxB
 15: +0L
 18: -0.94000 MxB

ALMs: 0{HHHH}3

1: 27.10000 xC
 4: 83.80000 xC
 7: +0L

10: -0.27600 MxB
 13: 9.51000 MxB
 16: 0.70000 MxB
 19: -0.14000 MxB

DI/O: 0{HHHHHHHH}7

2: 59.00000 xC
 5: 75.80000 xC
 8: 316.60001 xC

11: 2.36000 MxB
 14: 1.06000 MxB
 17: -1.09000 MxB
 20: 13.55000 MxB

Total: 0

07/19/93 16:41:04

Inst. Number = 1

0: -0.34000 MxB
 3: 93.30000 xC
 298.50000 xC

57.15000 MxB
 12: 7.52000 MxB
 15: +0L
 18: 102.43000 MxB

ALMs: 0{HHHH}3

1: 27.10000 xC
 4: 91.10000 xC
 7: +0L

10: -0.27600 MxB
 13: 8.95000 MxB
 16: 0.66000 MxB
 19: 20.03000 MxB

DI/O: 0{HHHHHHHH}7

2: 57.80000 xC
 5: 77.50000 xC
 8: 322.60001 xC

11: 1.50000 MxB
 14: 1.03000 MxB
 17: 198.36000 MxB
 20: 13.55000 MxB

Total: 0

07/19/93 16:47:04

Inst. Number = 1

0: -1.63000 MxB
 3: 74.00000 xC
 6: 303.10001 xC

9: 57.15000 MxB
 12: 7.36000 MxB
 15: +0L
 18: 152.92999 MxB

ALMs: 0{HHHH}3

1: 27.80000 xC
 4: 85.70000 xC
 7: +0L

10: -0.14700 MxB
 13: 8.82000 MxB
 16: 0.71000 MxB
 19: 29.11000 MxB

DI/O: 0{HHHHHHHH}7

2: 71.40000 xC
 5: 77.00000 xC
 8: 329.10001 xC

11: 1.39000 MxB
 14: 1.05000 MxB
 17: 190.91000 MxB
 20: 13.55000 MxB

Total: 0

07/19/93 16:53:04

Inst. Number = 1

0: 100.66000 MxB
 3: 74.00000 xC
 6: 325.39999 xC

172.27000 MxB
 7.31000 MxB
 +0L

18: 109.45000 MxB
 ALMs: 0{HHHH}3

1: 32.40000 xC
 4: 83.30000 xC
 7: +0L

10: -0.15000 MxB
 13: 8.84000 MxB
 16: 0.69000 MxB

19: 18.02000 MxB
 DI/O: 0{HHHHHHHH}7

2: 75.40000 xC
 5: 76.20000 xC
 8: 335.60001 xC

11: 1.54000 MxB
 14: 1.05000 MxB
 17: 171.87000 MxB

20: 13.55000 MxB
 Total: 0

07/19/93 16:59:04

3: 97.90000 xC	4: 87.80000 xC	5: 76.70000 xC
6: 336.50000 xC	7: +0L	8: 326.79999 xC
9: 158.42999 MxB	10: -0.04400 MxB	11: 1.79000 MxB
12: 7.56000 MxB	13: 8.93000 MxB	14: 1.03000 MxB
15: 987.09003 MxB	16: 0.67000 MxB	17: 180.48000 MxB
1P: 79.08000 MxB	19: 14.19000 MxB	20: 14.33000 MxB
/ : 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 17:05:04

Inst. Number = 1		
0: 107.05000 MxB	1: 33.70000 xC	2: 96.80000 xC
3: 92.90000 xC	4: 87.70000 xC	5: 76.80000 xC
6: 336.79999 xC	7: +0L	8: 303.70001 xC
9: 147.70000 MxB	10: 0.00500 MxB	11: 1.97000 MxB
12: 7.73000 MxB	13: 9.10000 MxB	14: 1.03000 MxB
15: 998.83002 MxB	16: 0.69000 MxB	17: -1.09000 MxB
18: -0.95000 MxB	19: -0.14000 MxB	20: 14.33000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 17:11:04

Inst. Number = 1		
0: 100.85000 MxB	1: 35.20000 xC	2: 100.20000 xC
3: 101.70000 xC	4: 89.10000 xC	5: 77.20000 xC
6: 335.39999 xC	7: +0L	8: 295.20001 xC
9: 152.75000 MxB	10: 0.02700 MxB	11: 1.50000 MxB
12: 7.47000 MxB	13: 9.00000 MxB	14: 1.03000 MxB
15: 893.82001 MxB	16: 0.68000 MxB	17: 185.61000 MxB
18: 90.60000 MxB	19: 16.51000 MxB	20: 14.32000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

9/93 17:17:04

Inst. Number = 1		
0: -1.78000 MxB	1: 34.50000 xC	2: 100.20000 xC
3: 105.60000 xC	4: 90.20000 xC	5: 77.50000 xC
6: 334.79999 xC	7: +0L	8: 290.70001 xC
9: 140.31000 MxB	10: 0.12100 MxB	11: 1.46000 MxB
12: 7.46000 MxB	13: 8.94000 MxB	14: 1.05000 MxB
15: -261.94000 MxB	16: 0.69000 MxB	17: 200.99001 MxB
18: 102.43000 MxB	19: 20.53000 MxB	20: 14.33000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 17:23:04

Inst. Number = 1		
0: 1.34000 MxB	1: 30.90000 xC	2: 89.70000 xC
3: 72.00000 xC	4: 85.20000 xC	5: 77.10000 xC
6: 334.60001 xC	7: +0L	8: 287.70001 xC
9: 60.68000 MxB	10: -0.27700 MxB	11: 1.68000 MxB
12: 7.45000 MxB	13: 8.92000 MxB	14: 1.05000 MxB
15: -261.94000 MxB	16: 0.71000 MxB	17: 131.91000 MxB
18: 100.13000 MxB	19: 13.48000 MxB	20: 15.09000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/19/93 17:29:04

Inst. Number = 1		
0: 1.03000 MxB	1: 33.40000 xC	2: 69.20000 xC
3: 65.40000 xC	4: 81.50000 xC	5: 76.30000 xC
6: 341.39999 xC	7: +0L	8: 286.10001 xC
9: 192.09000 MxB	10: -0.27600 MxB	11: 1.78000 MxB
12: 7.40000 MxB	13: 8.86000 MxB	14: 1.04000 MxB

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/19/93 17:35:04

Inst. Number = 1

0: -0.27000 MxB
 72.20000 xC
 358.50000 xC
 9: 205.86000 MxB
 12: 7.54000 MxB
 15: -262.01001 MxB
 18: 98.55000 MxB
 ALMs: 0{HHHH}3

1: 34.50000 xC
 4: 81.30000 xC
 7: +0L
 10: -0.27700 MxB
 13: 8.99000 MxB
 16: 0.67000 MxB
 19: 12.47000 MxB
 DI/O: 0{HHHHHHHH}7

2: 68.50000 xC
 5: 75.40000 xC
 8: 285.60001 xC
 11: 1.77000 MxB
 14: 1.03000 MxB
 17: 129.36000 MxB
 20: 15.09000 MxB
 Total: 0

07/19/93 17:41:04

Inst. Number = 1

0: -1.74000 MxB
 3: 78.00000 xC
 6: 372.60001 xC
 9: 201.98000 MxB
 12: 7.37000 MxB
 15: -261.94000 MxB
 18: 69.80000 MxB
 ALMs: 0{HHHH}3

1: 38.00000 xC
 4: 82.10000 xC
 7: +0L
 10: -0.27700 MxB
 13: 8.83000 MxB
 16: 0.70000 MxB
 19: 9.44000 MxB
 DI/O: 0{HHHHHHHH}7

2: 72.30000 xC
 5: 75.00000 xC
 8: 285.60001 xC
 11: 1.52000 MxB
 14: 1.07000 MxB
 17: 134.49001 MxB
 20: 15.09000 MxB
 Total: 0

07/19/93 17:47:04

Inst. Number = 1

0: -1.72000 MxB
 3: 74.60000 xC
 6: 385.79999 xC
 9: 198.73000 MxB
 12: 6.51000 MxB
 15: -261.94000 MxB
 18: 72.89000 MxB
 ALMs: 0{HHHH}3

1: 39.30000 xC
 4: 81.80000 xC
 7: +0L
 10: -0.07700 MxB
 13: 7.79000 MxB
 16: 0.57000 MxB
 19: 9.44000 MxB
 DI/O: 0{HHHHHHHH}7

2: 71.60000 xC
 5: 74.40000 xC
 8: 285.89999 xC
 11: 1.27000 MxB
 14: 0.95000 MxB
 17: 131.91000 MxB
 20: 15.09000 MxB
 Total: 0

07/19/93 17:53:04

Inst. Number = 1

0: -1.86000 MxB
 3: 85.60000 xC
 6: 398.00000 xC
 9: 189.62000 MxB
 12: 5.99000 MxB
 15: -261.94000 MxB
 18: 69.02000 MxB
 ALMs: 0{HHHH}3

1: 43.90000 xC
 4: 83.00000 xC
 7: +0L
 10: -0.15000 MxB
 13: 7.43000 MxB
 16: 0.66000 MxB
 19: 9.43000 MxB
 DI/O: 0{HHHHHHHH}7

2: 74.50000 xC
 5: 73.90000 xC
 8: 286.10001 xC
 11: 1.35000 MxB
 14: 0.98000 MxB
 17: 134.45000 MxB
 20: 15.09000 MxB
 Total: 0

07/19/93 17:59:04

Inst. Number = 1

0: -1.91000 MxB
 3: 72.60000 xC
 6: 402.79999 xC
 9: 66.85000 MxB
 12: 6.43000 MxB
 15: -262.01001 MxB
 18: -0.94000 MxB
 ALMs: 0{HHHH}3

1: 40.40000 xC
 4: 82.30000 xC
 7: +0L
 10: -0.18900 MxB
 13: 7.75000 MxB
 16: 0.58000 MxB
 19: -0.14000 MxB
 DI/O: 0{HHHHHHHH}7

2: 76.20000 xC
 5: 73.90000 xC
 8: 286.60001 xC
 11: 1.43000 MxB
 14: 0.95000 MxB
 17: -1.09000 MxB
 20: 15.09000 MxB
 Total: 0

07/19/93 18:05:04

3: 70.50000 xC
6: 399.20001 xC
9: 56.47000 MxB
12: 7.12000 MxB
15: -261.87000 MxB
18: -0.94000 MxB
f : 0{HHHH}3

4: 81.20000 xC
7: +0L
10: -0.27600 MxB
13: 8.26000 MxB
16: 0.48000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

5: 73.50000 xC
8: 285.89999 xC
11: 2.40000 MxB
14: 0.89000 MxB
17: -1.14000 MxB
20: 15.10000 MxB
Total: 0

07/19/93 18:11:04

Inst. Number = 1

0: -0.34000 MxB
3: 85.90000 xC
6: 395.50000 xC
9: 35.89000 MxB
12: 7.23000 MxB
15: -261.87000 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

1: 38.80000 xC
4: 83.90000 xC
7: +0L
10: -0.27600 MxB
13: 8.35000 MxB
16: 0.56000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 70.30000 xC
5: 73.60000 xC
8: 284.89999 xC
11: 2.35000 MxB
14: 0.89000 MxB
17: -1.14000 MxB
20: 15.10000 MxB
Total: 0

Appendix A-3

**Facility DAS Printer Output
20 July 1993, S60-IV Melt**

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/20/93 08:22:14

Hydra Printer Output 07/20/93 08:42:45
Skipping 5 Scans Between Outputs

Tuesday 7/20/93

07/20/93 08:42:53

Inst. Number = 1

0: -1.63000 MxB	1: 19.20000 xC	2: 17.90000 xC
3: 20.80000 xC	4: 59.90000 xC	5: 45.00000 xC
6: 57.00000 xC	7: 51.30000 xC	8: 111.10000 xC
9: 11.44000 MxB	10: -0.03000 MxB	11: 1.34000 MxB
12: 9.43000 MxB	13: 10.67000 MxB	14: 1.01000 MxB
15: 361.37000 MxB	16: 0.69000 MxB	17: -1.14000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: -0.41000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 08:48:53

Inst. Number = 1

1: 1.47000 MxB	1: 19.70000 xC	2: 18.30000 xC
2: 20.60000 xC	4: 59.10000 xC	5: 46.60000 xC
3: 56.40000 xC	7: 51.00000 xC	8: 109.80000 xC
9: 39.79000 MxB	10: 0.03900 MxB	11: 1.20000 MxB
12: 9.28000 MxB	13: 10.53000 MxB	14: 1.01000 MxB
15: 382.53000 MxB	16: 0.70000 MxB	17: -1.14000 MxB
18: -0.93000 MxB	19: -0.14000 MxB	20: -0.41000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Inst. Number = 1		
0: -1.86000 MxB	1: 19.80000 xC	2: 18.50000 xC
3: 20.70000 xC	4: 59.10000 xC	5: 47.60000 xC
6: 55.90000 xC	7: 50.80000 xC	8: 108.70000 xC
9: 52.57000 MxB	10: 0.03200 MxB	11: 1.25000 MxB
9.40000 MxB	13: 10.51000 MxB	14: 1.01000 MxB
325.48999 MxB	16: 0.66000 MxB	17: -1.14000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: -0.41000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 09:00:53

Inst. Number = 1		
0: -0.84000 MxB	1: 19.20000 xC	2: 18.40000 xC
3: 20.20000 xC	4: 58.80000 xC	5: 48.30000 xC
6: 55.40000 xC	7: 50.30000 xC	8: 107.60000 xC
9: 49.56000 MxB	10: -0.18700 MxB	11: 1.54000 MxB
12: 10.74000 MxB	13: 11.97000 MxB	14: 1.11000 MxB
15: 302.63000 MxB	16: 0.77000 MxB	17: -1.14000 MxB
18: -0.93000 MxB	19: -0.14000 MxB	20: -0.41000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 09:06:53

Inst. Number = 1		
0: -0.84000 MxB	1: 19.40000 xC	2: 60.00000 xC
3: 32.00000 xC	4: 61.20000 xC	5: 49.20000 xC
6: 56.30000 xC	7: 50.10000 xC	8: 106.40000 xC
9: 192.08000 MxB	10: -0.07700 MxB	11: 1.55000 MxB
12: 11.20000 MxB	13: 12.47000 MxB	14: 1.13000 MxB
15: 267.82001 MxB	16: 0.79000 MxB	17: 129.28000 MxB
66.71000 MxB	19: 7.93000 MxB	20: -0.41000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 09:12:53

Inst. Number = 1		
0: 45.94000 MxB	1: 19.60000 xC	2: 127.10000 xC
3: 70.50000 xC	4: 72.10000 xC	5: 52.80000 xC
6: 59.40000 xC	7: 49.90000 xC	8: 105.20000 xC
9: 227.77000 MxB	10: -0.27700 MxB	11: 2.11000 MxB
12: 12.03000 MxB	13: 13.41000 MxB	14: 1.18000 MxB
15: 267.32001 MxB	16: 0.86000 MxB	17: 136.95000 MxB
18: 83.01000 MxB	19: 10.44000 MxB	20: -0.41000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 09:18:53

Inst. Number = 1		
0: 24.45000 MxB	1: 19.70000 xC	2: 98.10000 xC
3: 48.40000 xC	4: 69.30000 xC	5: 54.50000 xC
6: 62.50000 xC	7: 49.70000 xC	8: 104.10000 xC
9: 124.61000 MxB	10: -0.25200 MxB	11: 1.89000 MxB
12: 11.28000 MxB	13: 12.68000 MxB	14: 1.18000 MxB
15: 274.10999 MxB	16: 0.81000 MxB	17: 144.66000 MxB
89.23000 MxB	19: 12.97000 MxB	20: -0.41000 MxB
: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 09:24:53

Inst. Number = 1		
0: 53.02000 MxB	1: 19.80000 xC	2: 105.90000 xC
3: 48.70000 xC	4: 69.10000 xC	5: 55.60000 xC
6: 62.50000 xC	7: 49.70000 xC	8: 104.10000 xC

12: 11.22000 MxB
15: 248.00000 MxB
18: 74.58000 MxB
ALMs: 0{HHHH}3

13: 12.63000 MxB
16: 0.80000 MxB
19: 11.46000 MxB
DI/O: 0{HHHHHHHH}7

14: 1.17000 MxB
17: 157.46001 MxB
20: -0.41000 MxB
Total: 0

07/20/93 09:30:53

.. Number = 1

0: 53.55000 MxB
3: 48.80000 xC
6: 68.00000 xC
9: 164.09000 MxB
12: 11.35000 MxB
15: 250.20000 MxB
18: 96.99000 MxB
ALMs: 0{HHHH}3

1: 19.80000 xC
4: 69.20000 xC
7: 49.50000 xC
10: -0.02900 MxB
13: 12.73000 MxB
16: 0.80000 MxB
19: 13.98000 MxB
DI/O: 0{HHHHHHHH}7

2: 95.50000 xC
5: 56.50000 xC
8: 102.40000 xC
11: 1.73000 MxB
14: 1.17000 MxB
17: 144.71001 MxB
20: -0.41000 MxB
Total: 0

07/20/93 09:38:01

Inst. Number = 1

0: 88.26000 MxB
3: 49.40000 xC
6: 69.80000 xC
9: 144.58000 MxB
12: 11.25000 MxB
15: 243.69000 MxB
18: 98.56000 MxB
ALMs: 0{HHHH}3

1: 20.20000 xC
4: 69.30000 xC
7: 53.50000 xC
10: -0.03400 MxB
13: 12.65000 MxB
16: 0.77000 MxB
19: 14.48000 MxB
DI/O: 0{HHHHHHHH}7

2: 86.50000 xC
5: 57.40000 xC
8: 101.80000 xC
11: 1.70000 MxB
14: 1.17000 MxB
17: 144.66000 MxB
20: -0.41000 MxB
Total: 0

07/20/93 09:44:00

Inst. Number = 1

0: 89.10000 MxB
3: 51.80000 xC
6: 70.50000 xC
9: 158.73000 MxB
12: 11.66000 MxB
15: 260.45999 MxB
18: 86.89000 MxB
ALMs: 0{HHHH}3

1: 20.50000 xC
4: 70.30000 xC
7: 58.40000 xC
10: -0.24200 MxB
13: 13.12000 MxB
16: 0.83000 MxB
19: 14.99000 MxB
DI/O: 0{HHHHHHHH}7

2: 70.60000 xC
5: 58.40000 xC
8: 101.80000 xC
11: 1.95000 MxB
14: 1.20000 MxB
17: 172.81000 MxB
20: -0.41000 MxB
Total: 0

07/20/93 09:50:00

Inst. Number = 1

0: 93.86000 MxB
3: 49.50000 xC
6: 71.10000 xC
9: 127.51000 MxB
12: 11.55000 MxB
15: 276.10001 MxB
18: 81.46000 MxB
ALMs: 0{HHHH}3

1: 20.30000 xC
4: 69.60000 xC
7: 61.10000 xC
10: -0.25700 MxB
13: 13.05000 MxB
16: 0.86000 MxB
19: 13.98000 MxB
DI/O: 0{HHHHHHHH}7

2: 58.00000 xC
5: 58.80000 xC
8: 102.20000 xC
11: 1.82000 MxB
14: 1.22000 MxB
17: 170.22000 MxB
20: 0.36000 MxB
Total: 0

07/20/93 09:56:00

Inst. Number = 1

0: 95.64000 MxB
3: 50.20000 xC
6: 72.60000 xC
9: 143.46001 MxB
12: 11.60000 MxB
15: 270.79001 MxB
18: 77.55000 MxB
ALMs: 0{HHHH}3

1: 20.80000 xC
4: 70.00000 xC
7: 66.10000 xC
10: -0.19700 MxB
13: 13.08000 MxB
16: 0.83000 MxB
19: 14.98000 MxB
DI/O: 0{HHHHHHHH}7

2: 49.70000 xC
5: 59.10000 xC
8: 103.20000 xC
11: 1.78000 MxB
14: 1.21000 MxB
17: 190.74001 MxB
20: 0.37000 MxB
Total: 0

Inst. Number = 1		
0: 92.24000 MxB	1: 21.30000 xC	2: 45.10000 xC
3: 46.70000 xC	4: 68.40000 xC	5: 59.60000 xC
6: 73.50000 xC	7: 71.80000 xC	8: 104.50000 xC
9: 150.89000 MxB	10: -0.20100 MxB	11: 1.87000 MxB
11: 11.52000 MxB	13: 13.00000 MxB	14: 1.21000 MxB
17: 276.51999 MxB	16: 0.85000 MxB	17: 196.44000 MxB
18: 80.67000 MxB	19: 16.00000 MxB	20: 0.37000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 10:08:00

Inst. Number = 1		
0: 98.76000 MxB	1: 21.40000 xC	2: 46.90000 xC
3: 64.90000 xC	4: 74.10000 xC	5: 61.30000 xC
6: 77.40000 xC	7: 73.60000 xC	8: 106.60000 xC
9: 198.91000 MxB	10: -0.07100 MxB	11: 1.57000 MxB
12: 11.46000 MxB	13: 12.92000 MxB	14: 1.21000 MxB
15: 266.12000 MxB	16: 0.81000 MxB	17: 200.95000 MxB
18: 81.46000 MxB	19: 16.49000 MxB	20: 0.36000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 10:14:00

Inst. Number = 1		
0: 96.15000 MxB	1: 21.70000 xC	2: 44.50000 xC
3: 59.80000 xC	4: 73.40000 xC	5: 61.10000 xC
6: 76.50000 xC	7: 75.40000 xC	8: 109.30000 xC
9: 139.56000 MxB	10: -0.01400 MxB	11: 1.06000 MxB
12: 11.28000 MxB	13: 12.77000 MxB	14: 1.22000 MxB
15: 245.52000 MxB	16: 0.83000 MxB	17: 180.42999 MxB
18: 71.35000 MxB	19: 12.97000 MxB	20: 0.37000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 10:20:00

Inst. Number = 1		
0: 95.94000 MxB	1: 21.60000 xC	2: 47.10000 xC
3: 59.60000 xC	4: 73.30000 xC	5: 61.80000 xC
6: 78.70000 xC	7: 82.10000 xC	8: 113.10000 xC
9: 144.58000 MxB	10: -0.27700 MxB	11: 1.75000 MxB
12: 11.34000 MxB	13: 12.84000 MxB	14: 1.23000 MxB
15: 276.59000 MxB	16: 0.87000 MxB	17: 198.36000 MxB
18: 71.37000 MxB	19: 14.48000 MxB	20: 1.14000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 10:26:00

Inst. Number = 1		
0: 101.57000 MxB	1: 21.60000 xC	2: 47.20000 xC
3: 58.40000 xC	4: 73.40000 xC	5: 62.10000 xC
6: 81.80000 xC	7: 89.70000 xC	8: 117.60000 xC
9: 174.34000 MxB	10: -0.20000 MxB	11: 1.91000 MxB
12: 11.46000 MxB	13: 12.97000 MxB	14: 1.20000 MxB
15: 281.32999 MxB	16: 0.83000 MxB	17: 187.21001 MxB
18: 71.35000 MxB	19: 13.46000 MxB	20: 1.14000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 10:32:00

Inst. Number = 1		
0: 89.96000 MxB	1: 22.30000 xC	2: 52.60000 xC
3: 67.40000 xC	4: 76.20000 xC	5: 63.30000 xC
6: 85.00000 xC	7: 88.70000 xC	8: 122.70000 xC

12: 11.42000 MxB	13: 12.90000 MxB	14: 1.20000 MxB
15: 268.31000 MxB	16: 0.83000 MxB	17: 190.69000 MxB
18: 79.12000 MxB	19: 14.99000 MxB	20: 1.14000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 10:38:00

Inst. Number = 1		
0: 101.27000 MxB	1: 22.00000 xC	2: 51.20000 xC
3: 62.00000 xC	4: 75.10000 xC	5: 63.50000 xC
6: 86.20000 xC	7: 100.40000 xC	8: 128.50000 xC
9: 135.19000 MxB	10: -0.09000 MxB	11: 1.81000 MxB
12: 11.42000 MxB	13: 12.92000 MxB	14: 1.20000 MxB
15: 312.12000 MxB	16: 0.85000 MxB	17: 188.19000 MxB
18: 81.44000 MxB	19: 15.48000 MxB	20: 1.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 10:44:00

Inst. Number = 1		
0: 89.71000 MxB	1: 22.00000 xC	2: 52.70000 xC
3: 64.30000 xC	4: 76.00000 xC	5: 64.10000 xC
6: 88.20000 xC	7: 102.90000 xC	8: 134.30000 xC
9: 208.88000 MxB	10: -0.11400 MxB	11: 1.76000 MxB
12: 11.30000 MxB	13: 12.82000 MxB	14: 1.21000 MxB
15: 295.98001 MxB	16: 0.84000 MxB	17: 200.95000 MxB
18: 70.58000 MxB	19: 13.98000 MxB	20: 1.14000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 10:50:00

Inst. Number = 1		
0: 90.04000 MxB	1: 22.40000 xC	2: 54.10000 xC
3: 67.10000 xC	4: 77.20000 xC	5: 65.00000 xC
6: 90.00000 xC	7: 115.60000 xC	8: 139.89999 xC
9: 170.28000 MxB	10: -0.00100 MxB	11: 1.61000 MxB
12: 11.23000 MxB	13: 12.76000 MxB	14: 1.21000 MxB
15: 303.48001 MxB	16: 0.87000 MxB	17: 188.14999 MxB
18: 75.22000 MxB	19: 14.48000 MxB	20: 1.14000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 10:56:00

Inst. Number = 1		
0: 109.08000 MxB	1: 22.60000 xC	2: 60.20000 xC
3: 75.50000 xC	4: 79.80000 xC	5: 66.00000 xC
6: 92.00000 xC	7: 144.20000 xC	8: 145.50000 xC
9: 68.03000 MxB	10: -0.18200 MxB	11: 1.87000 MxB
12: 11.16000 MxB	13: 12.63000 MxB	14: 1.17000 MxB
15: 270.92999 MxB	16: 0.82000 MxB	17: 193.28000 MxB
18: 77.55000 MxB	19: 14.49000 MxB	20: 1.93000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 11:02:00

Inst. Number = 1		
0: 115.72000 MxB	1: 22.50000 xC	2: 60.90000 xC
3: 74.20000 xC	4: 80.00000 xC	5: 66.80000 xC
6: 93.90000 xC	7: 184.10001 xC	8: 151.39999 xC
9: 130.46001 MxB	10: -0.27700 MxB	11: 1.74000 MxB
12: 11.11000 MxB	13: 12.60000 MxB	14: 1.17000 MxB
15: 266.75000 MxB	16: 0.81000 MxB	17: 180.48000 MxB
18: 72.27000 MxB	19: 13.47000 MxB	20: 1.91000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Inst. Number = 1		
0: -1.34000 MxB	1: 22.80000 xC	2: 60.40000 xC
3: 72.30000 xC	4: 79.70000 xC	5: 67.50000 xC
6: 96.70000 xC	7: 223.50000 xC	8: 149.60001 xC
9: 221.98000 MxB	10: -0.27000 MxB	11: 1.89000 MxB
11: 11.18000 MxB	13: 12.63000 MxB	14: 1.17000 MxB
274.39999 MxB	16: 0.68000 MxB	17: 190.69000 MxB
18: 74.43000 MxB	19: 14.48000 MxB	20: 1.93000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 11:14:00

Inst. Number = 1		
0: 106.01000 MxB	1: 22.90000 xC	2: 55.30000 xC
3: 69.40000 xC	4: 78.70000 xC	5: 67.30000 xC
6: 100.40000 xC	7: 257.70001 xC	8: 142.00000 xC
9: 73.39000 MxB	10: -0.22800 MxB	11: 1.85000 MxB
12: 11.14000 MxB	13: 12.63000 MxB	14: 1.18000 MxB
15: 299.17001 MxB	16: 0.82000 MxB	17: 198.41000 MxB
18: 77.55000 MxB	19: 15.49000 MxB	20: 1.93000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 11:20:00

Inst. Number = 1		
0: 114.60000 MxB	1: 23.10000 xC	2: 62.40000 xC
3: 76.40000 xC	4: 81.10000 xC	5: 68.20000 xC
6: 103.60000 xC	7: 286.70001 xC	8: 141.10001 xC
9: 141.22000 MxB	10: -0.11800 MxB	11: 1.82000 MxB
12: 11.37000 MxB	13: 12.87000 MxB	14: 1.19000 MxB
15: 305.17999 MxB	16: 0.84000 MxB	17: 218.83000 MxB
61.23000 MxB	19: 16.49000 MxB	20: 1.93000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 11:26:00

Inst. Number = 1		
0: 113.87000 MxB	1: 23.00000 xC	2: 58.60000 xC
3: 72.70000 xC	4: 80.10000 xC	5: 68.50000 xC
6: 107.10000 xC	7: 310.79999 xC	8: 141.50000 xC
9: 160.57001 MxB	10: -0.27700 MxB	11: 1.87000 MxB
12: 11.34000 MxB	13: 12.82000 MxB	14: 1.18000 MxB
15: 297.67999 MxB	16: 0.80000 MxB	17: 134.39999 MxB
18: 82.90000 MxB	19: 11.45000 MxB	20: 2.70000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 11:32:00

Inst. Number = 1		
0: 127.66000 MxB	1: 23.30000 xC	2: 63.70000 xC
3: 81.10000 xC	4: 82.80000 xC	5: 69.40000 xC
6: 110.50000 xC	7: 331.20001 xC	8: 143.39999 xC
9: 57.09000 MxB	10: -0.15000 MxB	11: 1.66000 MxB
12: 11.36000 MxB	13: 12.84000 MxB	14: 1.18000 MxB
15: 308.37000 MxB	16: 0.83000 MxB	17: 200.95000 MxB
18: 75.22000 MxB	19: 14.86000 MxB	20: 2.68000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 11:38:00

Inst. Number = 1		
0: 114.38000 MxB	1: 23.90000 xC	2: 65.60000 xC
3: 85.30000 xC	4: 84.20000 xC	5: 70.20000 xC
6: 114.10000 xC	7: 340.00000 xC	8: 145.40001 xC

12: 11.34000 MxB	13: 12.84000 MxB	14: 1.18000 MxB
15: 298.10001 MxB	16: 0.81000 MxB	17: 195.82001 MxB
18: 76.77000 MxB	19: 14.98000 MxB	20: 2.70000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 11:44:00

.. Number = 1

0: 150.20000 MxB	1: 23.20000 xC	2: 66.90000 xC
3: 88.20000 xC	4: 85.50000 xC	5: 70.80000 xC
6: 117.10000 xC	7: 364.79999 xC	8: 148.10001 xC
9: 60.57000 MxB	10: -0.14100 MxB	11: 1.71000 MxB
12: 11.47000 MxB	13: 12.97000 MxB	14: 1.17000 MxB
15: 296.54999 MxB	16: 0.79000 MxB	17: 190.74001 MxB
18: 65.91000 MxB	19: 12.45000 MxB	20: 2.68000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 11:50:00

Inst. Number = 1

0: 138.17999 MxB	1: 23.50000 xC	2: 68.10000 xC
3: 89.40000 xC	4: 86.10000 xC	5: 71.70000 xC
6: 120.10000 xC	7: 378.89999 xC	8: 150.89999 xC
9: 60.21000 MxB	10: -0.04500 MxB	11: 1.42000 MxB
12: 11.19000 MxB	13: 12.74000 MxB	14: 1.20000 MxB
15: 309.00000 MxB	16: 0.85000 MxB	17: 195.82001 MxB
18: 74.45000 MxB	19: 14.99000 MxB	20: 2.70000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 11:56:00

Inst. Number = 1

0: 148.67999 MxB	1: 24.10000 xC	2: 67.10000 xC
3: 79.50000 xC	4: 83.40000 xC	5: 72.30000 xC
6: 122.40000 xC	7: 391.00000 xC	8: 154.20000 xC
9: 60.75000 MxB	10: -0.14600 MxB	11: 1.58000 MxB
12: 11.32000 MxB	13: 12.80000 MxB	14: 1.19000 MxB
15: 312.75000 MxB	16: 0.82000 MxB	17: 198.41000 MxB
18: 103.24000 MxB	19: 20.53000 MxB	20: 2.68000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 12:02:00

Inst. Number = 1

0: 149.37000 MxB	1: 34.20000 xC	2: 75.30000 xC
3: 102.40000 xC	4: 90.40000 xC	5: 73.60000 xC
6: 125.10000 xC	7: 400.70001 xC	8: 157.80000 xC
9: 173.64999 MxB	10: -0.09800 MxB	11: 1.56000 MxB
12: 11.30000 MxB	13: 12.79000 MxB	14: 1.17000 MxB
15: 336.60001 MxB	16: 0.84000 MxB	17: 190.69000 MxB
18: 91.54000 MxB	19: 17.50000 MxB	20: 3.47000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 12:08:00

Inst. Number = 1

0: 142.89999 MxB	1: 36.10000 xC	2: 76.70000 xC
3: 105.20000 xC	4: 91.60000 xC	5: 74.80000 xC
6: 127.60000 xC	7: 408.39999 xC	8: 161.60001 xC
9: 163.45000 MxB	10: -0.10200 MxB	11: 1.63000 MxB
12: 11.43000 MxB	13: 12.90000 MxB	14: 1.16000 MxB
15: 324.92999 MxB	16: 0.81000 MxB	17: 180.42999 MxB
18: 82.22000 MxB	19: 14.98000 MxB	20: 3.47000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Inst. Number = 1		
0: 145.50999 MxB	1: 44.80000 xC	2: 65.80000 xC
3: 96.50000 xC	4: 89.80000 xC	5: 75.50000 xC
6: 130.89999 xC	7: 414.39999 xC	8: 169.20000 xC
9: 60.63000 MxB	10: -0.00300 MxB	11: 1.91000 MxB
11: 11.55000 MxB	13: 12.98000 MxB	14: 1.17000 MxB
13: 353.01999 MxB	16: 0.78000 MxB	17: 195.82001 MxB
18: 94.68000 MxB	19: 18.51000 MxB	20: 3.47000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 12:20:00

Inst. Number = 1		
0: 136.66000 MxB	1: 46.40000 xC	2: 61.90000 xC
3: 100.00000 xC	4: 91.20000 xC	5: 76.00000 xC
6: 133.60001 xC	7: 419.70001 xC	8: 174.00000 xC
9: 161.03999 MxB	10: -0.16700 MxB	11: 1.84000 MxB
12: 10.41000 MxB	13: 12.38000 MxB	14: 1.21000 MxB
15: 309.35999 MxB	16: 0.82000 MxB	17: 193.23000 MxB
18: 96.79000 MxB	19: 19.52000 MxB	20: 3.48000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 12:26:00

Inst. Number = 1		
0: 174.19000 MxB	1: 41.20000 xC	2: 59.80000 xC
3: 100.30000 xC	4: 91.50000 xC	5: 76.70000 xC
6: 136.10001 xC	7: 423.79999 xC	8: 177.60001 xC
9: 163.21001 MxB	10: -0.06000 MxB	11: 1.67000 MxB
12: 11.23000 MxB	13: 12.70000 MxB	14: 1.18000 MxB
15: 300.09000 MxB	16: 0.80000 MxB	17: 195.86000 MxB
18: 92.32000 MxB	19: 18.26000 MxB	20: 4.24000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 12:32:00

Inst. Number = 1		
0: 168.42999 MxB	1: 34.90000 xC	2: 59.20000 xC
3: 96.70000 xC	4: 90.30000 xC	5: 76.90000 xC
6: 138.00000 xC	7: 427.20001 xC	8: 180.39999 xC
9: 156.48000 MxB	10: -0.05700 MxB	11: 1.69000 MxB
12: 11.31000 MxB	13: 12.81000 MxB	14: 1.19000 MxB
15: 294.28000 MxB	16: 0.82000 MxB	17: 190.74001 MxB
18: 86.88000 MxB	19: 18.01000 MxB	20: 4.25000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 12:38:00

Inst. Number = 1		
0: 154.41000 MxB	1: 33.30000 xC	2: 65.30000 xC
3: 104.00000 xC	4: 92.60000 xC	5: 77.30000 xC
6: 140.10001 xC	7: 429.89999 xC	8: 183.39999 xC
9: 150.25999 MxB	10: 0.50100 MxB	11: 1.06000 MxB
12: 12.29000 MxB	13: 13.88000 MxB	14: 1.26000 MxB
15: 287.48999 MxB	16: 0.85000 MxB	17: 195.82001 MxB
18: 77.55000 MxB	19: 15.49000 MxB	20: 4.25000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 12:44:00

Inst. Number = 1		
0: 154.11000 MxB	1: 33.50000 xC	2: 70.20000 xC
3: 98.40000 xC	4: 91.40000 xC	5: 78.10000 xC
6: 142.00000 xC	7: 432.00001 xC	8: 184.30000 xC

12: 12.27000 MxB
15: 306.88000 MxB
18: 91.55000 MxB
ALMs: 0{HHHH}3

13: 13.85000 MxB
16: 0.86000 MxB
19: 18.01000 MxB
DI/O: 0{HHHHHHHH}7

14: 1.25000 MxB
17: 198.41000 MxB
20: 4.25000 MxB
Total: 0

07/20/93 12:50:00

Inst. Number = 1

0: 164.55000 MxB
3: 95.60000 xC
6: 144.39999 xC
9: 146.80000 MxB
12: 12.05000 MxB
15: 324.85001 MxB
18: 92.32000 MxB
ALMs: 0{HHHH}3

1: 34.40000 xC
4: 90.80000 xC
7: 434.50000 xC
10: -0.27700 MxB
13: 13.65000 MxB
16: 0.86000 MxB
19: 18.51000 MxB
DI/O: 0{HHHHHHHH}7

2: 70.50000 xC
5: 78.30000 xC
8: 189.20000 xC
11: 2.19000 MxB
14: 1.28000 MxB
17: 200.95000 MxB
20: 5.02000 MxB
Total: 0

07/20/93 12:56:00

Inst. Number = 1

0: 156.87000 MxB
3: 99.80000 xC
6: 146.30000 xC
9: 166.38000 MxB
12: 12.17000 MxB
15: 301.50000 MxB
18: 84.55000 MxB
ALMs: 0{HHHH}3

1: 34.00000 xC
4: 91.50000 xC
7: 436.50000 xC
10: -0.05600 MxB
13: 13.76000 MxB
16: 0.84000 MxB
19: 16.50000 MxB
DI/O: 0{HHHHHHHH}7

2: 71.20000 xC
5: 78.40000 xC
8: 191.60001 xC
11: 1.79000 MxB
14: 1.25000 MxB
17: 195.82001 MxB
20: 5.02000 MxB
Total: 0

07/20/93 13:02:00

Inst. Number = 1

0: 156.57001 MxB
3: 88.80000 xC
6: 147.80000 xC
9: 159.36000 MxB
12: 11.87000 MxB
15: 309.92001 MxB
18: 90.78000 MxB
ALMs: 0{HHHH}3

1: 36.30000 xC
4: 88.60000 xC
7: 438.10001 xC
10: -0.27700 MxB
13: 13.53000 MxB
16: 0.88000 MxB
19: 18.01000 MxB
DI/O: 0{HHHHHHHH}7

2: 69.50000 xC
5: 78.30000 xC
8: 194.20000 xC
11: 1.95000 MxB
14: 1.29000 MxB
17: 198.36000 MxB
20: 5.02000 MxB
Total: 0

07/20/93 13:09:08

Inst. Number = 1

0: 148.86000 MxB
3: 103.00000 xC
6: 149.70000 xC
9: 151.12000 MxB
12: 11.76000 MxB
15: 292.01999 MxB
18: 93.87000 MxB
ALMs: 0{HHHH}3

1: 35.40000 xC
4: 91.50000 xC
7: 412.29999 xC
10: -0.27700 MxB
13: 13.37000 MxB
16: 0.89000 MxB
19: 19.60000 MxB
DI/O: 0{HHHHHHHH}7

2: 69.80000 xC
5: 78.50000 xC
8: 197.00000 xC
11: 2.49000 MxB
14: 1.30000 MxB
17: 203.53999 MxB
20: 5.03000 MxB
Total: 0

07/20/93 13:15:07

Inst. Number = 1

0: 151.19000 MxB
3: 95.20000 xC
6: 151.39999 xC
9: 141.56000 MxB
12: 11.51000 MxB
15: 301.14999 MxB
18: 92.32000 MxB
ALMs: 0{HHHH}3

1: 36.10000 xC
4: 89.70000 xC
7: 410.20001 xC
10: -0.27700 MxB
13: 13.23000 MxB
16: 0.91000 MxB
19: 18.52000 MxB
DI/O: 0{HHHHHHHH}7

2: 67.40000 xC
5: 78.30000 xC
8: 199.00000 xC
11: 2.16000 MxB
14: 1.33000 MxB
17: 198.41000 MxB
20: 5.81000 MxB
Total: 0

Inst. Number = 1		
0: 164.27000 MxB	1: 35.90000 xC	2: 64.40000 xC
3: 96.10000 xC	4: 90.10000 xC	5: 78.40000 xC
6: 152.70000 xC	7: 400.10001 xC	8: 200.80000 xC
9: 104.39000 MxB	10: -0.16400 MxB	11: 2.04000 MxB
11: 11.83000 MxB	13: 13.39000 MxB	14: 1.26000 MxB
293.72000 MxB	16: 0.83000 MxB	17: 195.86000 MxB
18: 100.79000 MxB	19: 20.03000 MxB	20: 5.79000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 13:27:07

Inst. Number = 1		
0: 160.83000 MxB	1: 30.80000 xC	2: 65.20000 xC
3: 96.50000 xC	4: 90.20000 xC	5: 78.60000 xC
6: 153.50000 xC	7: 410.29999 xC	8: 202.70000 xC
9: 57.15000 MxB	10: -0.12800 MxB	11: 1.55000 MxB
12: 11.40000 MxB	13: 13.02000 MxB	14: 1.30000 MxB
15: 278.29001 MxB	16: 0.89000 MxB	17: 198.72000 MxB
18: 86.88000 MxB	19: 17.50000 MxB	20: 5.81000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 13:33:07

Inst. Number = 1		
0: 148.33000 MxB	1: 29.30000 xC	2: 63.20000 xC
3: 101.20000 xC	4: 92.10000 xC	5: 79.10000 xC
6: 154.30000 xC	7: 404.89999 xC	8: 204.20000 xC
9: 57.15000 MxB	10: -0.08700 MxB	11: 2.07000 MxB
12: 11.69000 MxB	13: 13.27000 MxB	14: 1.27000 MxB
15: 300.79001 MxB	16: 0.85000 MxB	17: 195.82001 MxB
90.00000 MxB	19: 18.02000 MxB	20: 5.81000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 13:39:07

Inst. Number = 1		
0: 157.75999 MxB	1: 29.40000 xC	2: 61.10000 xC
3: 103.60000 xC	4: 91.70000 xC	5: 79.30000 xC
6: 155.20000 xC	7: 405.89999 xC	8: 205.50000 xC
9: 57.15000 MxB	10: 0.01700 MxB	11: 2.21000 MxB
12: 11.09000 MxB	13: 12.82000 MxB	14: 1.32000 MxB
15: 274.32999 MxB	16: 0.92000 MxB	17: 190.69000 MxB
18: 91.54000 MxB	19: 17.50000 MxB	20: 6.59000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 13:45:07

Inst. Number = 1		
0: -0.66000 MxB	1: 36.60000 xC	2: 64.00000 xC
3: 101.60000 xC	4: 92.50000 xC	5: 80.10000 xC
6: 156.70000 xC	7: 398.20001 xC	8: 207.20000 xC
9: 158.59000 MxB	10: -0.27700 MxB	11: 2.07000 MxB
12: 11.37000 MxB	13: 13.13000 MxB	14: 1.27000 MxB
15: 321.17001 MxB	16: 0.86000 MxB	17: 200.99001 MxB
18: 108.68000 MxB	19: 22.05000 MxB	20: 6.58000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 13:51:07

Inst. Number = 1		
0: -0.94000 MxB	1: 34.30000 xC	2: 72.80000 xC
3: 110.20000 xC	4: 94.40000 xC	5: 80.40000 xC
6: 159.00000 xC	7: 394.29999 xC	8: 208.20000 xC

12: 10.80000 MxB	13: 12.78000 MxB	14: 1.34000 MxB
15: 333.48999 MxB	16: 0.90000 MxB	17: 195.86000 MxB
18: 107.14000 MxB	19: 20.85000 MxB	20: 6.58000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 13:57:07

1 . Number = 1

0: -0.28000 MxB	1: 31.40000 xC	2: 82.00000 xC
3: 123.80000 xC	4: 99.20000 xC	5: 81.50000 xC
6: 161.50000 xC	7: 394.39999 xC	8: 209.00000 xC
9: 57.15000 MxB	10: -0.27600 MxB	11: 2.50000 MxB
12: 10.98000 MxB	13: 12.85000 MxB	14: 1.33000 MxB
15: 318.84000 MxB	16: 0.73000 MxB	17: 195.86000 MxB
18: 82.23000 MxB	19: 16.16000 MxB	20: 6.58000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 14:03:07

Inst. Number = 1

0: 0.68000 MxB	1: 32.30000 xC	2: 80.30000 xC
3: 95.70000 xC	4: 92.10000 xC	5: 81.40000 xC
6: 165.80000 xC	7: 392.70001 xC	8: 210.20000 xC
9: 57.15000 MxB	10: -0.27600 MxB	11: 2.84000 MxB
12: 10.33000 MxB	13: 12.36000 MxB	14: 1.39000 MxB
15: 350.19000 MxB	16: 0.89000 MxB	17: 175.35001 MxB
18: 74.46000 MxB	19: 12.47000 MxB	20: 6.58000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 14:09:07

Inst. Number = 1

0: -2.18000 MxB	1: 38.80000 xC	2: 77.90000 xC
3: 92.50000 xC	4: 89.90000 xC	5: 80.90000 xC
6: 171.10001 xC	7: 394.70001 xC	8: 210.00000 xC
9: 152.88000 MxB	10: -0.27600 MxB	11: 2.86000 MxB
12: 10.26000 MxB	13: 12.20000 MxB	14: 1.40000 MxB
15: 399.23001 MxB	16: 0.91000 MxB	17: 170.25999 MxB
18: 72.91000 MxB	19: 12.46000 MxB	20: 7.35000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 14:15:07

Inst. Number = 1

0: -0.43000 MxB	1: 39.50000 xC	2: 69.40000 xC
3: 89.10000 xC	4: 88.50000 xC	5: 80.00000 xC
6: 176.70000 xC	7: 386.60001 xC	8: 209.70000 xC
9: 152.88000 MxB	10: -0.27600 MxB	11: 2.80000 MxB
12: 11.08000 MxB	13: 12.82000 MxB	14: 1.34000 MxB
15: 389.89001 MxB	16: 0.88000 MxB	17: 175.39000 MxB
18: 83.00000 MxB	19: 14.36000 MxB	20: 7.35000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 14:21:07

Inst. Number = 1

0: -1.70000 MxB	1: 34.70000 xC	2: 65.80000 xC
116.20000 xC	4: 96.60000 xC	5: 81.20000 xC
181.70000 xC	7: 388.79999 xC	8: 210.20000 xC
9: 57.14000 MxB	10: -0.00700 MxB	11: 1.91000 MxB
12: 10.22000 MxB	13: 12.21000 MxB	14: 1.43000 MxB
15: 337.31000 MxB	16: 0.92000 MxB	17: -1.14000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: 7.36000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Inst. Number = 1

0: 1.17000 MxB
3: 81.20000 xC
6: 185.70000 xC
9: 57.15000 MxB
11: 11.35000 MxB
13: 344.31000 MxB
15: 81.44000 MxB
ALMs: 0{HHHH}3

1: 35.90000 xC
4: 87.50000 xC
7: 394.89999 xC
10: -0.27600 MxB
13: 13.11000 MxB
16: 0.86000 MxB
19: 14.49000 MxB
DI/O: 0{HHHHHHHH}7

2: 59.80000 xC
5: 81.20000 xC
8: 211.39999 xC
11: 2.47000 MxB
14: 1.33000 MxB
17: 175.35001 MxB
20: 7.35000 MxB
Total: 0

07/20/93 14:33:07

Inst. Number = 1

0: 1.67000 MxB
3: 85.10000 xC
6: 188.00000 xC
9: 57.15000 MxB
12: 10.23000 MxB
15: 352.31000 MxB
18: 76.78000 MxB
ALMs: 0{HHHH}3

1: 36.60000 xC
4: 87.60000 xC
7: 401.00000 xC
10: -0.27600 MxB
13: 11.80000 MxB
16: 0.80000 MxB
19: 12.98000 MxB
DI/O: 0{HHHHHHHH}7

2: 65.00000 xC
5: 80.30000 xC
8: 211.10001 xC
11: 2.07000 MxB
14: 1.24000 MxB
17: 177.89000 MxB
20: 7.36000 MxB
Total: 0

07/20/93 14:39:07

Inst. Number = 1

0: 83.27000 MxB
3: 85.70000 xC
6: 189.80000 xC
9: 57.15000 MxB
12: 9.63000 MxB
15: 320.17999 MxB
18: 89.20000 MxB
ALMs: 0{HHHH}3

1: 36.90000 xC
4: 86.90000 xC
7: 398.10001 xC
10: -0.27700 MxB
13: 11.13000 MxB
16: 0.76000 MxB
19: 14.49000 MxB
DI/O: 0{HHHHHHHH}7

2: 66.20000 xC
5: 79.40000 xC
8: 211.50000 xC
11: 1.87000 MxB
14: 1.20000 MxB
17: 157.46001 MxB
20: 7.36000 MxB
Total: 0

07/20/93 14:45:07

Inst. Number = 1

0: 72.84000 MxB
3: 80.30000 xC
6: 192.10001 xC
9: 57.15000 MxB
12: 9.51000 MxB
15: 315.16000 MxB
18: 79.11000 MxB
ALMs: 0{HHHH}3

1: 28.80000 xC
4: 85.00000 xC
7: 389.39999 xC
10: -0.22900 MxB
13: 11.05000 MxB
16: 0.77000 MxB
19: 13.48000 MxB
DI/O: 0{HHHHHHHH}7

2: 62.80000 xC
5: 78.50000 xC
8: 211.20000 xC
11: 1.66000 MxB
14: 1.22000 MxB
17: 167.67999 MxB
20: 7.36000 MxB
Total: 0

07/20/93 14:51:07

Inst. Number = 1

0: 85.47000 MxB
3: 77.40000 xC
6: 193.89999 xC
9: 57.15000 MxB
12: 8.00000 MxB
15: 296.89999 MxB
18: 87.66000 MxB
ALMs: 0{HHHH}3

1: 27.20000 xC
4: 84.00000 xC
7: 389.39999 xC
10: -0.27700 MxB
13: 10.04000 MxB
16: 0.85000 MxB
19: 12.97000 MxB
DI/O: 0{HHHHHHHH}7

2: 60.20000 xC
5: 77.80000 xC
8: 210.70000 xC
11: 1.86000 MxB
14: 1.32000 MxB
17: 149.30000 MxB
20: 8.13000 MxB
Total: 0

07/20/93 14:57:07

Inst. Number = 1

0: 91.86000 MxB
3: 80.20000 xC
6: 195.00000 xC

1: 35.50000 xC
4: 84.30000 xC
7: 389.00000 xC

2: 58.70000 xC
5: 77.00000 xC
8: 210.00000 xC

12: 9.84000 MxB	13: 11.32000 MxB	14: 1.19000 MxB
15: 345.23001 MxB	16: 0.75000 MxB	17: 147.25000 MxB
18: 94.66000 MxB	19: 13.99000 MxB	20: 8.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 15:04:14

1 . Number = 1

0: 127.03000 MxB	1: 34.80000 xC	2: 60.10000 xC
3: 81.70000 xC	4: 84.90000 xC	5: 76.90000 xC
6: 197.39999 xC	7: 422.29999 xC	8: 210.50000 xC
9: 163.47000 MxB	10: -0.27700 MxB	11: 2.04000 MxB
12: 9.48000 MxB	13: 11.04000 MxB	14: 1.22000 MxB
15: 345.31000 MxB	16: 0.75000 MxB	17: 147.28999 MxB
18: 88.43000 MxB	19: 12.97000 MxB	20: 8.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 15:10:14

Inst. Number = 1

0: 109.74000 MxB	1: 35.10000 xC	2: 59.00000 xC
3: 77.40000 xC	4: 83.70000 xC	5: 76.90000 xC
6: 198.70000 xC	7: 421.29999 xC	8: 210.10001 xC
9: 160.39000 MxB	10: -0.20900 MxB	11: 1.97000 MxB
12: 9.57000 MxB	13: 11.10000 MxB	14: 1.20000 MxB
15: 334.54999 MxB	16: 0.76000 MxB	17: 147.25000 MxB
18: 86.69000 MxB	19: 12.98000 MxB	20: 8.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 15:16:14

Inst. Number = 1

0: 121.88000 MxB	1: 33.50000 xC	2: 58.50000 xC
3: 73.90000 xC	4: 82.90000 xC	5: 76.60000 xC
6: 199.39999 xC	7: 419.89999 xC	8: 209.60001 xC
9: 157.09000 MxB	10: -0.10400 MxB	11: 1.89000 MxB
12: 9.39000 MxB	13: 10.84000 MxB	14: 1.18000 MxB
15: 343.10999 MxB	16: 0.71000 MxB	17: 147.28999 MxB
18: 85.32000 MxB	19: 12.46000 MxB	20: 8.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 15:22:14

Inst. Number = 1

0: 111.89000 MxB	1: 36.10000 xC	2: 57.60000 xC
3: 77.20000 xC	4: 83.30000 xC	5: 76.00000 xC
6: 200.20000 xC	7: 418.39999 xC	8: 209.80000 xC
9: 159.67000 MxB	10: -0.11000 MxB	11: 1.89000 MxB
12: 9.75000 MxB	13: 11.28000 MxB	14: 1.20000 MxB
15: 340.70999 MxB	16: 0.77000 MxB	17: 149.84000 MxB
18: 81.43000 MxB	19: 12.46000 MxB	20: 8.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 15:28:14

Inst. Number = 1

0: 102.46000 MxB	1: 36.00000 xC	2: 58.90000 xC
79.90000 xC	4: 83.90000 xC	5: 75.80000 xC
201.00000 xC	7: 416.60001 xC	8: 209.50000 xC
9: 160.50000 MxB	10: -0.00800 MxB	11: 1.66000 MxB
12: 8.62000 MxB	13: 10.60000 MxB	14: 1.25000 MxB
15: 331.44000 MxB	16: 0.81000 MxB	17: 152.50999 MxB
18: 80.66000 MxB	19: 12.47000 MxB	20: 8.90000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

```

Inst. Number = 1
0: 113.39000 MxB      1: 40.90000 xC      2: 59.30000 xC
3: 83.90000 xC        4: 84.90000 xC      5: 75.60000 xC
6: 201.60001 xC       7: 414.70001 xC     8: 208.89999 xC
9: 156.87000 MxB      10: -0.20100 MxB    11: 1.87000 MxB
    9.94000 MxB        13: 11.52000 MxB    14: 1.17000 MxB
    350.47000 MxB      16: 0.74000 MxB     17: 147.25000 MxB
18: 90.75000 MxB      19: 13.47000 MxB    20: 8.90000 MxB
ALMs: 0{HHHH}3       DI/O: 0{HHHHHHHH}7       Total: 0

```

07/20/93 15:40:14

```

Inst. Number = 1
0: 101.04000 MxB      1: 40.60000 xC      2: 60.10000 xC
3: 87.90000 xC        4: 86.00000 xC      5: 75.80000 xC
6: 202.30000 xC       7: 412.70001 xC     8: 208.10001 xC
9: 152.73000 MxB      10: -0.17300 MxB    11: 1.96000 MxB
12: 9.53000 MxB        13: 11.14000 MxB    14: 1.22000 MxB
15: 364.34000 MxB      16: 0.78000 MxB     17: 154.92000 MxB
18: 85.32000 MxB      19: 13.47000 MxB    20: 8.89000 MxB
ALMs: 0{HHHH}3       DI/O: 0{HHHHHHHH}7       Total: 0

```

07/20/93 15:46:14

```

Inst. Number = 1
0: 104.56000 MxB      1: 36.20000 xC      2: 57.80000 xC
3: 86.10000 xC        4: 85.80000 xC      5: 75.80000 xC
6: 202.70000 xC       7: 410.60001 xC     8: 207.50000 xC
9: 152.97000 MxB      10: -0.27700 MxB    11: 2.24000 MxB
12: 9.29000 MxB        13: 10.97000 MxB    14: 1.24000 MxB
15: 354.72000 MxB      16: 0.78000 MxB     17: 152.38000 MxB
    84.55000 MxB      19: 12.97000 MxB    20: 8.89000 MxB
ALMs: 0{HHHH}3       DI/O: 0{HHHHHHHH}7       Total: 0

```

07/20/93 15:52:14

```

Inst. Number = 1
0: 108.44000 MxB      1: 31.80000 xC      2: 55.40000 xC
3: 81.90000 xC        4: 84.70000 xC      5: 75.60000 xC
6: 203.50000 xC       7: 408.60001 xC     8: 206.39999 xC
9: 150.89000 MxB      10: -0.09000 MxB    11: 1.85000 MxB
12: 9.65000 MxB        13: 11.29000 MxB    14: 1.21000 MxB
15: 337.88000 MxB      16: 0.80000 MxB     17: 149.78999 MxB
18: 89.20000 MxB      19: 13.47000 MxB    20: 8.90000 MxB
ALMs: 0{HHHH}3       DI/O: 0{HHHHHHHH}7       Total: 0

```

07/20/93 15:58:14

```

Inst. Number = 1
0: 108.92000 MxB      1: 32.20000 xC      2: 55.70000 xC
3: 78.90000 xC        4: 83.80000 xC      5: 75.10000 xC
6: 204.10001 xC       7: 406.60001 xC     8: 205.39999 xC
9: 150.87000 MxB      10: -0.23100 MxB    11: 2.02000 MxB
12: 8.86000 MxB        13: 10.56000 MxB    14: 1.20000 MxB
15: 342.26001 MxB      16: 0.75000 MxB     17: 149.78999 MxB
18: 92.31000 MxB      19: 13.98000 MxB    20: 9.68000 MxB
    : 0{HHHH}3       DI/O: 0{HHHHHHHH}7       Total: 0

```

07/20/93 16:04:14

```

Inst. Number = 1
0: 105.93000 MxB      1: 31.80000 xC      2: 58.60000 xC
3: 76.80000 xC        4: 82.90000 xC      5: 74.60000 xC
6: 204.70000 xC       7: 404.60001 xC     8: 205.39999 xC
9: 150.87000 MxB      10: -0.23100 MxB    11: 2.02000 MxB
12: 8.86000 MxB        13: 10.56000 MxB    14: 1.20000 MxB
15: 342.26001 MxB      16: 0.75000 MxB     17: 149.78999 MxB
18: 92.31000 MxB      19: 13.98000 MxB    20: 9.68000 MxB
    : 0{HHHH}3       DI/O: 0{HHHHHHHH}7       Total: 0

```

12: 9.65000 MxB
15: 371.70001 MxB
18: 90.65000 MxB
ALMs: 0{HHHH}3

13: 11.20000 MxB
16: 0.76000 MxB
19: 13.99000 MxB
DI/O: 0{HHHHHHHH}7

14: 1.18000 MxB
17: 152.38000 MxB
20: 9.68000 MxB
Total: 0

07/20/93 16:10:14

Inst. Number = 1
0: 89.33000 MxB
3: 88.30000 xC
6: 204.39999 xC
9: 141.80000 MxB
12: 9.19000 MxB
15: 342.54999 MxB
18: 84.55000 MxB
ALMs: 0{HHHH}3

1: 31.90000 xC
4: 86.00000 xC
7: 402.60001 xC
10: -0.27600 MxB
13: 10.87000 MxB
16: 0.76000 MxB
19: 13.47000 MxB
DI/O: 0{HHHHHHHH}7

2: 61.20000 xC
5: 74.80000 xC
8: 205.39999 xC
11: 2.21000 MxB
14: 1.24000 MxB
17: 157.50999 MxB
20: 9.67000 MxB
Total: 0

07/20/93 16:16:14

Inst. Number = 1
0: -1.77000 MxB
3: 81.70000 xC
6: 204.50000 xC
9: 57.15000 MxB
12: 9.70000 MxB
15: 323.57999 MxB
18: 85.31000 MxB
ALMs: 0{HHHH}3

1: 27.60000 xC
4: 83.60000 xC
7: 400.89999 xC
10: -0.05100 MxB
13: 11.35000 MxB
16: 0.82000 MxB
19: 12.47000 MxB
DI/O: 0{HHHHHHHH}7

2: 58.30000 xC
5: 74.40000 xC
8: 204.80000 xC
11: 1.78000 MxB
14: 1.22000 MxB
17: 144.71001 MxB
20: 9.68000 MxB
Total: 0

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Inst. Number = 1
0: -0.74000 MxB
3: 75.40000 xC
6: 205.00000 xC
9: 57.15000 MxB
12: 9.49000 MxB
15: 330.23001 MxB
18: 91.54000 MxB
ALMs: 0{HHHH}3

1: 26.70000 xC
4: 82.00000 xC
7: 399.20001 xC
10: -0.27700 MxB
13: 11.22000 MxB
16: 0.78000 MxB
19: 13.47000 MxB
DI/O: 0{HHHHHHHH}7

2: 57.70000 xC
5: 74.00000 xC
8: 204.30000 xC
11: 2.07000 MxB
14: 1.25000 MxB
17: 147.28999 MxB
20: 9.67000 MxB
Total: 0

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Inst. Number = 1
0: 91.05000 MxB
3: 81.40000 xC
6: 205.60001 xC
9: 57.15000 MxB
12: 9.92000 MxB
15: 316.57001 MxB
18: 92.52000 MxB
ALMs: 0{HHHH}3

1: 25.80000 xC
4: 82.80000 xC
7: 397.70001 xC
10: -0.14600 MxB
13: 11.55000 MxB
16: 0.76000 MxB
19: 13.48000 MxB
DI/O: 0{HHHHHHHH}7

2: 60.60000 xC
5: 73.70000 xC
8: 203.20000 xC
11: 1.90000 MxB
14: 1.20000 MxB
17: 142.17000 MxB
20: 9.67000 MxB
Total: 0

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Inst. Number = 1
0: 97.36000 MxB
3: 87.90000 xC
6: 206.60001 xC
9: 157.82001 MxB
12: 9.58000 MxB
15: 342.26001 MxB
18: 84.54000 MxB
ALMs: 0{HHHH}3

1: 29.80000 xC
4: 85.10000 xC
7: 396.39999 xC
10: -0.27700 MxB
13: 11.29000 MxB
16: 0.81000 MxB
19: 12.97000 MxB
DI/O: 0{HHHHHHHH}7

2: 62.70000 xC
5: 74.00000 xC
8: 202.30000 xC
11: 2.42000 MxB
14: 1.27000 MxB
17: 154.97000 MxB
20: 10.44000 MxB
Total: 0

Inst. Number = 1		
0: 99.54000 MxB	1: 32.10000 xC	2: 63.20000 xC
3: 84.80000 xC	4: 84.70000 xC	5: 74.40000 xC
6: 208.39999 xC	7: 395.10001 xC	8: 200.50000 xC
9: 156.92999 MxB	10: -0.27700 MxB	11: 2.53000 MxB
9.41000 MxB	13: 11.15000 MxB	14: 1.28000 MxB
351.45999 MxB	16: 0.81000 MxB	17: 154.97000 MxB
18: 86.09000 MxB	19: 13.47000 MxB	20: 10.44000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 83.98000 MxB	1: 31.80000 xC	2: 60.40000 xC
3: 82.10000 xC	4: 83.80000 xC	5: 74.50000 xC
6: 210.60001 xC	7: 394.00000 xC	8: 198.20000 xC
9: 150.48000 MxB	10: -0.27700 MxB	11: 2.17000 MxB
12: 8.60000 MxB	13: 10.21000 MxB	14: 1.21000 MxB
15: 372.62000 MxB	16: 0.75000 MxB	17: 149.78999 MxB
18: 89.98000 MxB	19: 13.48000 MxB	20: 10.45000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 98.02000 MxB	1: 32.60000 xC	2: 58.20000 xC
3: 81.90000 xC	4: 84.00000 xC	5: 74.30000 xC
6: 212.00000 xC	7: 392.89999 xC	8: 196.70000 xC
9: 153.96001 MxB	10: 0.30800 MxB	11: 1.85000 MxB
12: 9.00000 MxB	13: 10.59000 MxB	14: 1.21000 MxB
15: 381.60999 MxB	16: 0.76000 MxB	17: 147.25000 MxB
86.88000 MxB	19: 12.98000 MxB	20: 10.44000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 106.64000 MxB	1: 28.70000 xC	2: 56.50000 xC
3: 82.90000 xC	4: 84.30000 xC	5: 74.30000 xC
6: 212.70000 xC	7: 392.00000 xC	8: 195.80000 xC
9: 145.85001 MxB	10: -0.27700 MxB	11: 2.02000 MxB
12: 8.89000 MxB	13: 10.49000 MxB	14: 1.22000 MxB
15: 383.59000 MxB	16: 0.77000 MxB	17: 147.25000 MxB
18: 89.20000 MxB	19: 13.48000 MxB	20: 10.45000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 97.31000 MxB	1: 28.60000 xC	2: 59.30000 xC
3: 79.90000 xC	4: 83.30000 xC	5: 74.40000 xC
6: 213.80000 xC	7: 390.89999 xC	8: 194.50000 xC
9: 152.14000 MxB	10: -0.27700 MxB	11: 1.89000 MxB
12: 8.47000 MxB	13: 10.07000 MxB	14: 1.21000 MxB
15: 359.81000 MxB	16: 0.76000 MxB	17: 157.46001 MxB
18: 85.32000 MxB	19: 13.48000 MxB	20: 10.44000 MxB
: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 91.76000 MxB	1: 29.20000 xC	2: 58.70000 xC
3: 79.40000 xC	4: 83.10000 xC	5: 74.30000 xC
6: 214.00000 xC	7: 390.00000 xC	8: 193.40001 xC

12: 8.48000 MxB	13: 10.07000 MxB	14: 1.22000 MxB
15: 467.94000 MxB	16: 0.70000 MxB	17: 154.97000 MxB
18: 89.97000 MxB	19: 13.98000 MxB	20: 11.21000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 100.58000 MxB	1: 29.60000 xC	2: 56.80000 xC
3: 78.30000 xC	4: 82.80000 xC	5: 74.10000 xC
6: 215.70000 xC	7: 389.10001 xC	8: 192.39999 xC
9: 146.31000 MxB	10: -0.27700 MxB	11: 1.97000 MxB
12: 8.58000 MxB	13: 10.16000 MxB	14: 1.21000 MxB
15: 465.25000 MxB	16: 0.73000 MxB	17: 154.97000 MxB
18: 90.77000 MxB	19: 13.98000 MxB	20: 11.21000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 100.66000 MxB	1: 29.30000 xC	2: 56.20000 xC
3: 79.90000 xC	4: 83.10000 xC	5: 74.10000 xC
6: 216.70000 xC	7: 388.29999 xC	8: 191.39999 xC
9: 145.56000 MxB	10: -0.26900 MxB	11: 1.95000 MxB
12: 7.58000 MxB	13: 9.63000 MxB	14: 1.25000 MxB
15: 435.67001 MxB	16: 0.80000 MxB	17: 154.97000 MxB
18: 86.00000 MxB	19: 13.47000 MxB	20: 11.21000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 86.21000 MxB	1: 29.40000 xC	2: 55.40000 xC
3: 81.00000 xC	4: 83.30000 xC	5: 74.10000 xC
6: 217.70000 xC	7: 387.60001 xC	8: 190.30000 xC
9: 146.35001 MxB	10: -0.24600 MxB	11: 1.99000 MxB
12: 8.54000 MxB	13: 10.14000 MxB	14: 1.20000 MxB
15: 440.56000 MxB	16: 0.76000 MxB	17: 154.92000 MxB
18: 85.32000 MxB	19: 12.98000 MxB	20: 11.22000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 94.40000 MxB	1: 32.20000 xC	2: 57.40000 xC
3: 84.30000 xC	4: 84.30000 xC	5: 74.50000 xC
6: 218.30000 xC	7: 386.89999 xC	8: 189.60001 xC
9: 145.89000 MxB	10: -0.27700 MxB	11: 1.76000 MxB
12: 8.28000 MxB	13: 9.95000 MxB	14: 1.23000 MxB
15: 418.41000 MxB	16: 0.78000 MxB	17: 150.95000 MxB
18: 82.99000 MxB	19: 12.46000 MxB	20: 11.22000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 93.41000 MxB	1: 30.00000 xC	2: 58.40000 xC
3: 88.20000 xC	4: 85.70000 xC	5: 74.80000 xC
6: 219.00000 xC	7: 386.20001 xC	8: 189.00000 xC
9: 146.56000 MxB	10: -0.24500 MxB	11: 2.08000 MxB
12: 8.59000 MxB	13: 10.12000 MxB	14: 1.21000 MxB
15: 440.63000 MxB	16: 0.78000 MxB	17: 147.25000 MxB
18: 91.60000 MxB	19: 13.99000 MxB	20: 12.00000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Inst. Number = 1		
0: 97.51000 MxB	1: 30.50000 xC	2: 58.10000 xC
3: 89.20000 xC	4: 86.30000 xC	5: 75.50000 xC
6: 219.39999 xC	7: 385.60001 xC	8: 188.50000 xC
9: 143.44000 MxB	10: -0.10500 MxB	11: 1.74000 MxB
8.27000 MxB	13: 9.93000 MxB	14: 1.22000 MxB
456.06000 MxB	16: 0.77000 MxB	17: 149.84000 MxB
18: 82.32000 MxB	19: 12.47000 MxB	20: 11.98000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 82.35000 MxB	1: 33.20000 xC	2: 57.10000 xC
3: 88.80000 xC	4: 86.50000 xC	5: 76.00000 xC
6: 220.20000 xC	7: 384.89999 xC	8: 188.10001 xC
9: 143.83000 MxB	10: -0.26900 MxB	11: 1.89000 MxB
12: 8.66000 MxB	13: 10.15000 MxB	14: 1.19000 MxB
15: 532.40997 MxB	16: 0.75000 MxB	17: 154.97000 MxB
18: 96.09000 MxB	19: 14.99000 MxB	20: 12.00000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 76.44000 MxB	1: 33.50000 xC	2: 67.10000 xC
3: 90.10000 xC	4: 87.00000 xC	5: 76.10000 xC
6: 221.00000 xC	7: 384.29999 xC	8: 187.60001 xC
9: 143.12000 MxB	10: -0.02900 MxB	11: 1.62000 MxB
12: 7.85000 MxB	13: 9.37000 MxB	14: 1.16000 MxB
15: 482.17001 MxB	16: 0.74000 MxB	17: 149.78999 MxB
88.43000 MxB	19: 13.48000 MxB	20: 12.00000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 79.08000 MxB	1: 32.40000 xC	2: 66.80000 xC
3: 87.30000 xC	4: 86.40000 xC	5: 76.40000 xC
6: 221.20000 xC	7: 383.70001 xC	8: 187.50000 xC
9: 143.50999 MxB	10: -0.25300 MxB	11: 1.84000 MxB
12: 8.38000 MxB	13: 9.87000 MxB	14: 1.18000 MxB
15: 437.59000 MxB	16: 0.72000 MxB	17: 154.92000 MxB
18: 87.65000 MxB	19: 13.48000 MxB	20: 12.00000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 76.52000 MxB	1: 35.20000 xC	2: 61.90000 xC
3: 86.60000 xC	4: 86.40000 xC	5: 76.50000 xC
6: 221.80000 xC	7: 383.10001 xC	8: 187.39999 xC
9: 149.47000 MxB	10: -0.11200 MxB	11: 1.76000 MxB
12: 8.25000 MxB	13: 9.71000 MxB	14: 1.16000 MxB
15: 518.96997 MxB	16: 0.71000 MxB	17: 149.78999 MxB
18: 90.00000 MxB	19: 13.48000 MxB	20: 12.00000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 192.67000 MxB	1: 33.60000 xC	2: 59.30000 xC
3: 90.00000 xC	4: 87.00000 xC	5: 76.50000 xC
6: 220.50000 xC	7: 383.10001 xC	8: 187.39999 xC

12: 8.19000 MxB	13: 9.68000 MxB	14: 1.16000 MxB
15: 460.79999 MxB	16: 0.69000 MxB	17: 154.92000 MxB
18: 85.32000 MxB	19: 12.98000 MxB	20: 12.78000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: -0.79000 MxB	1: 30.20000 xC	2: 59.40000 xC
3: 79.80000 xC	4: 84.90000 xC	5: 76.80000 xC
6: 222.70000 xC	7: 382.00000 xC	8: 186.89999 xC
9: 62.35000 MxB	10: -0.25600 MxB	11: 1.79000 MxB
12: 7.89000 MxB	13: 9.33000 MxB	14: 1.16000 MxB
15: 476.07999 MxB	16: 0.71000 MxB	17: 134.45000 MxB
18: 55.02000 MxB	19: 7.43000 MxB	20: 12.78000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 0.66000 MxB	1: 24.30000 xC	2: 56.40000 xC
3: 65.10000 xC	4: 80.60000 xC	5: 75.90000 xC
6: 223.60001 xC	7: +0L	8: 197.10001 xC
9: 159.03000 MxB	10: -0.10400 MxB	11: 1.51000 MxB
12: 8.94000 MxB	13: 10.41000 MxB	14: 1.17000 MxB
15: -261.94000 MxB	16: 0.71000 MxB	17: 139.53000 MxB
18: 53.47000 MxB	19: 7.43000 MxB	20: 12.78000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 0.94000 MxB	1: 27.90000 xC	2: 53.40000 xC
3: 64.60000 xC	4: 79.20000 xC	5: 75.00000 xC
6: 224.80000 xC	7: +0L	8: 210.60001 xC
9: 190.22000 MxB	10: -0.27700 MxB	11: 2.02000 MxB
12: 8.33000 MxB	13: 9.92000 MxB	14: 1.23000 MxB
15: -261.94000 MxB	16: 0.74000 MxB	17: 131.86000 MxB
18: 54.25000 MxB	19: 6.93000 MxB	20: 12.78000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: -1.83000 MxB	1: 32.00000 xC	2: 50.20000 xC
3: 64.40000 xC	4: 78.40000 xC	5: 73.90000 xC
6: 226.20000 xC	7: +0L	8: 220.80000 xC
9: 177.27000 MxB	10: -0.27700 MxB	11: 1.93000 MxB
12: 8.15000 MxB	13: 9.64000 MxB	14: 1.17000 MxB
15: -261.94000 MxB	16: 0.73000 MxB	17: 131.91000 MxB
18: 55.82000 MxB	19: 7.43000 MxB	20: 12.77000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 1.60000 MxB	1: 32.50000 xC	2: 48.10000 xC
3: 64.30000 xC	4: 78.00000 xC	5: 73.20000 xC
6: 227.39999 xC	7: +0L	8: 228.60001 xC
9: 209.75000 MxB	10: -0.27700 MxB	11: 1.92000 MxB
12: 8.17000 MxB	13: 9.63000 MxB	14: 1.18000 MxB
15: -261.94000 MxB	16: 0.73000 MxB	17: 134.45000 MxB
18: 54.90000 MxB	19: 7.43000 MxB	20: 12.77000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Inst. Number = 1

0: 1.93000 MxB
3: 67.90000 xC
6: 229.60001 xC
9: 203.13000 MxB
8.02000 MxB
-261.94000 MxB
10: 51.90000 MxB
ALMs: 0(HHHH)3

1: 36.50000 xC
4: 78.40000 xC
7: +0L
10: -0.27700 MxB
13: 9.56000 MxB
16: 0.73000 MxB
19: 6.93000 MxB
DI/O: 0(HHHHHHHH)7

2: 47.80000 xC
5: 72.40000 xC
8: 234.70000 xC
11: 2.16000 MxB
14: 1.19000 MxB
17: 136.99001 MxB
20: 12.78000 MxB
Total: 0

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Inst. Number = 1

0: 1.62000 MxB
3: 66.70000 xC
6: 233.60001 xC
9: 173.38000 MxB
12: 8.15000 MxB
15: -261.94000 MxB
18: 54.25000 MxB
ALMs: 0(HHHH)3

1: 32.20000 xC
4: 77.70000 xC
7: +0L
10: -0.27700 MxB
13: 9.65000 MxB
16: 0.72000 MxB
19: 6.93000 MxB
DI/O: 0(HHHHHHHH)7

2: 46.70000 xC
5: 72.00000 xC
8: 239.50000 xC
11: 2.02000 MxB
14: 1.18000 MxB
17: 126.73000 MxB
20: 12.78000 MxB
Total: 0

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Inst. Number = 1

0: 2.03000 MxB
3: 63.30000 xC
6: 238.70000 xC
9: 202.14000 MxB
12: 8.09000 MxB
15: -261.94000 MxB
90.00000 MxB
ALMs: 0(HHHH)3

1: 28.20000 xC
4: 76.60000 xC
7: +0L
10: -0.27700 MxB
13: 9.65000 MxB
16: 0.73000 MxB
19: 11.97000 MxB
DI/O: 0(HHHHHHHH)7

2: 43.70000 xC
5: 71.10000 xC
8: 243.39999 xC
11: 2.04000 MxB
14: 1.18000 MxB
17: 134.39999 MxB
20: 12.77000 MxB
Total: 0

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Inst. Number = 1

0: -0.20000 MxB
3: 73.50000 xC
6: 245.00000 xC
9: 243.59000 MxB
12: 8.11000 MxB
15: -262.01001 MxB
18: 86.88000 MxB
ALMs: 0(HHHH)3

1: 33.90000 xC
4: 79.30000 xC
7: +0L
10: -0.27700 MxB
13: 9.70000 MxB
16: 0.72000 MxB
19: 15.99000 MxB
DI/O: 0(HHHHHHHH)7

2: 50.10000 xC
5: 71.20000 xC
8: 247.20000 xC
11: 2.07000 MxB
14: 1.18000 MxB
17: 183.06000 MxB
20: 13.54000 MxB
Total: 0

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Inst. Number = 1

0: 0.66000 MxB
3: 72.30000 xC
6: 252.60001 xC
9: 237.64000 MxB
12: 8.12000 MxB
15: -261.94000 MxB
18: 106.36000 MxB
ALMs: 0(HHHH)3

1: 29.60000 xC
4: 79.30000 xC
7: +0L
10: -0.27700 MxB
13: 9.68000 MxB
16: 0.72000 MxB
19: 3.53000 MxB
DI/O: 0(HHHHHHHH)7

2: 46.50000 xC
5: 71.20000 xC
8: 250.00000 xC
11: 1.93000 MxB
14: 1.18000 MxB
17: 172.81000 MxB
20: 13.55000 MxB
Total: 0

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Inst. Number = 1

0: -1.17000 MxB
3: 76.40000 xC
A: 261.89999 xC

1: 31.90000 xC
4: 80.40000 xC
7: +0L

2: 46.20000 xC
5: 71.30000 xC
8: 252.60001 xC

12: 8.19000 MxB	13: 9.72000 MxB	14: 1.18000 MxB
15: -261.94000 MxB	16: 0.75000 MxB	17: 165.13000 MxB
18: 102.44000 MxB	19: 17.00000 MxB	20: 13.55000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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. Number = 1		
-1.60000 MxB	1: 30.20000 xC	2: 52.00000 xC
3: 104.90000 xC	4: 87.80000 xC	5: 72.30000 xC
6: 276.70001 xC	7: +0L	8: 254.89999 xC
9: 151.17000 MxB	10: -0.27700 MxB	11: 1.95000 MxB
12: 8.33000 MxB	13: 9.89000 MxB	14: 1.16000 MxB
15: -261.94000 MxB	16: 0.72000 MxB	17: 139.58000 MxB
18: 135.08000 MxB	19: 19.02000 MxB	20: 13.55000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: -1.50000 MxB	1: 34.60000 xC	2: 69.80000 xC
3: 117.60000 xC	4: 93.40000 xC	5: 75.00000 xC
6: 294.39999 xC	7: +0L	8: 257.00000 xC
9: 197.20000 MxB	10: -0.27700 MxB	11: 2.05000 MxB
12: 8.21000 MxB	13: 9.81000 MxB	14: 1.16000 MxB
15: -261.94000 MxB	16: 0.72000 MxB	17: 137.03999 MxB
18: 134.30000 MxB	19: 18.51000 MxB	20: 13.55000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
-1.98000 MxB	1: 26.50000 xC	2: 74.80000 xC
103.70000 xC	4: 91.50000 xC	5: 76.90000 xC
6: 314.50000 xC	7: +0L	8: 259.00000 xC
9: 188.55000 MxB	10: -0.26600 MxB	11: 1.78000 MxB
12: 8.18000 MxB	13: 9.76000 MxB	14: 1.16000 MxB
15: -262.01001 MxB	16: 0.71000 MxB	17: 139.58000 MxB
18: 57.36000 MxB	19: 7.93000 MxB	20: 14.32000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 19:46:14

Inst. Number = 1		
0: -1.39000 MxB	1: 34.80000 xC	2: 67.10000 xC
3: 93.50000 xC	4: 89.70000 xC	5: 77.70000 xC
6: 332.39999 xC	7: +0L	8: 260.39999 xC
9: 195.61000 MxB	10: -0.27700 MxB	11: 1.85000 MxB
12: 7.99000 MxB	13: 9.58000 MxB	14: 1.17000 MxB
15: -261.94000 MxB	16: 0.70000 MxB	17: 134.45000 MxB
18: 48.78000 MxB	19: 6.42000 MxB	20: 14.33000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 19:52:15

Inst. Number = 1		
0: -0.63000 MxB	1: 38.60000 xC	2: 58.70000 xC
78.10000 xC	4: 85.30000 xC	5: 77.40000 xC
347.00000 xC	7: +0L	8: 262.50000 xC
151.87000 MxB	10: -0.00900 MxB	11: 1.36000 MxB
12: 7.62000 MxB	13: 9.30000 MxB	14: 1.20000 MxB
15: -261.94000 MxB	16: 0.71000 MxB	17: 126.73000 MxB
18: 55.65000 MxB	19: 6.93000 MxB	20: 14.32000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Inst. Number = 1		
0: -2.23000 MxB	1: 40.40000 xC	2: 50.30000 xC
3: 44.80000 xC	4: 80.70000 xC	5: 75.90000 xC
6: 357.29999 xC	7: +0L	8: 264.50000 xC
9: 200.87000 MxB	10: 0.26200 MxB	11: 1.18000 MxB
12: 7.58000 MxB	13: 9.19000 MxB	14: 1.21000 MxB
15: -262.01001 MxB	16: 0.74000 MxB	17: 121.69000 MxB
18: 42.59000 MxB	19: 4.90000 MxB	20: 14.32000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 20:04:14

Inst. Number = 1		
0: -0.68000 MxB	1: 34.80000 xC	2: 47.70000 xC
3: 29.10000 xC	4: 78.00000 xC	5: 74.50000 xC
6: 364.89999 xC	7: +0L	8: 266.39999 xC
9: 52.35000 MxB	10: -0.02400 MxB	11: 1.38000 MxB
12: 7.64000 MxB	13: 9.25000 MxB	14: 1.21000 MxB
15: -262.01001 MxB	16: 0.76000 MxB	17: -1.09000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: 14.32000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/20/93 20:10:15

Inst. Number = 1		
0: 1.90000 MxB	1: 30.70000 xC	2: 45.10000 xC
3: 25.10000 xC	4: 74.80000 xC	5: 72.80000 xC
6: 366.29999 xC	7: +0L	8: 268.20001 xC
9: -14.97000 MxB	10: 0.05500 MxB	11: 1.37000 MxB
12: 7.55000 MxB	13: 9.16000 MxB	14: 1.23000 MxB
15: -261.94000 MxB	16: 0.75000 MxB	17: -1.14000 MxB
18: -0.94000 MxB	19: -0.13000 MxB	20: 14.33000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Appendix A-4

**Facility DAS Printer Output
21 July 1993, N80 and N80-MOD Melts**

ALMs: 0{HHHH}3

DI/O: 0{HHHHHHHH}7

Total: 0

07/21/93 08:24:00

Hvdra Printer Output 07/21/93 08:32:49
 Skipping 5 Scans Between Outputs

07/21/93 08:32:57

Inst. Number = 1

-2.28000 MxB	1: 17.50000 xC	2: 15.50000 xC
.. 19.70000 xC	4: 59.40000 xC	5: 48.50000 xC
6: 64.50000 xC	7: 49.30000 xC	8: 146.00000 xC
9: -45.14000 MxB	10: -0.13900 MxB	11: 1.51000 MxB
12: 10.10000 MxB	13: 11.54000 MxB	14: 1.22000 MxB
15: 452.01999 MxB	16: 0.76000 MxB	17: -1.18000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: -0.16000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 08:38:57

Inst. Number = 1

0: 1.32000 MxB	1: 17.40000 xC	2: 15.40000 xC
3: 19.10000 xC	4: 59.00000 xC	5: 49.50000 xC
6: 63.60000 xC	7: 48.90000 xC	8: 144.60001 xC
9: 29.36000 MxB	10: -0.27700 MxB	11: 1.79000 MxB
12: 10.99000 MxB	13: 12.52000 MxB	14: 1.30000 MxB
15: 465.17999 MxB	16: 0.82000 MxB	17: -1.14000 MxB
18: -0.93000 MxB	19: -0.14000 MxB	20: -0.17000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 08:44:57

Inst. Number = 1

.. 35.50000 MxB	1: 18.10000 xC	2: 18.20000 xC
33.50000 xC	4: 62.40000 xC	5: 50.50000 xC
64.70000 xC	7: 48.60000 xC	8: 143.30000 xC
9: 147.33000 MxB	10: -0.27700 MxB	11: 2.52000 MxB
12: 10.84000 MxB	13: 12.40000 MxB	14: 1.29000 MxB
15: 476.22000 MxB	16: 0.85000 MxB	17: 131.86000 MxB
18: 31.63000 MxB	19: -0.14000 MxB	20: -0.16000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Wednesday
 7/21/93

Inst. Number = 1		
0: 29.41000 MxB	1: 18.30000 xC	2: 22.90000 xC
3: 41.30000 xC	4: 65.30000 xC	5: 52.00000 xC
6: 66.30000 xC	7: 48.30000 xC	8: 141.89999 xC
9: 225.63000 MxB	10: -0.09700 MxB	11: 1.82000 MxB
10: 10.98000 MxB	13: 12.46000 MxB	14: 1.29000 MxB
11: 477.07001 MxB	16: 0.81000 MxB	17: 131.86000 MxB
18: 65.94000 MxB	19: 8.43000 MxB	20: -0.16000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 08:56:57

Inst. Number = 1		
0: 36.37000 MxB	1: 18.40000 xC	2: 25.50000 xC
3: 41.90000 xC	4: 63.40000 xC	5: 53.20000 xC
6: 69.90000 xC	7: 48.10000 xC	8: 140.70000 xC
9: 93.58000 MxB	10: 0.10800 MxB	11: 1.32000 MxB
12: 10.34000 MxB	13: 11.96000 MxB	14: 1.33000 MxB
15: 475.45001 MxB	16: 0.84000 MxB	17: 131.86000 MxB
18: 86.11000 MxB	19: 10.95000 MxB	20: -0.16000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 09:02:57

Inst. Number = 1		
0: 37.60000 MxB	1: 18.20000 xC	2: 26.20000 xC
3: 44.90000 xC	4: 66.80000 xC	5: 54.40000 xC
6: 72.80000 xC	7: 48.10000 xC	8: 122.30000 xC
9: 183.31000 MxB	10: 0.11000 MxB	11: 1.48000 MxB
12: 11.47000 MxB	13: 13.06000 MxB	14: 1.40000 MxB
15: 430.85999 MxB	16: 0.89000 MxB	17: 129.28000 MxB
18: 61.25000 MxB	19: 7.92000 MxB	20: 0.15000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 09:08:57

Inst. Number = 1		
0: 38.45000 MxB	1: 18.20000 xC	2: 27.00000 xC
3: 42.80000 xC	4: 67.00000 xC	5: 55.40000 xC
6: 74.70000 xC	7: 48.00000 xC	8: 112.70000 xC
9: 119.34000 MxB	10: -0.26400 MxB	11: 1.87000 MxB
12: 11.63000 MxB	13: 13.33000 MxB	14: 1.38000 MxB
15: 429.66000 MxB	16: 0.89000 MxB	17: 129.28000 MxB
18: 73.66000 MxB	19: 9.43000 MxB	20: 0.15000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 09:14:57

Inst. Number = 1		
0: 41.34000 MxB	1: 18.20000 xC	2: 27.40000 xC
3: 44.70000 xC	4: 67.80000 xC	5: 56.50000 xC
6: 76.30000 xC	7: 47.60000 xC	8: 106.00000 xC
9: 114.20000 MxB	10: -0.15700 MxB	11: 1.82000 MxB
12: 11.50000 MxB	13: 13.23000 MxB	14: 1.38000 MxB
15: 455.63000 MxB	16: 0.92000 MxB	17: 136.99001 MxB
18: 69.03000 MxB	19: 9.43000 MxB	20: 0.15000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 09:20:57

Inst. Number = 1		
0: 42.93000 MxB	1: 19.00000 xC	2: 28.10000 xC
3: 45.10000 xC	4: 68.20000 xC	5: 57.40000 xC
6: 77.00000 xC	7: 47.40000 xC	8: 100.00000 xC

12: 11.40000 MxB	13: 13.19000 MxB	14: 1.38000 MxB
15: 465.47000 MxB	16: 0.85000 MxB	17: 142.12000 MxB
18: 71.37000 MxB	19: 9.94000 MxB	20: 0.15000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 09:26:57

.. Number = 1

0: 44.23000 MxB	1: 18.90000 xC	2: 28.70000 xC
3: 47.30000 xC	4: 69.10000 xC	5: 58.30000 xC
6: 79.10000 xC	7: 47.10000 xC	8: 95.80000 xC
9: 193.67000 MxB	10: -0.20000 MxB	11: 1.91000 MxB
12: 11.54000 MxB	13: 13.24000 MxB	14: 1.37000 MxB
15: 490.66000 MxB	16: 0.88000 MxB	17: 139.53000 MxB
18: 77.57000 MxB	19: 10.94000 MxB	20: 0.46000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 09:32:57

Inst. Number = 1

0: 51.50000 MxB	1: 19.50000 xC	2: 29.00000 xC
3: 46.50000 xC	4: 69.10000 xC	5: 58.80000 xC
6: 80.50000 xC	7: 47.00000 xC	8: 91.80000 xC
9: 75.61000 MxB	10: -0.09900 MxB	11: 1.83000 MxB
12: 11.38000 MxB	13: 13.12000 MxB	14: 1.38000 MxB
15: 477.78000 MxB	16: 0.90000 MxB	17: 150.77000 MxB
18: 94.67000 MxB	19: 13.98000 MxB	20: 0.46000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 09:38:57

Inst. Number = 1

60.72000 MxB	1: 19.70000 xC	2: 34.20000 xC
69.90000 xC	4: 74.80000 xC	5: 60.30000 xC
6: 82.20000 xC	7: 47.90000 xC	8: 88.60000 xC
9: 126.13000 MxB	10: -0.04700 MxB	11: 1.93000 MxB
12: 12.43000 MxB	13: 14.26000 MxB	14: 1.43000 MxB
15: 447.85001 MxB	16: 0.92000 MxB	17: 177.89000 MxB
18: 98.56000 MxB	19: 17.50000 MxB	20: 0.77000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 09:44:57

Inst. Number = 1

0: 76.05000 MxB	1: 20.30000 xC	2: 43.20000 xC
3: 19.80000 xC	4: 78.70000 xC	5: 62.50000 xC
6: 84.50000 xC	7: 52.20000 xC	8: 85.70000 xC
9: 231.69000 MxB	10: 0.06000 MxB	11: 1.98000 MxB
12: 12.41000 MxB	13: 14.21000 MxB	14: 1.43000 MxB
15: 447.78000 MxB	16: -0.16000 MxB	17: 177.89000 MxB
18: 98.56000 MxB	19: 18.01000 MxB	20: 0.77000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 09:50:57

Inst. Number = 1

0: 93.80000 MxB	1: 20.50000 xC	2: 48.70000 xC
20.20000 xC	4: 80.80000 xC	5: 64.80000 xC
87.20000 xC	7: 56.30000 xC	8: 83.40000 xC
9: 99.06000 MxB	10: 0.26900 MxB	11: 1.82000 MxB
12: 12.44000 MxB	13: 14.41000 MxB	14: 1.51000 MxB
15: 471.91000 MxB	16: 1.02000 MxB	17: 167.67999 MxB
18: 103.25000 MxB	19: 17.50000 MxB	20: 1.08000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Inst. Number = 1		
0: 87.31000 MxB	1: 20.70000 xC	2: 50.10000 xC
3: 20.40000 xC	4: 81.50000 xC	5: 66.40000 xC
6: 90.40000 xC	7: 56.30000 xC	8: 81.00000 xC
9: 102.29000 MxB	10: -0.18900 MxB	11: 2.25000 MxB
12: 69000 MxB	13: 14.58000 MxB	14: 1.48000 MxB
15: 481.81000 MxB	16: 0.94000 MxB	17: 170.22000 MxB
18: 100.03000 MxB	19: 16.49000 MxB	20: 1.08000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 10:02:57

Inst. Number = 1		
0: 85.27000 MxB	1: 20.80000 xC	2: 52.70000 xC
3: 20.70000 xC	4: 82.90000 xC	5: 67.80000 xC
6: 94.20000 xC	7: 57.40000 xC	8: 79.00000 xC
9: 129.21001 MxB	10: 0.02500 MxB	11: 1.99000 MxB
12: 12.61000 MxB	13: 14.46000 MxB	14: 1.48000 MxB
15: 490.23999 MxB	16: 0.97000 MxB	17: 167.63000 MxB
18: 96.22000 MxB	19: 16.00000 MxB	20: 1.39000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 10:08:57

Inst. Number = 1		
0: 90.51000 MxB	1: 20.80000 xC	2: 53.90000 xC
3: 20.90000 xC	4: 83.70000 xC	5: 69.20000 xC
6: 97.80000 xC	7: 59.80000 xC	8: 77.30000 xC
9: 173.25999 MxB	10: -0.11500 MxB	11: 1.94000 MxB
12: 11.94000 MxB	13: 14.01000 MxB	14: 1.52000 MxB
15: 527.39001 MxB	16: 0.99000 MxB	17: 175.35001 MxB
18: 89.21000 MxB	19: 16.12000 MxB	20: 1.39000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 10:14:57

Inst. Number = 1		
0: 111.93000 MxB	1: 20.70000 xC	2: 53.40000 xC
3: 21.00000 xC	4: 85.60000 xC	5: 70.20000 xC
6: 101.40000 xC	7: 62.40000 xC	8: 75.60000 xC
9: 94.56000 MxB	10: -0.06700 MxB	11: 2.29000 MxB
12: 13.86000 MxB	13: 15.93000 MxB	14: 1.61000 MxB
15: 444.38000 MxB	16: 1.05000 MxB	17: 171.20000 MxB
18: 100.13000 MxB	19: 16.99000 MxB	20: 1.69000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 10:20:57

Inst. Number = 1		
0: 128.03999 MxB	1: 21.20000 xC	2: 56.50000 xC
3: 21.10000 xC	4: 87.20000 xC	5: 72.40000 xC
6: 105.00000 xC	7: 63.90000 xC	8: 74.10000 xC
9: 52.18000 MxB	10: -0.27700 MxB	11: 2.55000 MxB
12: 13.86000 MxB	13: 15.87000 MxB	14: 1.59000 MxB
15: 478.06000 MxB	16: 1.07000 MxB	17: 175.39000 MxB
18: 83.01000 MxB	19: 14.48000 MxB	20: 1.69000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 10:26:57

Inst. Number = 1		
0: 102.55000 MxB	1: 21.50000 xC	2: 56.10000 xC
3: 21.60000 xC	4: 86.90000 xC	5: 73.20000 xC
6: 100.40000 xC	7: 63.50000 xC	8: 74.10000 xC
9: 52.18000 MxB	10: -0.27700 MxB	11: 2.55000 MxB
12: 13.86000 MxB	13: 15.87000 MxB	14: 1.59000 MxB
15: 478.06000 MxB	16: 1.07000 MxB	17: 175.39000 MxB
18: 83.01000 MxB	19: 14.48000 MxB	20: 1.69000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

12: 12.80000 MxB	13: 14.79000 MxB	14: 1.51000 MxB
15: 487.26001 MxB	16: 0.99000 MxB	17: 170.25999 MxB
18: 100.12000 MxB	19: 17.50000 MxB	20: 2.01000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 10:32:57

.. Number = 1		
0: 114.77000 MxB	1: 21.50000 xC	2: 54.10000 xC
3: 21.50000 xC	4: 85.60000 xC	5: 73.50000 xC
6: 113.20000 xC	7: 64.40000 xC	8: 71.60000 xC
9: 97.69000 MxB	10: -0.08900 MxB	11: 1.97000 MxB
12: 12.20000 MxB	13: 14.17000 MxB	14: 1.48000 MxB
15: 491.64999 MxB	16: 0.98000 MxB	17: 175.35001 MxB
18: 93.89000 MxB	19: 16.00000 MxB	20: 2.00000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 10:38:57

Inst. Number = 1		
0: 119.16000 MxB	1: 24.50000 xC	2: 61.90000 xC
3: 21.30000 xC	4: 85.30000 xC	5: 73.60000 xC
6: 117.10000 xC	7: 64.20000 xC	8: 70.80000 xC
9: 157.71001 MxB	10: -0.25500 MxB	11: 2.07000 MxB
12: 12.17000 MxB	13: 14.09000 MxB	14: 1.48000 MxB
15: 483.23001 MxB	16: 0.98000 MxB	17: 179.50000 MxB
18: 90.01000 MxB	19: 16.49000 MxB	20: 2.32000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 113.41000 MxB	1: 26.50000 xC	2: 68.80000 xC
3: 21.60000 xC	4: 86.70000 xC	5: 73.90000 xC
6: 121.00000 xC	7: 63.90000 xC	8: 70.10000 xC
9: 147.92999 MxB	10: -0.14700 MxB	11: 2.11000 MxB
12: 12.19000 MxB	13: 14.13000 MxB	14: 1.48000 MxB
15: 489.45999 MxB	16: 0.96000 MxB	17: 177.89000 MxB
18: 96.21000 MxB	19: 17.51000 MxB	20: 2.32000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 125.13000 MxB	1: 28.60000 xC	2: 70.00000 xC
3: 21.60000 xC	4: 86.60000 xC	5: 74.20000 xC
6: 125.30000 xC	7: 63.20000 xC	8: 69.50000 xC
9: 168.78999 MxB	10: -0.16000 MxB	11: 2.28000 MxB
12: 12.06000 MxB	13: 14.03000 MxB	14: 1.49000 MxB
15: 531.34998 MxB	16: 0.97000 MxB	17: 175.30000 MxB
18: 93.89000 MxB	19: 16.49000 MxB	20: 2.63000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 10:56:57

Inst. Number = 1		
0: 158.06000 MxB	1: 29.90000 xC	2: 69.40000 xC
3: 21.90000 xC	4: 86.30000 xC	5: 74.60000 xC
6: 129.50000 xC	7: 62.40000 xC	8: 68.90000 xC
9: 169.52000 MxB	10: -0.27700 MxB	11: 2.27000 MxB
12: 11.86000 MxB	13: 13.84000 MxB	14: 1.51000 MxB
15: 509.13000 MxB	16: 1.00000 MxB	17: 180.48000 MxB
18: 99.35000 MxB	19: 18.00000 MxB	20: 2.93000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Inst. Number = 1		
0: 130.48000 MxB	1: 31.10000 xC	2: 69.70000 xC
3: 22.00000 xC	4: 87.10000 xC	5: 75.20000 xC
6: 133.60001 xC	7: 61.30000 xC	8: 68.20000 xC
9: 165.14000 MxB	10: -0.14000 MxB	11: 2.26000 MxB
12: 12.00000 MxB	13: 14.02000 MxB	14: 1.48000 MxB
488.25000 MxB	16: 0.98000 MxB	17: 185.64999 MxB
18: 102.47000 MxB	19: 19.02000 MxB	20: 2.93000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 11:08:57

Inst. Number = 1		
0: 126.72000 MxB	1: 33.00000 xC	2: 67.40000 xC
3: 22.20000 xC	4: 87.30000 xC	5: 75.60000 xC
6: 136.89999 xC	7: 60.30000 xC	8: 67.50000 xC
9: 155.75000 MxB	10: -0.27700 MxB	11: 2.17000 MxB
12: 12.11000 MxB	13: 14.04000 MxB	14: 1.48000 MxB
15: 566.59003 MxB	16: 0.99000 MxB	17: 175.35001 MxB
18: 93.89000 MxB	19: 16.50000 MxB	20: 3.25000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 11:14:57

Inst. Number = 1		
0: 127.66000 MxB	1: 30.70000 xC	2: 67.50000 xC
3: 22.60000 xC	4: 87.00000 xC	5: 75.80000 xC
6: 139.80000 xC	7: 59.20000 xC	8: 67.20000 xC
9: 144.47000 MxB	10: -0.27700 MxB	11: 2.27000 MxB
12: 12.03000 MxB	13: 14.00000 MxB	14: 1.48000 MxB
15: 513.45001 MxB	16: 0.82000 MxB	17: 172.81000 MxB
98.56000 MxB	19: 17.50000 MxB	20: 3.25000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 11:20:57

Inst. Number = 1		
0: 126.34000 MxB	1: 32.10000 xC	2: 68.20000 xC
3: 22.90000 xC	4: 87.10000 xC	5: 75.80000 xC
6: 142.39999 xC	7: 58.40000 xC	8: 66.90000 xC
9: 155.25999 MxB	10: -0.27700 MxB	11: 2.17000 MxB
12: 11.43000 MxB	13: 13.46000 MxB	14: 1.45000 MxB
15: 517.27002 MxB	16: 0.93000 MxB	17: 175.35001 MxB
18: 100.12000 MxB	19: 18.01000 MxB	20: 3.56000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 11:26:57

Inst. Number = 1		
0: 127.55000 MxB	1: 32.20000 xC	2: 68.50000 xC
3: 23.00000 xC	4: 87.50000 xC	5: 76.30000 xC
6: 144.80000 xC	7: 57.60000 xC	8: 66.90000 xC
9: 143.03999 MxB	10: -0.27000 MxB	11: 2.08000 MxB
12: 11.46000 MxB	13: 13.45000 MxB	14: 1.45000 MxB
15: 514.51001 MxB	16: 0.95000 MxB	17: 175.35001 MxB
18: 103.25000 MxB	19: 18.01000 MxB	20: 3.55000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 11:32:57

Inst. Number = 1		
0: 131.03999 MxB	1: 33.90000 xC	2: 67.20000 xC
3: 23.20000 xC	4: 86.50000 xC	5: 76.40000 xC
6: 144.00000 xC	7: 57.00000 xC	8: 67.00000 xC

12: 11.01000 MxB	13: 12.96000 MxB	14: 1.41000 MxB
15: 518.26001 MxB	16: 0.88000 MxB	17: 177.94000 MxB
18: 107.14000 MxB	19: 19.52000 MxB	20: 3.87000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 11:38:57

.. Number = 1		
0: 98.23000 MxB	1: 34.40000 xC	2: 62.90000 xC
3: 23.30000 xC	4: 85.40000 xC	5: 76.10000 xC
6: 149.20000 xC	7: 56.70000 xC	8: 67.00000 xC
9: 165.48000 MxB	10: -0.12500 MxB	11: 2.03000 MxB
12: 11.13000 MxB	13: 13.09000 MxB	14: 1.44000 MxB
15: 540.47998 MxB	16: 0.90000 MxB	17: 177.89000 MxB
18: 91.90000 MxB	19: 16.50000 MxB	20: 4.18000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 11:44:57

Inst. Number = 1		
0: 105.75000 MxB	1: 39.30000 xC	2: 62.90000 xC
3: 23.70000 xC	4: 86.10000 xC	5: 76.30000 xC
6: 151.00000 xC	7: 56.40000 xC	8: 67.20000 xC
9: 160.27000 MxB	10: -0.21100 MxB	11: 1.86000 MxB
12: 10.90000 MxB	13: 12.98000 MxB	14: 1.45000 MxB
15: 553.71002 MxB	16: 0.94000 MxB	17: 167.72000 MxB
18: 100.68000 MxB	19: 17.00000 MxB	20: 4.18000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 11:50:57

Inst. Number = 1		
0: 102.40000 MxB	1: 35.30000 xC	2: 62.50000 xC
3: 24.10000 xC	4: 86.10000 xC	5: 76.40000 xC
6: 152.50000 xC	7: 56.40000 xC	8: 68.50000 xC
9: 160.10001 MxB	10: -0.19600 MxB	11: 2.09000 MxB
12: 11.25000 MxB	13: 13.20000 MxB	14: 1.42000 MxB
15: 530.28998 MxB	16: 0.91000 MxB	17: 170.22000 MxB
18: 100.12000 MxB	19: 17.70000 MxB	20: 4.49000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 11:56:57

Inst. Number = 1		
0: 100.58000 MxB	1: 32.10000 xC	2: 60.10000 xC
3: 24.20000 xC	4: 85.70000 xC	5: 76.20000 xC
6: 153.70000 xC	7: 56.30000 xC	8: 68.50000 xC
9: 154.38000 MxB	10: -0.18600 MxB	11: 2.03000 MxB
12: 11.25000 MxB	13: 13.17000 MxB	14: 1.43000 MxB
15: 512.46002 MxB	16: 0.92000 MxB	17: 172.81000 MxB
18: 96.22000 MxB	19: 16.20000 MxB	20: 4.48000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 12:02:57

Inst. Number = 1		
0: 127.31000 MxB	1: 33.20000 xC	2: 59.40000 xC
3: 24.50000 xC	4: 85.60000 xC	5: 76.30000 xC
6: 155.00000 xC	7: 56.60000 xC	8: 69.10000 xC
9: 145.53999 MxB	10: -0.16900 MxB	11: 1.97000 MxB
12: 11.05000 MxB	13: 13.07000 MxB	14: 1.43000 MxB
15: 496.60001 MxB	16: 0.74000 MxB	17: 172.81000 MxB
18: 100.90000 MxB	19: 17.50000 MxB	20: 4.80000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Inst. Number = 1		
0: 125.78000 MxB	1: 35.90000 xC	2: 59.80000 xC
3: 24.80000 xC	4: 86.10000 xC	5: 76.40000 xC
6: 156.60001 xC	7: 56.70000 xC	8: 69.60000 xC
9: 135.12000 MxB	10: -0.19800 MxB	11: 1.99000 MxB
10: 10.74000 MxB	13: 12.72000 MxB	14: 1.42000 MxB
15: 509.48001 MxB	16: 0.90000 MxB	17: 175.39000 MxB
18: 98.56000 MxB	19: 17.50000 MxB	20: 4.79000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 12:14:57

Inst. Number = 1		
0: 104.23000 MxB	1: 34.20000 xC	2: 58.30000 xC
3: 24.90000 xC	4: 86.00000 xC	5: 76.50000 xC
6: 158.10001 xC	7: 57.10000 xC	8: 69.60000 xC
9: 150.14000 MxB	10: 0.08300 MxB	11: 1.81000 MxB
12: 10.83000 MxB	13: 12.77000 MxB	14: 1.41000 MxB
15: 535.88000 MxB	16: 0.90000 MxB	17: 175.35001 MxB
18: 93.87000 MxB	19: 16.49000 MxB	20: 5.11000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 12:20:57

Inst. Number = 1		
0: 105.06000 MxB	1: 36.20000 xC	2: 56.80000 xC
3: 24.90000 xC	4: 86.10000 xC	5: 76.20000 xC
6: 159.20000 xC	7: 57.60000 xC	8: 70.40000 xC
9: 147.12000 MxB	10: -0.26600 MxB	11: 1.96000 MxB
12: 10.76000 MxB	13: 12.76000 MxB	14: 1.42000 MxB
15: 556.33002 MxB	16: 0.88000 MxB	17: 177.89000 MxB
18: 96.97000 MxB	19: 17.50000 MxB	20: 5.42000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 12:26:57

Inst. Number = 1		
0: 105.95000 MxB	1: 36.00000 xC	2: 55.60000 xC
3: 24.90000 xC	4: 85.90000 xC	5: 76.00000 xC
6: 160.20000 xC	7: 57.90000 xC	8: 70.70000 xC
9: 57.15000 MxB	10: -0.15800 MxB	11: 1.81000 MxB
12: 10.63000 MxB	13: 12.60000 MxB	14: 1.39000 MxB
15: 589.16998 MxB	16: 0.88000 MxB	17: 170.25999 MxB
18: 100.12000 MxB	19: 17.00000 MxB	20: 5.42000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 12:32:57

Inst. Number = 1		
0: 101.19000 MxB	1: 32.10000 xC	2: 57.80000 xC
3: 25.00000 xC	4: 85.30000 xC	5: 75.90000 xC
6: 160.89999 xC	7: 58.40000 xC	8: 70.30000 xC
9: 138.57001 MxB	10: -0.22400 MxB	11: 1.77000 MxB
12: 10.08000 MxB	13: 12.18000 MxB	14: 1.44000 MxB
15: 504.95001 MxB	16: 0.95000 MxB	17: 170.22000 MxB
18: 99.35000 MxB	19: 17.00000 MxB	20: 5.73000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 12:38:57

Inst. Number = 1		
0: 106.29000 MxB	1: 30.70000 xC	2: 59.70000 xC
3: 24.90000 xC	4: 84.80000 xC	5: 75.80000 xC
6: 161.70000 xC	7: 58.80000 xC	8: 70.50000 xC

12: 10.39000 MxB	13: 12.29000 MxB	14: 1.37000 MxB
15: 503.82001 MxB	16: 0.86000 MxB	17: 172.85001 MxB
18: 89.21000 MxB	19: 15.49000 MxB	20: 5.73000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 12:44:57

.. Number = 1		
0: -1.95000 MxB	1: 32.80000 xC	2: 60.10000 xC
3: 25.00000 xC	4: 85.10000 xC	5: 75.70000 xC
6: 162.70000 xC	7: 59.60000 xC	8: 71.00000 xC
9: 142.89000 MxB	10: -0.24800 MxB	11: 2.01000 MxB
12: 10.41000 MxB	13: 12.38000 MxB	14: 1.37000 MxB
15: 543.65997 MxB	16: 0.90000 MxB	17: 170.25999 MxB
18: 101.67000 MxB	19: 17.50000 MxB	20: 6.04000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 12:50:57

Inst. Number = 1		
0: -1.28000 MxB	1: 32.50000 xC	2: 58.30000 xC
3: 24.90000 xC	4: 81.30000 xC	5: 75.10000 xC
6: 164.30000 xC	7: 60.20000 xC	8: 71.30000 xC
9: 144.89000 MxB	10: -0.27700 MxB	11: 1.77000 MxB
12: 9.24000 MxB	13: 10.96000 MxB	14: 1.26000 MxB
15: 478.20999 MxB	16: 0.76000 MxB	17: -1.14000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: 6.04000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 12:56:57

Inst. Number = 1		
0: 0.27000 MxB	1: 28.40000 xC	2: 49.90000 xC
3: 24.60000 xC	4: 60.60000 xC	5: 63.70000 xC
6: 165.80000 xC	7: 60.80000 xC	8: 71.80000 xC
9: 57.15000 MxB	10: -0.21200 MxB	11: -0.02000 MxB
12: 0.04000 MxB	13: -0.01000 MxB	14: 0.03000 MxB
15: 24.59000 MxB	16: -0.07000 MxB	17: -1.14000 MxB
18: -0.93000 MxB	19: -0.14000 MxB	20: 6.04000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 13:02:57

Inst. Number = 1		
0: -1.34000 MxB	1: 26.50000 xC	2: +DL
3: 24.60000 xC	4: 51.20000 xC	5: 61.80000 xC
6: 166.70000 xC	7: 61.60000 xC	8: 72.20000 xC
9: 57.15000 MxB	10: -0.06900 MxB	11: -0.02000 MxB
12: 0.47000 MxB	13: 0.78000 MxB	14: 0.37000 MxB
15: 31.88000 MxB	16: 0.12000 MxB	17: -1.18000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: 6.04000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 13:08:57

Inst. Number = 1		
0: 0.36000 MxB	1: 25.80000 xC	2: 59.70000 xC
3: 24.20000 xC	4: 74.50000 xC	5: 61.50000 xC
6: 166.80000 xC	7: 62.40000 xC	8: 72.80000 xC
9: 57.15000 MxB	10: -0.02400 MxB	11: 0.23000 MxB
12: 1.40000 MxB	13: 1.53000 MxB	14: 0.27000 MxB
15: 18.44000 MxB	16: 0.09000 MxB	17: -1.18000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: 6.04000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Inst. Number = 1		
0: -0.85000 MxB	1: 25.10000 xC	2: 60.60000 xC
3: 24.50000 xC	4: 75.60000 xC	5: 61.50000 xC
6: 167.00000 xC	7: 63.30000 xC	8: 73.70000 xC
9: 57.15000 MxB	10: -0.27700 MxB	11: 0.54000 MxB
12: 1.55000 MxB	13: 1.63000 MxB	14: 0.25000 MxB
15: 113.47000 MxB	16: 0.08000 MxB	17: 185.64999 MxB
18: 34.84000 MxB	19: 6.41000 MxB	20: 6.04000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 13:20:57

Inst. Number = 1		
0: 99.49000 MxB	1: 25.90000 xC	2: 68.90000 xC
3: 22.70000 xC	4: 73.70000 xC	5: 63.70000 xC
6: 166.80000 xC	7: 64.10000 xC	8: 74.50000 xC
9: 57.15000 MxB	10: -0.08700 MxB	11: 1.40000 MxB
12: 9.50000 MxB	13: 11.15000 MxB	14: 1.24000 MxB
15: 457.12000 MxB	16: 0.76000 MxB	17: 175.35001 MxB
18: 98.56000 MxB	19: 17.50000 MxB	20: 6.34000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 13:26:57

Inst. Number = 1		
0: 97.18000 MxB	1: 27.40000 xC	2: 160.60001 xC
3: 24.00000 xC	4: 78.50000 xC	5: 65.30000 xC
6: 167.39999 xC	7: 64.90000 xC	8: 75.80000 xC
9: 57.15000 MxB	10: -0.02000 MxB	11: 1.61000 MxB
12: 10.24000 MxB	13: 12.03000 MxB	14: 1.31000 MxB
15: 429.16000 MxB	16: 0.81000 MxB	17: 175.35001 MxB
18: 91.55000 MxB	19: 16.00000 MxB	20: 6.35000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 13:32:57

Inst. Number = 1		
0: 112.40000 MxB	1: 26.00000 xC	2: 137.80000 xC
3: 24.00000 xC	4: 83.20000 xC	5: 67.40000 xC
6: 167.39999 xC	7: 65.70000 xC	8: 76.50000 xC
9: 57.15000 MxB	10: -0.15000 MxB	11: 1.87000 MxB
12: 11.56000 MxB	13: 13.56000 MxB	14: 1.42000 MxB
15: 488.04001 MxB	16: 0.89000 MxB	17: 180.48000 MxB
18: 94.66000 MxB	19: 17.23000 MxB	20: 6.66000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 13:41:11

Inst. Number = 1		
0: 80.42000 MxB	1: 26.10000 xC	2: 127.30000 xC
3: +0L $\rightarrow$ 10 56000 1600	4: 83.30000 xC	5: 69.70000 xC
6: 169.20000 xC	7: 66.90000 xC	8: 77.80000 xC
9: 57.15000 MxB	10: -0.27200 MxB	11: 2.11000 MxB
12: 11.08000 MxB	13: 13.06000 MxB	14: 1.37000 MxB
15: 493.42001 MxB	16: 0.87000 MxB	17: 144.71001 MxB
18: 76.77000 MxB	19: 10.95000 MxB	20: 6.66000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 13:48:17

Inst. Number = 1		
0: 79.57000 MxB	1: 26.10000 xC	2: 101.20000 xC
3: +0L	4: 81.30000 xC	5: 70.00000 xC
6: 169.20000 xC	7: 66.90000 xC	8: 77.80000 xC

12: 10.70000 MxB	13: 12.73000 MxB	14: 1.36000 MxB
15: 492.70999 MxB	16: 0.86000 MxB	17: 149.78999 MxB
18: 82.23000 MxB	19: 12.47000 MxB	20: 6.97000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 13:54:17

.. Number = 1		
0: 83.10000 MxB	1: 31.50000 xC	2: 76.90000 xC
3: 71.60000 xC	4: 80.70000 xC	5: 70.10000 xC
6: 170.39999 xC	7: 68.10000 xC	8: 80.60000 xC
9: 147.59000 MxB	10: -0.27400 MxB	11: 1.86000 MxB
12: 10.70000 MxB	13: 12.76000 MxB	14: 1.35000 MxB
15: 521.44000 MxB	16: 0.84000 MxB	17: 149.84000 MxB
18: 82.23000 MxB	19: 12.46000 MxB	20: 6.97000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 14:00:17

Inst. Number = 1		
0: 107.90000 MxB	1: 35.10000 xC	2: 60.00000 xC
3: 71.90000 xC	4: 80.20000 xC	5: 69.90000 xC
6: 171.20000 xC	7: 68.70000 xC	8: 82.30000 xC
9: 171.14999 MxB	10: -0.27700 MxB	11: 2.00000 MxB
12: 10.78000 MxB	13: 12.85000 MxB	14: 1.34000 MxB
15: 532.90997 MxB	16: 0.85000 MxB	17: 142.17000 MxB
18: 77.55000 MxB	19: 10.95000 MxB	20: 7.27000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 14:06:17

Inst. Number = 1		
135.09000 MxB	1: 35.70000 xC	2: 55.60000 xC
73.10000 xC	4: 80.50000 xC	5: 69.90000 xC
6: 171.80000 xC	7: 69.20000 xC	8: 84.00000 xC
9: 166.10001 MxB	10: -0.27700 MxB	11: 2.09000 MxB
12: 10.75000 MxB	13: 12.85000 MxB	14: 1.35000 MxB
15: 566.95001 MxB	16: 0.86000 MxB	17: 144.71001 MxB
18: 87.16000 MxB	19: 12.97000 MxB	20: 7.27000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 14:12:17

Inst. Number = 1		
0: 104.72000 MxB	1: 37.70000 xC	2: 52.90000 xC
3: 77.50000 xC	4: 81.40000 xC	5: 70.00000 xC
6: 172.30000 xC	7: 69.80000 xC	8: 85.00000 xC
9: 150.87000 MxB	10: -0.16300 MxB	11: 1.92000 MxB
12: 10.46000 MxB	13: 12.50000 MxB	14: 1.30000 MxB
15: 582.02002 MxB	16: 0.81000 MxB	17: 149.78999 MxB
18: 83.77000 MxB	19: 12.96000 MxB	20: 7.27000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 14:18:17

Inst. Number = 1		
0: 110.07000 MxB	1: 35.40000 xC	2: 50.40000 xC
72.80000 xC	4: 80.70000 xC	5: 70.10000 xC
172.00000 xC	7: 70.60000 xC	8: 86.00000 xC
9: 137.02000 MxB	10: -0.11400 MxB	11: 1.91000 MxB
12: 10.42000 MxB	13: 12.47000 MxB	14: 1.30000 MxB
15: 561.35999 MxB	16: 0.81000 MxB	17: 149.84000 MxB
18: 82.99000 MxB	19: 12.68000 MxB	20: 7.59000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Inst. Number = 1		
0: 104.19000 MxB	1: 37.70000 xC	2: 48.60000 xC
3: 71.60000 xC	4: 80.20000 xC	5: 70.10000 xC
6: 171.70000 xC	7: 71.80000 xC	8: 87.40000 xC
9: 138.86000 MxB	10: -0.09200 MxB	11: 1.85000 MxB
10: 10.26000 MxB	13: 12.37000 MxB	14: 1.31000 MxB
15: 543.88000 MxB	16: 0.81000 MxB	17: 177.89000 MxB
18: 94.64000 MxB	19: 17.00000 MxB	20: 7.59000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 14:30:17

Inst. Number = 1		
0: 101.37000 MxB	1: 35.70000 xC	2: 53.80000 xC
3: 83.50000 xC	4: 83.10000 xC	5: 70.80000 xC
6: 171.10001 xC	7: 72.90000 xC	8: 88.20000 xC
9: 110.96000 MxB	10: -0.21100 MxB	11: 2.15000 MxB
12: 11.11000 MxB	13: 13.42000 MxB	14: 1.39000 MxB
15: 521.79999 MxB	16: 0.86000 MxB	17: 172.75999 MxB
18: 96.97000 MxB	19: 17.00000 MxB	20: 7.90000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 14:36:17

Inst. Number = 1		
0: 111.91000 MxB	1: 36.80000 xC	2: 61.80000 xC
3: 88.20000 xC	4: 85.30000 xC	5: 71.50000 xC
6: 171.39999 xC	7: 74.20000 xC	8: 89.20000 xC
9: 140.64999 MxB	10: -0.27700 MxB	11: 2.07000 MxB
12: 11.09000 MxB	13: 13.39000 MxB	14: 1.38000 MxB
15: 564.19000 MxB	16: 0.87000 MxB	17: 142.17000 MxB
18: 71.35000 MxB	19: 9.94000 MxB	20: 7.90000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 14:42:17

Inst. Number = 1		
0: 115.51000 MxB	1: 35.30000 xC	2: 59.30000 xC
3: 82.20000 xC	4: 84.90000 xC	5: 72.10000 xC
6: 171.00000 xC	7: 75.30000 xC	8: 90.20000 xC
9: 57.15000 MxB	10: -0.27700 MxB	11: 2.24000 MxB
12: 11.27000 MxB	13: 13.62000 MxB	14: 1.40000 MxB
15: 510.97000 MxB	16: 0.90000 MxB	17: 144.71001 MxB
18: 93.86000 MxB	19: 13.47000 MxB	20: 8.21000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 14:48:17

Inst. Number = 1		
0: 109.89000 MxB	1: 33.00000 xC	2: 58.60000 xC
3: 87.20000 xC	4: 84.60000 xC	5: 72.40000 xC
6: 171.10001 xC	7: 76.00000 xC	8: 91.40000 xC
9: 57.15000 MxB	10: -0.26600 MxB	11: 2.27000 MxB
12: 11.32000 MxB	13: 13.68000 MxB	14: 1.39000 MxB
15: 588.66998 MxB	16: 0.88000 MxB	17: 200.95000 MxB
18: 57.02000 MxB	19: 10.95000 MxB	20: 8.21000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 14:54:17

Inst. Number = 1		
0: 59.49000 MxB	1: 34.60000 xC	2: 55.70000 xC
3: 66.20000 xC	4: 81.00000 xC	5: 72.10000 xC
6: 171.00000 xC	7: 76.00000 xC	8: 91.40000 xC

12: 10.83000 MxB	13: 13.21000 MxB	14: 1.39000 MxB
15: 569.71002 MxB	16: 0.87000 MxB	17: -1.14000 MxB
18: -0.95000 MxB	19: -0.14000 MxB	20: 8.21000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 15:00:17

1 . Number = 1		
0: 29.59000 MxB	1: 29.50000 xC	2: 49.90000 xC
3: 61.10000 xC	4: 78.40000 xC	5: 71.40000 xC
6: 170.60001 xC	7: 76.60000 xC	8: 92.80000 xC
9: 124.08000 MxB	10: -0.27700 MxB	11: 2.08000 MxB
12: 10.59000 MxB	13: 12.98000 MxB	14: 1.38000 MxB
15: 509.54999 MxB	16: 0.87000 MxB	17: 154.92000 MxB
18: 87.66000 MxB	19: 13.47000 MxB	20: 8.51000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 15:06:17

Inst. Number = 1		
0: 29.19000 MxB	1: 26.40000 xC	2: 52.30000 xC
3: 71.00000 xC	4: 81.60000 xC	5: 71.70000 xC
6: 170.00000 xC	7: 79.00000 xC	8: 93.50000 xC
9: 57.15000 MxB	10: -0.18900 MxB	11: 2.04000 MxB
12: 10.57000 MxB	13: 12.99000 MxB	14: 1.37000 MxB
15: 499.85999 MxB	16: 0.85000 MxB	17: 152.38000 MxB
18: 84.55000 MxB	19: 12.97000 MxB	20: 8.51000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 15:12:17

Inst. Number = 1		
0: 32.27000 MxB	1: 28.70000 xC	2: 53.90000 xC
3: 67.60000 xC	4: 79.60000 xC	5: 71.00000 xC
6: 168.89999 xC	7: 79.70000 xC	8: 94.30000 xC
9: 132.21001 MxB	10: -0.22600 MxB	11: 2.29000 MxB
12: 10.46000 MxB	13: 12.95000 MxB	14: 1.38000 MxB
15: 490.79999 MxB	16: 0.86000 MxB	17: 147.28999 MxB
18: 86.89000 MxB	19: 13.28000 MxB	20: 8.51000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 15:18:17

Inst. Number = 1		
0: 33.37000 MxB	1: 29.80000 xC	2: 53.00000 xC
3: 67.20000 xC	4: 79.10000 xC	5: 70.70000 xC
6: 168.80000 xC	7: 79.90000 xC	8: 95.30000 xC
9: 141.69000 MxB	10: -0.18200 MxB	11: 2.22000 MxB
12: 10.79000 MxB	13: 13.30000 MxB	14: 1.38000 MxB
15: 491.72000 MxB	16: 0.86000 MxB	17: 144.39999 MxB
18: 80.66000 MxB	19: 11.97000 MxB	20: 8.83000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 15:24:17

Inst. Number = 1		
0: 29.99000 MxB	1: 30.00000 xC	2: 53.10000 xC
3: 67.00000 xC	4: 78.60000 xC	5: 70.30000 xC
6: 168.89999 xC	7: 80.40000 xC	8: 96.40000 xC
9: 138.78999 MxB	10: -0.27700 MxB	11: 2.35000 MxB
12: 10.63000 MxB	13: 13.15000 MxB	14: 1.41000 MxB
15: 500.57001 MxB	16: 0.88000 MxB	17: 147.25000 MxB
18: 88.44000 MxB	19: 12.97000 MxB	20: 8.82000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Inst. Number = 1		
0: 28.04000 MxB	1: 29.60000 xC	2: 54.00000 xC
3: 67.60000 xC	4: 78.60000 xC	5: 70.10000 xC
6: 169.50000 xC	7: 80.10000 xC	8: 97.50000 xC
9: 120.76000 MxB	10: -0.26800 MxB	11: 2.23000 MxB
10: 10.88000 MxB	13: 13.39000 MxB	14: 1.37000 MxB
506.72000 MxB	16: 0.88000 MxB	17: 149.78999 MxB
18: 87.67000 MxB	19: 13.48000 MxB	20: 9.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 15:36:17

Inst. Number = 1		
0: 29.81000 MxB	1: 29.50000 xC	2: 56.20000 xC
3: 87.70000 xC	4: 82.10000 xC	5: 70.30000 xC
6: 171.10001 xC	7: 80.30000 xC	8: 99.00000 xC
9: 57.15000 MxB	10: -0.27700 MxB	11: 2.35000 MxB
12: 10.47000 MxB	13: 13.32000 MxB	14: 1.42000 MxB
15: 454.22000 MxB	16: 0.88000 MxB	17: 185.61000 MxB
18: 72.91000 MxB	19: 13.48000 MxB	20: 9.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 15:42:17

Inst. Number = 1		
0: 84.80000 MxB	1: 27.00000 xC	2: 61.10000 xC
3: 79.80000 xC	4: 82.30000 xC	5: 70.60000 xC
6: 172.00000 xC	7: 80.30000 xC	8: 100.30000 xC
9: 126.28000 MxB	10: -0.21500 MxB	11: 2.16000 MxB
12: 10.87000 MxB	13: 13.56000 MxB	14: 1.41000 MxB
15: 493.35001 MxB	16: 0.89000 MxB	17: 180.48000 MxB
128.88000 MxB	19: 21.17000 MxB	20: 9.44000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 87.80000 MxB	1: 31.20000 xC	2: 63.80000 xC
3: 87.80000 xC	4: 84.20000 xC	5: 71.30000 xC
6: 173.20000 xC	7: 80.20000 xC	8: 102.00000 xC
9: 132.66000 MxB	10: -0.26300 MxB	11: 2.47000 MxB
12: 11.08000 MxB	13: 13.99000 MxB	14: 1.41000 MxB
15: 504.25000 MxB	16: 0.89000 MxB	17: 157.50999 MxB
18: 82.99000 MxB	19: 12.97000 MxB	20: 9.44000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 15:54:17

Inst. Number = 1		
0: 75.45000 MxB	1: 32.50000 xC	2: 64.60000 xC
3: 87.80000 xC	4: 85.30000 xC	5: 72.10000 xC
6: 175.00000 xC	7: 80.10000 xC	8: 103.50000 xC
9: 132.45000 MxB	10: -0.27700 MxB	11: 2.47000 MxB
12: 11.14000 MxB	13: 14.01000 MxB	14: 1.40000 MxB
15: 539.77002 MxB	16: 0.88000 MxB	17: 172.81000 MxB
18: 98.14000 MxB	19: 17.01000 MxB	20: 9.78000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 90.76000 MxB	1: 34.20000 xC	2: 62.40000 xC
3: 89.70000 xC	4: 85.40000 xC	5: 72.40000 xC
6: 174.40000 xC	7: 80.50000 xC	8: 105.00000 xC

12: 11.05000 MxB	13: 13.92000 MxB	14: 1.42000 MxB
15: 496.95999 MxB	16: 0.90000 MxB	17: 177.94000 MxB
18: 93.86000 MxB	19: 17.00000 MxB	20: 9.78000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 16:06:17

. Number = 1		
0: 98.75000 MxB	1: 31.40000 xC	2: 64.40000 xC
3: 93.70000 xC	4: 87.00000 xC	5: 72.90000 xC
6: 178.00000 xC	7: 81.00000 xC	8: 107.00000 xC
9: 129.27000 MxB	10: -0.27700 MxB	11: 2.61000 MxB
12: 11.28000 MxB	13: 13.45000 MxB	14: 1.47000 MxB
15: 557.17999 MxB	16: 0.94000 MxB	17: 175.39000 MxB
18: 96.20000 MxB	19: 17.00000 MxB	20: 10.09000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 16:12:17

Inst. Number = 1		
0: 87.98000 MxB	1: 30.50000 xC	2: 64.20000 xC
3: 93.00000 xC	4: 87.40000 xC	5: 73.50000 xC
6: 179.30000 xC	7: 82.50000 xC	8: 109.00000 xC
9: 135.61000 MxB	10: -0.27700 MxB	11: 2.64000 MxB
12: 11.32000 MxB	13: 13.37000 MxB	14: 1.48000 MxB
15: 573.95001 MxB	16: 0.94000 MxB	17: 172.85001 MxB
18: 98.55000 MxB	19: 17.00000 MxB	20: 10.40000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 16:18:17

Inst. Number = 1		
0: 81.07000 MxB	1: 30.80000 xC	2: 66.90000 xC
3: 96.10000 xC	4: 88.60000 xC	5: 74.40000 xC
6: 180.60001 xC	7: 85.90000 xC	8: 110.90000 xC
9: 132.83000 MxB	10: -0.27700 MxB	11: 2.67000 MxB
12: 11.16000 MxB	13: 13.20000 MxB	14: 1.49000 MxB
15: 525.26001 MxB	16: 0.95000 MxB	17: 167.67999 MxB
18: 112.54000 MxB	19: 18.51000 MxB	20: 10.40000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 16:24:17

Inst. Number = 1		
0: 79.77000 MxB	1: 30.30000 xC	2: 69.50000 xC
3: 95.90000 xC	4: 88.70000 xC	5: 75.00000 xC
6: 181.50000 xC	7: 91.00000 xC	8: 113.50000 xC
9: 130.05000 MxB	10: -0.27700 MxB	11: 2.71000 MxB
12: 11.07000 MxB	13: 13.19000 MxB	14: 1.49000 MxB
15: 522.65002 MxB	16: 0.92000 MxB	17: 177.89000 MxB
18: 89.98000 MxB	19: 16.00000 MxB	20: 10.71000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 82.54000 MxB	1: 28.90000 xC	2: 70.00000 xC
3: 94.60000 xC	4: 88.70000 xC	5: 75.60000 xC
6: 182.70000 xC	7: 98.80000 xC	8: 115.90000 xC
9: 128.50000 MxB	10: -0.27700 MxB	11: 2.74000 MxB
12: 10.94000 MxB	13: 13.05000 MxB	14: 1.49000 MxB
15: 509.70001 MxB	16: 0.94000 MxB	17: 175.35001 MxB
18: 104.01000 MxB	19: 18.52000 MxB	20: 10.71000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Inst. Number = 1		
0: 77.87000 MxB	1: 29.30000 xC	2: 72.30000 xC
3: 100.80000 xC	4: 89.60000 xC	5: 76.10000 xC
6: 183.89999 xC	7: 100.50000 xC	8: 118.60000 xC
9: 124.52000 MxB	10: -0.27700 MxB	11: 2.65000 MxB
11.22000 MxB	13: 13.20000 MxB	14: 1.47000 MxB
504.17999 MxB	16: 0.92000 MxB	17: 195.86000 MxB
18: 80.65000 MxB	19: 16.99000 MxB	20: 11.03000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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Inst. Number = 1		
0: 90.02000 MxB	1: 30.10000 xC	2: 72.70000 xC
3: 93.60000 xC	4: 87.80000 xC	5: 76.10000 xC
6: 185.70000 xC	7: 100.80000 xC	8: 121.10000 xC
9: 131.35001 MxB	10: -0.27700 MxB	11: 2.36000 MxB
12: 10.93000 MxB	13: 13.02000 MxB	14: 1.50000 MxB
15: 512.39001 MxB	16: 0.97000 MxB	17: 177.94000 MxB
18: 105.56000 MxB	19: 18.51000 MxB	20: 11.02000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 16:48:17

Inst. Number = 1		
0: 82.16000 MxB	1: 29.40000 xC	2: 73.10000 xC
3: 101.30000 xC	4: 90.70000 xC	5: 76.80000 xC
6: 187.70000 xC	7: 101.20000 xC	8: 122.60000 xC
9: 129.07001 MxB	10: -0.27700 MxB	11: 2.27000 MxB
12: 10.94000 MxB	13: 12.93000 MxB	14: 1.50000 MxB
15: 533.76001 MxB	16: 0.96000 MxB	17: 203.58000 MxB
80.66000 MxB	19: 16.50000 MxB	20: 11.33000 MxB
s: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 16:54:17

Inst. Number = 1		
0: 103.04000 MxB	1: 30.00000 xC	2: 77.00000 xC
3: 111.60000 xC	4: 92.70000 xC	5: 77.50000 xC
6: 189.60001 xC	7: 102.10000 xC	8: 124.80000 xC
9: 133.28000 MxB	10: -0.26700 MxB	11: 2.35000 MxB
12: 11.13000 MxB	13: 13.20000 MxB	14: 1.48000 MxB
15: 529.78998 MxB	16: 0.93000 MxB	17: 172.85001 MxB
18: 117.22000 MxB	19: 20.53000 MxB	20: 11.33000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 17:00:17

Inst. Number = 1		
0: 94.79000 MxB	1: 32.70000 xC	2: 81.90000 xC
3: 124.00000 xC	4: 95.50000 xC	5: 78.80000 xC
6: 191.10001 xC	7: 103.20000 xC	8: 127.40000 xC
9: 134.13000 MxB	10: -0.17100 MxB	11: 2.12000 MxB
12: 10.88000 MxB	13: 13.03000 MxB	14: 1.51000 MxB
15: 479.20001 MxB	16: 0.97000 MxB	17: 178.50999 MxB
18: 117.22000 MxB	19: 21.05000 MxB	20: 11.64000 MxB
s: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 17:06:17

Inst. Number = 1		
0: 95.93000 MxB	1: 32.80000 xC	2: 80.60000 xC
3: 122.60000 xC	4: 96.90000 xC	5: 79.80000 xC
6: 192.70000 xC	7: 104.00000 xC	8: 129.70000 xC

12: 11.00000 MxB	13: 13.09000 MxB	14: 1.48000 MxB
15: 560.37000 MxB	16: 0.93000 MxB	17: 177.94000 MxB
18: 130.42000 MxB	19: 23.07000 MxB	20: 11.95000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 17:12:17

.. Number = 1		
0: 108.77000 MxB	1: 31.50000 xC	2: 79.40000 xC
3: 123.20000 xC	4: 96.40000 xC	5: 80.80000 xC
6: 194.70000 xC	7: 107.20000 xC	8: 132.70000 xC
9: 151.95000 MxB	10: -0.27700 MxB	11: 2.35000 MxB
12: 10.82000 MxB	13: 12.95000 MxB	14: 1.50000 MxB
15: 565.73999 MxB	16: 0.95000 MxB	17: 183.06000 MxB
18: 124.20000 MxB	19: 23.07000 MxB	20: 12.26000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 17:18:17

Inst. Number = 1		
0: 104.90000 MxB	1: 33.30000 xC	2: 84.00000 xC
3: 121.30000 xC	4: 98.70000 xC	5: 81.70000 xC
6: 196.60001 xC	7: 110.00000 xC	8: 135.89999 xC
9: 153.63000 MxB	10: -0.27700 MxB	11: 2.27000 MxB
12: 10.82000 MxB	13: 12.98000 MxB	14: 1.49000 MxB
15: 552.58002 MxB	16: 0.92000 MxB	17: 183.06000 MxB
18: 109.45000 MxB	19: 17.57000 MxB	20: 12.26000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 17:24:17

Inst. Number = 1		
126.59000 MxB	1: 31.70000 xC	2: 86.90000 xC
129.89999 xC	4: 99.70000 xC	5: 82.60000 xC
6: 198.39999 xC	7: 112.60000 xC	8: 139.39999 xC
9: 141.36000 MxB	10: -0.27700 MxB	11: 2.31000 MxB
12: 10.99000 MxB	13: 13.08000 MxB	14: 1.47000 MxB
15: 552.51001 MxB	16: 0.97000 MxB	17: 176.02000 MxB
18: 120.33000 MxB	19: 21.04000 MxB	20: 12.57000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 17:30:17

Inst. Number = 1		
0: 203.72000 MxB	1: 30.40000 xC	2: 90.10000 xC
3: 121.20000 xC	4: 99.80000 xC	5: 83.20000 xC
6: 200.00000 xC	7: +0L	8: 142.60001 xC
9: 122.05000 MxB	10: -0.27700 MxB	11: 2.54000 MxB
12: 11.05000 MxB	13: 13.14000 MxB	14: 1.47000 MxB
15: 562.21002 MxB	16: 0.91000 MxB	17: 170.25999 MxB
18: 124.19000 MxB	19: 21.04000 MxB	20: 12.88000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 17:36:17

Inst. Number = 1		
0: 0.74000 MxB	1: 27.00000 xC	2: 98.60000 xC
83.70000 xC	4: 92.60000 xC	5: 83.00000 xC
205.10001 xC	7: +0L	8: 145.20000 xC
9: 89.97000 MxB	10: -0.27700 MxB	11: 2.54000 MxB
12: 10.71000 MxB	13: 12.82000 MxB	14: 1.48000 MxB
15: 477.92001 MxB	16: 0.92000 MxB	17: 149.78999 MxB
18: 95.41000 MxB	19: 13.48000 MxB	20: 12.88000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Inst. Number = 1		
0: 1.84000 MxB	1: 30.40000 xC	2: 90.20000 xC
3: 81.20000 xC	4: 88.70000 xC	5: 81.60000 xC
6: 215.10001 xC	7: +0L	8: 158.39999 xC
9: 138.13000 MxB	10: -0.27700 MxB	11: 2.68000 MxB
12: 10.78000 MxB	13: 12.94000 MxB	14: 1.47000 MxB
15: -2.23000 MxB	16: 0.84000 MxB	17: 134.45000 MxB
18: 114.90000 MxB	19: 15.50000 MxB	20: 13.19000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 17:48:17

Inst. Number = 1		
0: -1.63000 MxB	1: 30.30000 xC	2: 78.50000 xC
3: 65.60000 xC	4: 83.50000 xC	5: 79.40000 xC
6: 228.70000 xC	7: +0L	8: 169.30000 xC
9: 81.52000 MxB	10: -0.27700 MxB	11: 2.17000 MxB
12: 10.50000 MxB	13: 12.71000 MxB	14: 1.51000 MxB
15: -2.23000 MxB	16: 0.95000 MxB	17: 131.91000 MxB
18: 80.66000 MxB	19: 10.45000 MxB	20: 13.19000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 17:54:17

Inst. Number = 1		
0: -1.21000 MxB	1: 41.20000 xC	2: 72.00000 xC
3: 71.00000 xC	4: 81.70000 xC	5: 77.40000 xC
6: 241.39999 xC	7: +0L	8: 178.80000 xC
9: 12.93000 MxB	10: -0.27700 MxB	11: 2.13000 MxB
12: 10.40000 MxB	13: 12.59000 MxB	14: 1.52000 MxB
15: -2.30000 MxB	16: 1.00000 MxB	17: -1.14000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: 13.19000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/21/93 18:00:18

Inst. Number = 1		
0: 0.56000 MxB	1: 39.90000 xC	2: 71.90000 xC
3: 86.10000 xC	4: 80.90000 xC	5: 71.90000 xC
6: 249.60001 xC	7: +0L	8: 188.50000 xC
9: 37.88000 MxB	10: -0.10700 MxB	11: 0.06000 MxB
12: 0.22000 MxB	13: 0.05000 MxB	14: 0.09000 MxB
15: -2.30000 MxB	16: -0.01000 MxB	17: -1.09000 MxB
18: -0.93000 MxB	19: -0.14000 MxB	20: 13.19000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Appendix A-5

**Facility DAS Printer Output
22 July 1993, N80-IV and N80-IV-MOD Melts**

Thursday 7/22/93

Hydra Printer Output 07/22/93 08:20:04
Skipping 5 Scans Between Outputs

07/22/93 08:20:12

Inst. Number = 1

0: 1.72000 MxB	1: 20.30000 xC	2: 19.70000 xC
3: 21.10000 xC	4: 58.60000 xC	5: 49.00000 xC
6: 51.90000 xC	7: 37.40000 xC	8: 98.40000 xC
9: 30.18000 MxB	10: -0.57000 MxB	11: 1.83000 MxB
12: 11.23000 MxB	13: 12.68000 MxB	14: 1.29000 MxB
15: 447.63000 MxB	16: 0.83000 MxB	17: -1.14000 MxB
18: -0.93000 MxB	19: -0.14000 MxB	20: -0.12000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 08:23:11

Inst. Number = 1

0: 1.94000 MxB	1: 20.90000 xC	2: 19.90000 xC
3: 21.40000 xC	4: 58.80000 xC	5: 49.20000 xC
6: 51.70000 xC	7: 37.20000 xC	8: 97.90000 xC
9: 27.96000 MxB	10: -0.54000 MxB	11: 1.89000 MxB
12: 11.37000 MxB	13: 12.77000 MxB	14: 1.28000 MxB
15: 476.85999 MxB	16: 0.81000 MxB	17: -1.18000 MxB
18: -0.93000 MxB	19: -0.14000 MxB	20: -0.12000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 08:26:11

Inst. Number = 1

0: -1.99000 MxB	1: 20.80000 xC	2: 54.80000 xC
3: 53.30000 xC	4: 63.60000 xC	5: 49.60000 xC
6: 52.80000 xC	7: 37.20000 xC	8: 97.50000 xC
9: 139.14999 MxB	10: -0.36000 MxB	11: 1.65000 MxB
12: 12.01000 MxB	13: 13.59000 MxB	14: 1.38000 MxB
15: 499.29001 MxB	16: 0.93000 MxB	17: 83.25000 MxB
18: 167.53999 MxB	19: 10.94000 MxB	20: -0.12000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 08:29:12

Inst. Number = 1

0: 38.49000 MxB	1: 20.60000 xC	2: 64.80000 xC
3: 37.80000 xC	4: 62.60000 xC	5: 50.30000 xC
6: 52.80000 xC	7: 37.10000 xC	8: 97.00000 xC
9: 159.74001 MxB	10: -0.78000 MxB	11: 2.27000 MxB
12: 12.37000 MxB	13: 13.90000 MxB	14: 1.34000 MxB
15: 490.09000 MxB	16: 0.87000 MxB	17: 129.32001 MxB
18: 65.15000 MxB	19: 7.92000 MxB	20: -0.12000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 08:32:12

Inst. Number = 1		
0: 33.22000 MxB	1: 20.90000 xC	2: 91.40000 xC
3: 51.10000 xC	4: 65.80000 xC	5: 51.30000 xC
6: 53.80000 xC	7: 36.90000 xC	8: 96.50000 xC
9: 145.87000 MxB	10: 0.39000 MxB	11: -0.22000 MxB
12: 11.20000 MxB	13: 12.99000 MxB	14: 1.44000 MxB
423.92999 MxB	16: 0.95000 MxB	17: 121.69000 MxB
197.27000 MxB	19: 29.61000 MxB	20: -0.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 08:35:12

Inst. Number = 1		
0: 34.77000 MxB	1: 20.90000 xC	2: 117.40000 xC
3: 56.60000 xC	4: 68.80000 xC	5: 52.60000 xC
6: 55.20000 xC	7: 36.80000 xC	8: 96.00000 xC
9: 128.85001 MxB	10: -0.75000 MxB	11: 2.21000 MxB
12: 11.90000 MxB	13: 13.52000 MxB	14: 1.37000 MxB
15: 499.64999 MxB	16: 0.89000 MxB	17: 145.33000 MxB
18: 23.19000 MxB	19: 3.38000 MxB	20: -0.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 08:38:12

Inst. Number = 1		
0: 33.86000 MxB	1: 21.10000 xC	2: 129.30000 xC
3: 64.20000 xC	4: 71.10000 xC	5: 53.70000 xC
6: 56.90000 xC	7: 36.60000 xC	8: 95.50000 xC
9: 112.08000 MxB	10: -0.74000 MxB	11: 1.68000 MxB
12: 11.76000 MxB	13: 13.42000 MxB	14: 1.37000 MxB
15: 493.28000 MxB	16: 0.91000 MxB	17: 142.17000 MxB
18: 63.60000 MxB	19: 8.42000 MxB	20: 0.11000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 08:41:11

Inst. Number = 1		
0: 32.83000 MxB	1: 21.20000 xC	2: 126.80000 xC
3: 56.80000 xC	4: 70.50000 xC	5: 54.50000 xC
6: 56.90000 xC	7: 36.40000 xC	8: 95.10000 xC
9: 98.11000 MxB	10: -0.71000 MxB	11: 2.18000 MxB
12: 12.00000 MxB	13: 13.63000 MxB	14: 1.36000 MxB
15: 462.64001 MxB	16: 0.86000 MxB	17: 129.28000 MxB
18: 75.23000 MxB	19: 9.94000 MxB	20: 0.11000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 08:44:11

Inst. Number = 1		
0: 35.88000 MxB	1: 21.20000 xC	2: 128.60001 xC
3: 57.80000 xC	4: 71.10000 xC	5: 55.30000 xC
6: 57.90000 xC	7: 36.30000 xC	8: 94.60000 xC
9: 63.40000 MxB	10: -0.67000 MxB	11: 2.08000 MxB
12: 11.84000 MxB	13: 13.53000 MxB	14: 1.37000 MxB
15: 478.20999 MxB	16: 0.91000 MxB	17: 135.70000 MxB
18: 69.81000 MxB	19: 9.43000 MxB	20: 0.11000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 08:47:12

Inst. Number = 1		
0: 34.10000 MxB	1: 20.90000 xC	2: 132.00000 xC
3: 57.70000 xC	4: 71.50000 xC	5: 56.20000 xC
6: 58.80000 xC	7: 36.10000 xC	8: 94.20000 xC
9: 152.63000 MxB	10: -0.74000 MxB	11: 2.15000 MxB

15: 498.44000 MxB
18: 68.26000 MxB
ALMs: 0{HHHH}3

16: 0.86000 MxB
19: 9.27000 MxB
DI/O: 0{HHHHHHHH}7

17: 131.86000 MxB
20: 0.11000 MxB
Total: 0

07/22/93 08:50:12

Inst. Number = 1
0: 35.90000 MxB
3: 58.60000 xC
6: 59.80000 xC
9: 139.08000 MxB
12: 11.83000 MxB
15: 491.16000 MxB
18: 73.08000 MxB
ALMs: 0{HHHH}3

1: 21.10000 xC
4: 71.90000 xC
7: 36.10000 xC
10: -0.77000 MxB
13: 13.51000 MxB
16: 0.87000 MxB
19: 9.43000 MxB
DI/O: 0{HHHHHHHH}7

2: 132.70000 xC
5: 56.80000 xC
8: 93.70000 xC
11: 2.20000 MxB
14: 1.36000 MxB
17: 129.28000 MxB
20: 0.11000 MxB
Total: 0

07/22/93 08:53:12

Inst. Number = 1
0: 33.84000 MxB
3: 59.70000 xC
6: 61.10000 xC
9: 187.71001 MxB
12: 10.85000 MxB
15: 454.64001 MxB
18: 68.84000 MxB
ALMs: 0{HHHH}3

1: 21.20000 xC
4: 72.50000 xC
7: 36.00000 xC
10: -0.56000 MxB
13: 12.49000 MxB
16: 0.90000 MxB
19: 8.93000 MxB
DI/O: 0{HHHHHHHH}7

2: 132.20000 xC
5: 57.50000 xC
8: 93.30000 xC
11: 1.71000 MxB
14: 1.34000 MxB
17: 129.28000 MxB
20: 0.34000 MxB
Total: 0

07/22/93 08:56:12

Inst. Number = 1
0: 36.93000 MxB
3: 57.80000 xC
6: 62.40000 xC
9: 187.07001 MxB
12: 10.87000 MxB
15: 472.19000 MxB
18: 65.88000 MxB
ALMs: 0{HHHH}3

1: 21.30000 xC
4: 72.60000 xC
7: 35.80000 xC
10: -0.47000 MxB
13: 12.43000 MxB
16: 0.81000 MxB
19: 8.42000 MxB
DI/O: 0{HHHHHHHH}7

2: 128.39999 xC
5: 58.00000 xC
8: 92.90000 xC
11: 1.83000 MxB
14: 1.28000 MxB
17: 131.86000 MxB
20: 0.34000 MxB
Total: 0

07/22/93 08:59:11

Inst. Number = 1
0: 33.79000 MxB
3: 57.80000 xC
6: 63.80000 xC
9: 180.53000 MxB
12: 10.93000 MxB
15: 466.88000 MxB
18: 69.76000 MxB
ALMs: 0{HHHH}3

1: 21.50000 xC
4: 72.80000 xC
7: 35.80000 xC
10: -0.46000 MxB
13: 12.52000 MxB
16: 0.78000 MxB
19: 8.93000 MxB
DI/O: 0{HHHHHHHH}7

2: 121.50000 xC
5: 58.40000 xC
8: 92.40000 xC
11: 1.79000 MxB
14: 1.28000 MxB
17: 131.86000 MxB
20: 0.34000 MxB
Total: 0

07/22/93 09:02:12

Inst. Number = 1
0: 35.90000 MxB
3: 58.90000 xC
6: 65.20000 xC
9: 177.67000 MxB
12: 10.29000 MxB
15: 491.37000 MxB
18: 65.92000 MxB
ALMs: 0{HHHH}3

1: 21.60000 xC
4: 72.90000 xC
7: 35.80000 xC
10: -0.31000 MxB
13: 12.06000 MxB
16: 0.84000 MxB
19: 8.42000 MxB
DI/O: 0{HHHHHHHH}7

2: 115.50000 xC
5: 58.90000 xC
8: 92.20000 xC
11: 1.59000 MxB
14: 1.33000 MxB
17: 134.45000 MxB
20: 0.34000 MxB
Total: 0

07/22/93 09:05:12

Inst. Number = 1		
0: 38.29000 MxB	1: 21.50000 xC	2: 104.80000 xC
3: 56.50000 xC	4: 72.80000 xC	5: 59.30000 xC
6: 66.50000 xC	7: 36.80000 xC	8: 91.80000 xC
9: 198.35001 MxB	10: -0.42000 MxB	11: 1.80000 MxB
12: 10.77000 MxB	13: 12.37000 MxB	14: 1.29000 MxB
438.85999 MxB	16: 0.82000 MxB	17: 152.38000 MxB
70.58000 MxB	19: 10.43000 MxB	20: 0.35000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 09:08:12

Inst. Number = 1		
0: 39.85000 MxB	1: 21.50000 xC	2: 102.40000 xC
3: 56.70000 xC	4: 72.90000 xC	5: 59.70000 xC
6: 67.70000 xC	7: 36.60000 xC	8: 91.60000 xC
9: 146.53999 MxB	10: -0.45000 MxB	11: 1.77000 MxB
12: 10.81000 MxB	13: 12.40000 MxB	14: 1.29000 MxB
15: 430.79001 MxB	16: 0.79000 MxB	17: 141.85001 MxB
18: 74.45000 MxB	19: 10.43000 MxB	20: 0.57000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 09:11:12

Inst. Number = 1		
0: 61.00000 MxB	1: 21.50000 xC	2: 97.30000 xC
3: 56.50000 xC	4: 72.80000 xC	5: 60.00000 xC
6: 69.00000 xC	7: 36.60000 xC	8: 91.30000 xC
9: 201.52000 MxB	10: -0.40000 MxB	11: 1.70000 MxB
12: 10.63000 MxB	13: 12.31000 MxB	14: 1.27000 MxB
15: 434.97000 MxB	16: 0.81000 MxB	17: 152.38000 MxB
18: 65.92000 MxB	19: 9.94000 MxB	20: 0.57000 MxB
(: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 09:14:12

Inst. Number = 1		
0: 86.94000 MxB	1: 21.60000 xC	2: 92.60000 xC
3: 56.40000 xC	4: 73.10000 xC	5: 60.30000 xC
6: 70.20000 xC	7: 36.90000 xC	8: 91.30000 xC
9: 203.22000 MxB	10: -0.35000 MxB	11: 1.82000 MxB
12: 10.59000 MxB	13: 12.24000 MxB	14: 1.31000 MxB
15: 475.16000 MxB	16: 0.84000 MxB	17: 144.66000 MxB
18: 69.04000 MxB	19: 9.94000 MxB	20: 0.57000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 09:17:11

Inst. Number = 1		
0: 89.67000 MxB	1: 21.80000 xC	2: 85.60000 xC
3: 57.20000 xC	4: 73.50000 xC	5: 60.50000 xC
6: 71.20000 xC	7: 37.30000 xC	8: 91.30000 xC
9: 130.12000 MxB	10: -0.38000 MxB	11: 1.75000 MxB
12: 10.69000 MxB	13: 12.32000 MxB	14: 1.30000 MxB
15: 452.09000 MxB	16: 0.82000 MxB	17: 144.66000 MxB
18: 64.35000 MxB	19: 8.93000 MxB	20: 0.58000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 09:20:12

Inst. Number = 1		
0: 89.21000 MxB	1: 21.60000 xC	2: 82.20000 xC
3: 52.20000 xC	4: 72.70000 xC	5: 60.90000 xC
6: 72.50000 xC	7: 37.40000 xC	8: 91.50000 xC
9: 124.55000 MxB	10: 0.57000 MxB	11: 1.03000 MxB

15: 393.70999 MxB	16: 0.70000 MxB	17: 172.81000 MxB
18: 70.58000 MxB	19: 12.45000 MxB	20: 0.57000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 09:23:12

Inst. Number = 1		
0: 117.59000 MxB	1: 21.70000 xC	2: 74.50000 xC
3: 84.10000 xC	4: 79.90000 xC	5: 63.00000 xC
6: 73.10000 xC	7: 37.80000 xC	8: 91.70000 xC
9: 163.12000 MxB	10: -0.41000 MxB	11: 2.09000 MxB
12: 11.39000 MxB	13: 13.04000 MxB	14: 1.34000 MxB
15: 472.76001 MxB	16: 0.86000 MxB	17: 144.71001 MxB
18: 84.57000 MxB	19: 12.46000 MxB	20: 0.80000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 09:26:12

Inst. Number = 1		
0: 111.32000 MxB	1: 21.50000 xC	2: 68.90000 xC
3: 61.60000 xC	4: 75.90000 xC	5: 62.50000 xC
6: 74.00000 xC	7: 38.20000 xC	8: 92.00000 xC
9: 167.53000 MxB	10: -0.44000 MxB	11: 2.12000 MxB
12: 11.34000 MxB	13: 13.01000 MxB	14: 1.34000 MxB
15: 461.79001 MxB	16: 0.83000 MxB	17: 142.17000 MxB
18: 79.12000 MxB	19: 11.45000 MxB	20: 0.80000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 09:29:12

Inst. Number = 1		
0: 118.64000 MxB	1: 21.60000 xC	2: 62.80000 xC
3: 61.90000 xC	4: 75.50000 xC	5: 62.60000 xC
6: 74.90000 xC	7: 38.80000 xC	8: 92.60000 xC
9: 156.92000 MxB	10: -0.43000 MxB	11: 2.11000 MxB
12: 11.34000 MxB	13: 13.02000 MxB	14: 1.34000 MxB
15: 470.70001 MxB	16: 0.83000 MxB	17: 144.71001 MxB
18: 80.67000 MxB	19: 11.44000 MxB	20: 0.80000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 09:32:12

Inst. Number = 1		
0: 112.47000 MxB	1: 22.00000 xC	2: 59.30000 xC
3: 61.20000 xC	4: 75.60000 xC	5: 62.80000 xC
6: 75.80000 xC	7: 39.50000 xC	8: 93.30000 xC
9: 176.11000 MxB	10: -0.34000 MxB	11: 1.88000 MxB
12: 11.21000 MxB	13: 12.96000 MxB	14: 1.35000 MxB
15: 481.53000 MxB	16: 0.89000 MxB	17: 147.25000 MxB
18: 78.32000 MxB	19: 11.45000 MxB	20: 0.81000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 09:35:11

Inst. Number = 1		
0: 107.68000 MxB	1: 21.80000 xC	2: 56.60000 xC
3: 62.50000 xC	4: 75.30000 xC	5: 62.90000 xC
6: 76.70000 xC	7: 40.30000 xC	8: 94.00000 xC
9: 115.20000 MxB	10: -0.27000 MxB	11: 2.15000 MxB
12: 11.28000 MxB	13: 13.01000 MxB	14: 1.35000 MxB
15: 437.01999 MxB	16: 0.87000 MxB	17: 172.81000 MxB
18: 76.77000 MxB	19: 13.46000 MxB	20: 1.04000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

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15: 452.23001 MxB	16: 0.89000 MxB	17: 170.25999 MxB
18: 97.75000 MxB	19: 16.93000 MxB	20: 2.20000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 10:29:12

Inst. Number = 1		
87.70000 MxB	1: 22.00000 xC	2: 63.00000 xC
3: 87.90000 xC	4: 84.40000 xC	5: 70.10000 xC
6: 93.90000 xC	7: 58.90000 xC	8: 127.50000 xC
9: -6.62000 MxB	10: -0.42000 MxB	11: 2.26000 MxB
12: 11.79000 MxB	13: 13.73000 MxB	14: 1.42000 MxB
15: 447.78000 MxB	16: 0.94000 MxB	17: 170.25999 MxB
18: 102.45000 MxB	19: 17.50000 MxB	20: 2.44000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 10:32:12

Inst. Number = 1		
0: 94.67000 MxB	1: 22.00000 xC	2: 64.50000 xC
3: 90.80000 xC	4: 85.20000 xC	5: 70.40000 xC
6: 95.30000 xC	7: 59.90000 xC	8: 130.10001 xC
9: 75.44000 MxB	10: -0.40000 MxB	11: 2.33000 MxB
12: 11.88000 MxB	13: 13.80000 MxB	14: 1.41000 MxB
15: 444.23999 MxB	16: 0.90000 MxB	17: 183.06000 MxB
18: 93.87000 MxB	19: 17.01000 MxB	20: 2.44000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 10:35:12

Inst. Number = 1		
0: 110.93000 MxB	1: 22.30000 xC	2: 65.80000 xC
3: 91.20000 xC	4: 85.80000 xC	5: 70.80000 xC
6: 96.60000 xC	7: 61.10000 xC	8: 132.89999 xC
9: 61.67000 MxB	10: -0.46000 MxB	11: 2.38000 MxB
12: 11.82000 MxB	13: 13.79000 MxB	14: 1.41000 MxB
15: 479.20001 MxB	16: 0.90000 MxB	17: 172.81000 MxB
18: 101.68000 MxB	19: 17.50000 MxB	20: 2.43000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 10:38:12

Inst. Number = 1		
0: 114.33000 MxB	1: 21.90000 xC	2: 66.00000 xC
3: 91.50000 xC	4: 86.20000 xC	5: 71.30000 xC
6: 98.00000 xC	7: 62.50000 xC	8: 135.89999 xC
9: 74.30000 MxB	10: -0.42000 MxB	11: 2.25000 MxB
12: 11.66000 MxB	13: 13.66000 MxB	14: 1.43000 MxB
15: 491.85999 MxB	16: 0.94000 MxB	17: 167.67999 MxB
18: 108.68000 MxB	19: 18.00000 MxB	20: 2.67000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 10:41:12

Inst. Number = 1		
0: 98.86000 MxB	1: 21.90000 xC	2: 68.00000 xC
3: 92.90000 xC	4: 86.70000 xC	5: 71.60000 xC
6: 99.70000 xC	7: 63.70000 xC	8: 138.60001 xC
9: 82.68000 MxB	10: -0.52000 MxB	11: 2.51000 MxB
12: 11.79000 MxB	13: 13.77000 MxB	14: 1.41000 MxB
15: 485.07001 MxB	16: 0.90000 MxB	17: 167.67999 MxB
18: 97.77000 MxB	19: 16.49000 MxB	20: 2.67000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 10:44:12

Inst. Number = 1

0: 99.72000 MxB
3: 95.30000 xC
6: 101.50000 xC
9: 82.93000 MxB
12: 11.77000 MxB
438.35999 MxB
102.45000 MxB

ALMs: 0{HHHH}3

1: 22.00000 xC
4: 87.10000 xC
7: 65.40000 xC
10: -0.48000 MxB
13: 13.76000 MxB
16: 0.90000 MxB
19: 17.50000 MxB
DI/O: 0{HHHHHHHH}7

2: 69.70000 xC
5: 72.10000 xC
8: 141.60001 xC
11: 2.48000 MxB
14: 1.41000 MxB
17: 167.72000 MxB
20: 2.90000 MxB
Total: 0

07/22/93 10:47:12

Inst. Number = 1

0: 106.38000 MxB
3: 92.90000 xC
6: 103.20000 xC
9: 46.21000 MxB
12: 10.82000 MxB
15: 458.89001 MxB
18: 120.35000 MxB

ALMs: 0{HHHH}3

1: 21.90000 xC
4: 87.40000 xC
7: 67.50000 xC
10: -0.46000 MxB
13: 13.19000 MxB
16: 0.95000 MxB
19: 20.03000 MxB
DI/O: 0{HHHHHHHH}7

2: 69.80000 xC
5: 72.50000 xC
8: 144.60001 xC
11: 2.47000 MxB
14: 1.47000 MxB
17: 167.72000 MxB
20: 2.90000 MxB
Total: 0

07/22/93 10:50:12

Inst. Number = 1

0: 94.50000 MxB
3: 97.70000 xC
6: 105.40000 xC
9: 101.40000 MxB
12: 11.74000 MxB
15: 443.60001 MxB
18: 102.45000 MxB

ALMs: 0{HHHH}3

1: 22.30000 xC
4: 88.00000 xC
7: 69.60000 xC
10: -0.40000 MxB
13: 13.72000 MxB
16: 0.91000 MxB
19: 17.50000 MxB
DI/O: 0{HHHHHHHH}7

2: 70.60000 xC
5: 72.80000 xC
8: 147.60001 xC
11: 2.34000 MxB
14: 1.41000 MxB
17: 175.66000 MxB
20: 2.91000 MxB
Total: 0

07/22/93 10:53:12

Inst. Number = 1

0: 105.33000 MxB
3: 106.50000 xC
6: 110.50000 xC
9: 60.15000 MxB
12: 12.26000 MxB
15: 515.07001 MxB
18: 66.68000 MxB

ALMs: 0{HHHH}3

1: 22.30000 xC
4: 89.70000 xC
7: 71.60000 xC
10: -0.61000 MxB
13: 14.14000 MxB
16: 0.85000 MxB
19: 10.94000 MxB
DI/O: 0{HHHHHHHH}7

2: 70.70000 xC
5: 73.30000 xC
8: 150.70000 xC
11: 2.86000 MxB
14: 1.34000 MxB
17: 170.25999 MxB
20: 3.13000 MxB
Total: 0

07/22/93 10:56:12

Inst. Number = 1

0: 92.64000 MxB
3: 93.80000 xC
6: 111.90000 xC
9: 60.25000 MxB
12: 11.87000 MxB
15: 464.48001 MxB
18: 105.57000 MxB

ALMs: 0{HHHH}3

1: 22.40000 xC
4: 88.10000 xC
7: 73.50000 xC
10: -0.46000 MxB
13: 13.80000 MxB
16: 0.89000 MxB
19: 18.51000 MxB
DI/O: 0{HHHHHHHH}7

2: 69.90000 xC
5: 73.60000 xC
8: 153.70000 xC
11: 2.46000 MxB
14: 1.40000 MxB
17: 172.81000 MxB
20: 3.13000 MxB
Total: 0

07/22/93 10:59:12

Inst. Number = 1

0: 97.23000 MxB
3: 86.10000 xC
6: 113.00000 xC
9: 60.08000 MxB

1: 22.60000 xC
4: 86.60000 xC
7: 75.50000 xC
10: -0.43000 MxB

2: 68.20000 xC
5: 73.90000 xC
8: 156.70000 xC
11: 2.48000 MxB

15: 444.87000 MxB
 18: 108.69000 MxB
 ALMs: 0{HHHH}3

16: 0.89000 MxB
 19: 18.01000 MxB
 DI/O: 0{HHHHHHHH}7

17: 165.13000 MxB
 20: 3.13000 MxB
 Total: 0

07/22/93 11:02:12

Inst. Number = 1
 0: 102.45000 MxB
 3: 88.60000 xC
 6: 114.40000 xC
 9: 60.59000 MxB
 12: 11.65000 MxB
 15: 439.00000 MxB
 18: 113.10000 MxB
 ALMs: 0{HHHH}3

1: 22.20000 xC
 4: 86.50000 xC
 7: 77.40000 xC
 10: -0.49000 MxB
 13: 13.68000 MxB
 16: 0.89000 MxB
 19: 19.52000 MxB
 DI/O: 0{HHHHHHHH}7

2: 67.00000 xC
 5: 73.80000 xC
 8: 159.80000 xC
 11: 2.57000 MxB
 14: 1.42000 MxB
 17: 175.35001 MxB
 20: 3.36000 MxB
 Total: 0

07/22/93 11:05:12

Inst. Number = 1
 0: 99.72000 MxB
 3: 88.40000 xC
 6: 116.30000 xC
 9: 60.49000 MxB
 12: 11.60000 MxB
 15: 465.82001 MxB
 18: 105.56000 MxB
 ALMs: 0{HHHH}3

1: 22.00000 xC
 4: 86.10000 xC
 7: 79.60000 xC
 10: -0.48000 MxB
 13: 13.63000 MxB
 16: 0.91000 MxB
 19: 18.51000 MxB
 DI/O: 0{HHHHHHHH}7

2: 69.10000 xC
 5: 73.60000 xC
 8: 163.00000 xC
 11: 2.58000 MxB
 14: 1.43000 MxB
 17: 175.35001 MxB
 20: 3.37000 MxB
 Total: 0

07/22/93 11:08:12

Inst. Number = 1
 0: 105.83000 MxB
 3: 87.20000 xC
 6: 118.20000 xC
 9: 133.56000 MxB
 12: 11.63000 MxB
 15: 488.60999 MxB
 18: 108.68000 MxB
 ALMs: 0{HHHH}3

1: 24.20000 xC
 4: 86.00000 xC
 7: 81.20000 xC
 10: -0.44000 MxB
 13: 13.60000 MxB
 16: 0.93000 MxB
 19: 19.02000 MxB
 DI/O: 0{HHHHHHHH}7

2: 69.40000 xC
 5: 73.80000 xC
 8: 166.39999 xC
 11: 2.53000 MxB
 14: 1.42000 MxB
 17: 175.39000 MxB
 20: 3.59000 MxB
 Total: 0

07/22/93 11:11:12

Inst. Number = 1
 0: 105.59000 MxB
 3: 87.90000 xC
 6: 119.90000 xC
 9: 147.52000 MxB
 12: 11.63000 MxB
 15: 453.07999 MxB
 18: 104.78000 MxB
 ALMs: 0{HHHH}3

1: 25.80000 xC
 4: 86.10000 xC
 7: 82.20000 xC
 10: -0.48000 MxB
 13: 13.62000 MxB
 16: 0.89000 MxB
 19: 17.50000 MxB
 DI/O: 0{HHHHHHHH}7

2: 68.90000 xC
 5: 73.90000 xC
 8: 169.70000 xC
 11: 2.60000 MxB
 14: 1.42000 MxB
 17: 167.72000 MxB
 20: 3.59000 MxB
 Total: 0

07/22/93 11:14:12

Inst. Number = 1
 0: 100.01000 MxB
 3: 83.60000 xC
 6: 121.70000 xC
 9: 134.94000 MxB
 12: 11.37000 MxB
 15: 475.51999 MxB
 18: 107.90000 MxB
 ALMs: 0{HHHH}3

1: 27.30000 xC
 4: 85.30000 xC
 7: 83.00000 xC
 10: -0.56000 MxB
 13: 13.36000 MxB
 16: 0.88000 MxB
 19: 18.51000 MxB
 DI/O: 0{HHHHHHHH}7

2: 67.80000 xC
 5: 73.90000 xC
 8: 172.89999 xC
 11: 2.62000 MxB
 14: 1.40000 MxB
 17: 172.81000 MxB
 20: 3.59000 MxB
 Total: 0

07/22/93 11:17:12

Inst. Number = 1

0: 96.13000 MxB
3: 75.70000 xC
6: 123.40000 xC
9: 126.86000 MxB
12: 10.89000 MxB
466.53000 MxB
109.45000 MxB
ALMs: 0{HHHH}3

1: 27.00000 xC
4: 83.40000 xC
7: 84.50000 xC
10: -0.44000 MxB
13: 13.00000 MxB
16: 0.92000 MxB
19: 18.51000 MxB
DI/O: 0{HHHHHHHH}7

2: 64.90000 xC
5: 73.60000 xC
8: 176.30000 xC
11: 2.15000 MxB
14: 1.45000 MxB
17: 167.67999 MxB
20: 3.83000 MxB
Total: 0

07/22/93 11:20:12

Inst. Number = 1

0: 101.78000 MxB
3: 81.80000 xC
6: 125.10000 xC
9: 118.87000 MxB
12: 11.26000 MxB
15: 462.20999 MxB
18: 98.55000 MxB
ALMs: 0{HHHH}3

1: 26.80000 xC
4: 83.80000 xC
7: 85.20000 xC
10: -0.40000 MxB
13: 13.27000 MxB
16: 0.91000 MxB
19: 17.00000 MxB
DI/O: 0{HHHHHHHH}7

2: 62.20000 xC
5: 73.30000 xC
8: 179.70000 xC
11: 2.44000 MxB
14: 1.42000 MxB
17: 169.28000 MxB
20: 3.83000 MxB
Total: 0

07/22/93 11:23:12

Inst. Number = 1

0: 93.16000 MxB
3: 85.50000 xC
6: 126.60000 xC
9: 118.94000 MxB
12: 11.33000 MxB
15: 456.13000 MxB
18: 105.57000 MxB
ALMs: 0{HHHH}3

1: 27.10000 xC
4: 84.50000 xC
7: 85.80000 xC
10: -0.41000 MxB
13: 13.28000 MxB
16: 0.90000 MxB
19: 17.50000 MxB
DI/O: 0{HHHHHHHH}7

2: 63.00000 xC
5: 73.30000 xC
8: 182.89999 xC
11: 2.44000 MxB
14: 1.41000 MxB
17: 162.59000 MxB
20: 4.06000 MxB
Total: 0

07/22/93 11:26:12

Inst. Number = 1

0: 97.74000 MxB
3: 87.70000 xC
6: 128.20000 xC
9: 122.53000 MxB
12: 11.39000 MxB
15: 457.04999 MxB
18: 108.24000 MxB
ALMs: 0{HHHH}3

1: 27.50000 xC
4: 85.20000 xC
7: 87.50000 xC
10: -0.42000 MxB
13: 13.40000 MxB
16: 0.76000 MxB
19: 18.00000 MxB
DI/O: 0{HHHHHHHH}7

2: 64.90000 xC
5: 73.40000 xC
8: 186.20000 xC
11: 2.45000 MxB
14: 1.38000 MxB
17: 170.25999 MxB
20: 4.06000 MxB
Total: 0

07/22/93 11:29:12

Inst. Number = 1

0: 93.21000 MxB
3: 89.70000 xC
6: 129.80000 xC
9: 114.36000 MxB
12: 11.45000 MxB
15: 465.60999 MxB
18: 110.99000 MxB
ALMs: 0{HHHH}3

1: 27.10000 xC
4: 85.50000 xC
7: 89.10000 xC
10: -0.33000 MxB
13: 13.37000 MxB
16: 0.89000 MxB
19: 19.02000 MxB
DI/O: 0{HHHHHHHH}7

2: 65.50000 xC
5: 73.40000 xC
8: 189.39999 xC
11: 2.36000 MxB
14: 1.40000 MxB
17: 167.67999 MxB
20: 4.06000 MxB
Total: 0

07/22/93 11:32:12

Inst. Number = 1

0: 96.04000 MxB
3: 88.20000 xC
6: 131.39999 xC
9: 64.11000 MxB

1: 26.00000 xC
4: 85.50000 xC
7: 90.40000 xC
10: -0.33000 MxB

2: 66.20000 xC
5: 73.70000 xC
8: 192.39999 xC
11: 2.34000 MxB

15: 434.60999 MxB
18: 110.23000 MxB
ALMs: 0{HHHH}3

16: 0.92000 MxB
19: 19.02000 MxB
DI/O: 0{HHHHHHHH}7

17: 170.22000 MxB
20: 4.29000 MxB
Total: 0

07/22/93 11:35:12

Inst. Number = 1

0: 89.00000 MxB
3: 87.50000 xC
6: 133.00000 xC
9: 57.15000 MxB
12: 11.44000 MxB
15: 507.64001 MxB
18: 107.03000 MxB
ALMs: 0{HHHH}3

1: 25.70000 xC
4: 85.40000 xC
7: 92.00000 xC
10: -0.54000 MxB
13: 13.39000 MxB
16: 0.85000 MxB
19: 18.01000 MxB
DI/O: 0{HHHHHHHH}7

2: 65.80000 xC
5: 73.80000 xC
8: 195.20000 xC
11: 2.49000 MxB
14: 1.39000 MxB
17: 165.13000 MxB
20: 4.30000 MxB
Total: 0

07/22/93 11:38:12

Inst. Number = 1

0: 93.90000 MxB
3: 82.90000 xC
6: 134.80000 xC
9: 57.15000 MxB
12: 11.27000 MxB
15: 447.56000 MxB
18: 118.02000 MxB
ALMs: 0{HHHH}3

1: 24.20000 xC
4: 84.30000 xC
7: 93.20000 xC
10: -0.34000 MxB
13: 13.29000 MxB
16: 0.91000 MxB
19: 23.06000 MxB
DI/O: 0{HHHHHHHH}7

2: 64.60000 xC
5: 73.50000 xC
8: 198.20000 xC
11: 2.36000 MxB
14: 1.41000 MxB
17: 190.74001 MxB
20: 4.53000 MxB
Total: 0

07/22/93 11:41:12

Inst. Number = 1

0: 97.21000 MxB
3: 86.80000 xC
6: 136.39999 xC
9: 57.15000 MxB
12: 11.37000 MxB
15: 462.42001 MxB
18: 112.56000 MxB
ALMs: 0{HHHH}3

1: 23.90000 xC
4: 85.00000 xC
7: 93.90000 xC
10: -0.51000 MxB
13: 13.35000 MxB
16: 0.93000 MxB
19: 21.54000 MxB
DI/O: 0{HHHHHHHH}7

2: 64.50000 xC
5: 73.50000 xC
8: 201.00000 xC
11: 2.26000 MxB
14: 1.40000 MxB
17: 190.74001 MxB
20: 4.52000 MxB
Total: 0

07/22/93 11:44:12

Inst. Number = 1

0: 84.56000 MxB
3: 91.10000 xC
6: 138.10001 xC
9: 57.15000 MxB
12: 11.29000 MxB
15: 466.10001 MxB
18: 121.89000 MxB
ALMs: 0{HHHH}3

1: 24.30000 xC
4: 85.50000 xC
7: 95.10000 xC
10: -0.54000 MxB
13: 13.28000 MxB
16: 0.90000 MxB
19: 23.06000 MxB
DI/O: 0{HHHHHHHH}7

2: 64.60000 xC
5: 73.60000 xC
8: 203.60001 xC
11: 2.37000 MxB
14: 1.41000 MxB
17: 186.86000 MxB
20: 4.76000 MxB
Total: 0

07/22/93 11:47:12

Inst. Number = 1

0: 93.04000 MxB
3: 85.10000 xC
6: 139.70000 xC
9: 57.15000 MxB
12: 10.89000 MxB
15: 488.75000 MxB
18: 118.77000 MxB
ALMs: 0{HHHH}3

1: 24.20000 xC
4: 85.00000 xC
7: 97.20000 xC
10: -0.65000 MxB
13: 12.99000 MxB
16: 0.98000 MxB
19: 22.55000 MxB
DI/O: 0{HHHHHHHH}7

2: 65.40000 xC
5: 73.80000 xC
8: 195.10001 xC
11: 2.16000 MxB
14: 1.45000 MxB
17: 189.17000 MxB
20: 4.76000 MxB
Total: 0

07/22/93 11:50:12

Inst. Number = 1

0: 91.32000 MxB
3: 92.60000 xC
6: 141.39999 xC
9: 57.15000 MxB
12: 11.23000 MxB
15: 448.48001 MxB
18: 124.20000 MxB

ALMs: 0{HHHH}3

1: 24.20000 xC
4: 86.30000 xC
7: 98.80000 xC
10: -0.56000 MxB
13: 13.25000 MxB
16: 0.88000 MxB
19: 24.06000 MxB
DI/O: 0{HHHHHHHH}7

2: 65.10000 xC
5: 74.00000 xC
8: 187.50000 xC
11: 2.41000 MxB
14: 1.40000 MxB
17: 193.32001 MxB
20: 4.76000 MxB
Total: 0

07/22/93 11:53:12

Inst. Number = 1

0: 93.52000 MxB
3: 105.50000 xC
6: 143.39999 xC
9: 152.03999 MxB
12: 11.41000 MxB
15: 513.02002 MxB
18: 113.34000 MxB

ALMs: 0{HHHH}3

1: 30.10000 xC
4: 88.90000 xC
7: 99.70000 xC
10: -0.58000 MxB
13: 13.43000 MxB
16: 0.84000 MxB
19: 22.05000 MxB
DI/O: 0{HHHHHHHH}7

2: 65.10000 xC
5: 74.30000 xC
8: 184.20000 xC
11: 2.44000 MxB
14: 1.38000 MxB
17: 193.32001 MxB
20: 4.99000 MxB
Total: 0

07/22/93 11:56:12

Inst. Number = 1

0: 95.73000 MxB
3: 118.10000 xC
6: 145.30000 xC
9: 156.50000 MxB
12: 11.48000 MxB
15: 495.76001 MxB
18: 121.11000 MxB

ALMs: 0{HHHH}3

1: 33.80000 xC
4: 91.70000 xC
7: 100.20000 xC
10: -0.59000 MxB
13: 13.56000 MxB
16: 0.85000 MxB
19: 23.06000 MxB
DI/O: 0{HHHHHHHH}7

2: 66.20000 xC
5: 75.00000 xC
8: 182.60001 xC
11: 2.45000 MxB
14: 1.33000 MxB
17: 190.69000 MxB
20: 4.99000 MxB
Total: 0

07/22/93 11:59:12

Inst. Number = 1

0: 93.09000 MxB
3: 122.50000 xC
6: 147.30000 xC
9: 160.17000 MxB
12: 11.42000 MxB
15: 502.69000 MxB
18: 117.22000 MxB

ALMs: 0{HHHH}3

1: 37.50000 xC
4: 93.50000 xC
7: 100.20000 xC
10: -0.63000 MxB
13: 13.42000 MxB
16: 0.88000 MxB
19: 22.56000 MxB
DI/O: 0{HHHHHHHH}7

2: 66.30000 xC
5: 75.80000 xC
8: 181.10001 xC
11: 2.45000 MxB
14: 1.38000 MxB
17: 193.28000 MxB
20: 5.22000 MxB
Total: 0

07/22/93 12:02:12

Inst. Number = 1

0: 95.41000 MxB
3: 129.80000 xC
6: 149.20000 xC
9: 150.94000 MxB
12: 11.54000 MxB
15: 531.91998 MxB
18: 123.42000 MxB

ALMs: 0{HHHH}3

1: 38.80000 xC
4: 94.70000 xC
7: 100.30000 xC
10: -0.62000 MxB
13: 13.55000 MxB
16: 0.86000 MxB
19: 23.06000 MxB
DI/O: 0{HHHHHHHH}7

2: 68.20000 xC
5: 76.70000 xC
8: 180.10001 xC
11: 2.55000 MxB
14: 1.37000 MxB
17: 190.74001 MxB
20: 5.22000 MxB
Total: 0

07/22/93 12:05:12

Inst. Number = 1

0: 104.11000 MxB
3: 127.70000 xC
6: 151.60001 xC
9: 156.86000 MxB

1: 36.20000 xC
4: 96.00000 xC
7: 100.60000 xC
10: -0.59000 MxB

2: 71.40000 xC
5: 77.50000 xC
8: 179.30000 xC
11: 2.41000 MxB

15: 510.19000 MxB
 18: 123.41000 MxB
 ALMs: 0{HHHH}3

16: 0.86000 MxB
 19: 23.06000 MxB
 DI/O: 0{HHHHHHHH}7

17: 190.74001 MxB
 20: 5.46000 MxB
 Total: 0

07/22/93 12:08:12

. Number = 1
 107.65000 MxB
 3: 126.70000 xC
 6: 154.60001 xC
 9: 155.83000 MxB
 12: 10.94000 MxB
 15: 469.64001 MxB
 18: 121.88000 MxB
 ALMs: 0{HHHH}3

1: 36.80000 xC
 4: 96.50000 xC
 7: 101.80000 xC
 10: -0.40000 MxB
 13: 12.92000 MxB
 16: 0.87000 MxB
 19: 23.06000 MxB
 DI/O: 0{HHHHHHHH}7

2: 72.60000 xC
 5: 78.20000 xC
 8: 178.60001 xC
 11: 2.13000 MxB
 14: 1.33000 MxB
 17: 190.74001 MxB
 20: 5.46000 MxB
 Total: 0

07/22/93 12:11:12

Inst. Number = 1
 0: 118.29000 MxB
 3: 132.39999 xC
 6: 157.89999 xC
 9: 156.19000 MxB
 12: 11.01000 MxB
 15: 503.60999 MxB
 18: 117.22000 MxB
 ALMs: 0{HHHH}3

1: 38.90000 xC
 4: 97.80000 xC
 7: 104.40000 xC
 10: -0.41000 MxB
 13: 12.98000 MxB
 16: 0.85000 MxB
 19: 22.05000 MxB
 DI/O: 0{HHHHHHHH}7

2: 73.20000 xC
 5: 78.70000 xC
 8: 178.60001 xC
 11: 2.27000 MxB
 14: 1.32000 MxB
 17: 190.74001 MxB
 20: 5.69000 MxB
 Total: 0

07/22/93 12:14:12

Inst. Number = 1
 0: 129.66000 MxB
 3: 135.80000 xC
 6: 161.50000 xC
 9: 154.73000 MxB
 12: 11.00000 MxB
 15: 514.22998 MxB
 18: 116.45000 MxB
 ALMs: 0{HHHH}3

1: 39.60000 xC
 4: 98.90000 xC
 7: 108.60000 xC
 10: -0.38000 MxB
 13: 13.00000 MxB
 16: 0.83000 MxB
 19: 22.56000 MxB
 DI/O: 0{HHHHHHHH}7

2: 73.60000 xC
 5: 79.50000 xC
 8: 179.10001 xC
 11: 2.21000 MxB
 14: 1.31000 MxB
 17: 198.41000 MxB
 20: 5.69000 MxB
 Total: 0

07/22/93 12:17:12

Inst. Number = 1
 0: 144.70000 MxB
 3: 133.20000 xC
 6: 165.20000 xC
 9: 154.56000 MxB
 12: 10.69000 MxB
 15: 446.57001 MxB
 18: 114.10000 MxB
 ALMs: 0{HHHH}3

1: 38.40000 xC
 4: 99.20000 xC
 7: 114.30000 xC
 10: -0.28000 MxB
 13: 12.76000 MxB
 16: 0.86000 MxB
 19: 22.05000 MxB
 DI/O: 0{HHHHHHHH}7

2: 72.90000 xC
 5: 80.10000 xC
 8: 179.60001 xC
 11: 1.99000 MxB
 14: 1.34000 MxB
 17: 193.32001 MxB
 20: 5.92000 MxB
 Total: 0

07/22/93 12:20:12

Inst. Number = 1
 0: 136.25000 MxB
 3: 133.00000 xC
 6: 168.80000 xC
 9: 155.10001 MxB
 12: 11.24000 MxB
 15: 450.54001 MxB
 18: 106.34000 MxB
 ALMs: 0{HHHH}3

1: 39.10000 xC
 4: 99.50000 xC
 7: 120.60000 xC
 10: -0.38000 MxB
 13: 13.25000 MxB
 16: 0.86000 MxB
 19: 21.04000 MxB
 DI/O: 0{HHHHHHHH}7

2: 71.40000 xC
 5: 80.70000 xC
 8: 179.80000 xC
 11: 2.25000 MxB
 14: 1.33000 MxB
 17: 198.41000 MxB
 20: 5.92000 MxB
 Total: 0

07/22/93 12:23:12

Inst. Number = 1		
0: 137.89999 MxB	1: 36.60000 xC	2: 71.50000 xC
3: 131.50000 xC	4: 99.70000 xC	5: 81.10000 xC
6: 172.20000 xC	7: 127.40000 xC	8: 180.60001 xC
9: 155.70000 MxB	10: -0.31000 MxB	11: 2.29000 MxB
12: 11.24000 MxB	13: 13.32000 MxB	14: 1.37000 MxB
454.42999 MxB	16: 0.86000 MxB	17: 193.32001 MxB
103.99000 MxB	19: 19.52000 MxB	20: 6.16000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 12:26:12

Inst. Number = 1		
0: 145.16000 MxB	1: 34.90000 xC	2: 70.10000 xC
3: 130.20000 xC	4: 99.70000 xC	5: 81.50000 xC
6: 175.50000 xC	7: 134.00000 xC	8: 181.10001 xC
9: 160.00000 MxB	10: -0.32000 MxB	11: 2.27000 MxB
12: 11.26000 MxB	13: 13.39000 MxB	14: 1.40000 MxB
15: 438.72000 MxB	16: 0.71000 MxB	17: 190.74001 MxB
18: 117.22000 MxB	19: 22.04000 MxB	20: 6.15000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 12:29:12

Inst. Number = 1		
0: 136.34000 MxB	1: 34.20000 xC	2: 69.00000 xC
3: 120.20000 xC	4: 98.30000 xC	5: 81.70000 xC
6: 179.10001 xC	7: 140.60001 xC	8: 182.10001 xC
9: 154.57001 MxB	10: -0.39000 MxB	11: 2.34000 MxB
12: 11.25000 MxB	13: 13.36000 MxB	14: 1.37000 MxB
15: 443.39001 MxB	16: 0.90000 MxB	17: 172.81000 MxB
18: 112.56000 MxB	19: 19.52000 MxB	20: 6.38000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 12:32:12

Inst. Number = 1		
0: 143.58000 MxB	1: 33.70000 xC	2: 67.60000 xC
3: 121.60000 xC	4: 98.20000 xC	5: 82.00000 xC
6: 182.50000 xC	7: 147.10001 xC	8: 183.30000 xC
9: 152.77000 MxB	10: -0.41000 MxB	11: 2.23000 MxB
12: 11.09000 MxB	13: 13.19000 MxB	14: 1.38000 MxB
15: 441.69000 MxB	16: 0.88000 MxB	17: 175.39000 MxB
18: 103.22000 MxB	19: 17.88000 MxB	20: 6.38000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 12:35:12

Inst. Number = 1		
0: 137.61000 MxB	1: 34.10000 xC	2: 65.40000 xC
3: 122.20000 xC	4: 98.20000 xC	5: 82.30000 xC
6: 185.30000 xC	7: 153.50000 xC	8: 184.20000 xC
9: 160.25000 MxB	10: -0.32000 MxB	11: 2.19000 MxB
12: 11.22000 MxB	13: 13.31000 MxB	14: 1.36000 MxB
15: 399.16000 MxB	16: 0.87000 MxB	17: 172.81000 MxB
18: 107.88000 MxB	19: 18.51000 MxB	20: 6.39000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

22/93 12:38:12

Inst. Number = 1		
0: 132.00999 MxB	1: 33.60000 xC	2: 64.20000 xC
3: 119.10000 xC	4: 97.50000 xC	5: 82.60000 xC
6: 187.50000 xC	7: 159.80000 xC	8: 185.50000 xC
9: 153.00000 MxB	10: -0.23000 MxB	11: 2.13000 MxB

15: 472.39999 MxB
18: 89.98000 MxB
ALMs: 0{HHHH}3

16: 0.88000 MxB
19: 15.49000 MxB
DI/O: 0{HHHHHHHH}7

17: 175.35001 MxB
20: 6.62000 MxB
Total: 0

07/22/93 12:41:12

Number = 1
133.80000 MxB
3: 119.60000 xC
6: 189.39999 xC
9: 164.17999 MxB
12: 11.14000 MxB
15: 435.04001 MxB
18: 76.77000 MxB
ALMs: 0{HHHH}3

1: 34.10000 xC
4: 97.30000 xC
7: 165.70000 xC
10: -0.36000 MxB
13: 13.21000 MxB
16: 0.86000 MxB
19: 12.97000 MxB
DI/O: 0{HHHHHHHH}7

2: 62.70000 xC
5: 82.40000 xC
8: 187.10001 xC
11: 2.27000 MxB
14: 1.37000 MxB
17: 180.42999 MxB
20: 6.62000 MxB
Total: 0

07/22/93 12:44:12

Inst. Number = 1
0: 135.84000 MxB
3: 121.10000 xC
6: 191.20000 xC
9: 159.87000 MxB
12: 11.17000 MxB
15: 436.31000 MxB
18: 96.18000 MxB
ALMs: 0{HHHH}3

1: 34.90000 xC
4: 97.70000 xC
7: 171.30000 xC
10: -0.29000 MxB
13: 13.22000 MxB
16: 0.88000 MxB
19: 15.99000 MxB
DI/O: 0{HHHHHHHH}7

2: 61.80000 xC
5: 82.70000 xC
8: 189.00000 xC
11: 2.16000 MxB
14: 1.37000 MxB
17: 167.67999 MxB
20: 6.85000 MxB
Total: 0

07/22/93 12:47:12

Inst. Number = 1
0: 141.47000 MxB
3: 118.60000 xC
6: 192.80000 xC
9: 161.19000 MxB
12: 10.60000 MxB
15: 431.35999 MxB
18: 94.64000 MxB
ALMs: 0{HHHH}3

1: 34.40000 xC
4: 97.70000 xC
7: 176.39999 xC
10: -0.27000 MxB
13: 12.81000 MxB
16: 0.93000 MxB
19: 16.49000 MxB
DI/O: 0{HHHHHHHH}7

2: 60.60000 xC
5: 83.10000 xC
8: 190.70000 xC
11: 1.98000 MxB
14: 1.42000 MxB
17: 172.81000 MxB
20: 6.85000 MxB
Total: 0

07/22/93 12:50:12

Inst. Number = 1
0: 138.42999 MxB
3: 123.40000 xC
6: 194.10001 xC
9: 152.86000 MxB
12: 11.15000 MxB
15: 440.63000 MxB
18: 92.29000 MxB
ALMs: 0{HHHH}3

1: 37.40000 xC
4: 98.00000 xC
7: 181.39999 xC
10: -0.29000 MxB
13: 13.20000 MxB
16: 0.88000 MxB
19: 15.48000 MxB
DI/O: 0{HHHHHHHH}7

2: 60.40000 xC
5: 83.00000 xC
8: 193.10001 xC
11: 2.11000 MxB
14: 1.38000 MxB
17: 167.67999 MxB
20: 6.85000 MxB
Total: 0

07/22/93 12:53:12

Inst. Number = 1
0: 131.19000 MxB
3: 117.10000 xC
6: 195.50000 xC
9: 167.62000 MxB
12: 10.73000 MxB
15: 432.48999 MxB
18: 93.86000 MxB
ALMs: 0{HHHH}3

1: 37.20000 xC
4: 92.10000 xC
7: 185.89999 xC
10: -0.29000 MxB
13: 12.85000 MxB
16: 0.93000 MxB
19: 15.99000 MxB
DI/O: 0{HHHHHHHH}7

2: 59.60000 xC
5: 83.40000 xC
8: 195.20000 xC
11: 2.25000 MxB
14: 1.42000 MxB
17: 167.72000 MxB
20: 7.08000 MxB
Total: 0

07/22/93 12:56:12

Inst. Number = 1

0: 116.27000 MxB
3: 117.30000 xC
6: 196.70000 xC
9: 147.08000 MxB
12: 11.12000 MxB
512.03003 MxB
89.20000 MxB

ALMs: 0{HHHH}3

1: 35.40000 xC
4: 97.20000 xC
7: 190.30000 xC
10: -0.42000 MxB
13: 13.21000 MxB
16: 0.93000 MxB
19: 16.00000 MxB
DI/O: 0{HHHHHHHH}7

2: 59.10000 xC
5: 83.30000 xC
8: 196.89999 xC
11: 2.16000 MxB
14: 1.38000 MxB
17: 173.74001 MxB
20: 7.08000 MxB
Total: 0

07/22/93 12:59:12

Inst. Number = 1

0: 114.14000 MxB
3: 118.30000 xC
6: 198.00000 xC
9: 162.35001 MxB
12: 11.08000 MxB
15: 478.84000 MxB
18: 97.74000 MxB

ALMs: 0{HHHH}3

1: 36.80000 xC
4: 97.00000 xC
7: 194.39999 xC
10: -0.49000 MxB
13: 13.11000 MxB
16: 0.90000 MxB
19: 17.00000 MxB
DI/O: 0{HHHHHHHH}7

2: 58.80000 xC
5: 83.20000 xC
8: 198.70000 xC
11: 2.37000 MxB
14: 1.39000 MxB
17: 172.81000 MxB
20: 7.08000 MxB
Total: 0

07/22/93 13:02:12

Inst. Number = 1

0: 123.48000 MxB
3: 119.60000 xC
6: 199.20000 xC
9: 149.70000 MxB
12: 11.14000 MxB
15: 445.09000 MxB
18: 91.52000 MxB

ALMs: 0{HHHH}3

1: 36.90000 xC
4: 97.40000 xC
7: 198.20000 xC
10: -0.41000 MxB
13: 13.20000 MxB
16: 0.90000 MxB
19: 15.48000 MxB
DI/O: 0{HHHHHHHH}7

2: 58.40000 xC
5: 83.20000 xC
8: 200.80000 xC
11: 2.30000 MxB
14: 1.38000 MxB
17: 180.48000 MxB
20: 7.33000 MxB
Total: 0

07/22/93 13:05:12

Inst. Number = 1

0: 122.48000 MxB
3: 119.90000 xC
6: 200.89999 xC
9: 160.36000 MxB
12: 11.06000 MxB
15: 453.64999 MxB
18: 109.44000 MxB

ALMs: 0{HHHH}3

1: 36.50000 xC
4: 96.90000 xC
7: 201.80000 xC
10: -0.20000 MxB
13: 13.10000 MxB
16: 0.87000 MxB
19: 21.04000 MxB
DI/O: 0{HHHHHHHH}7

2: 57.50000 xC
5: 83.20000 xC
8: 202.80000 xC
11: 2.15000 MxB
14: 1.36000 MxB
17: 193.32001 MxB
20: 7.34000 MxB
Total: 0

07/22/93 13:08:12

Inst. Number = 1

0: 101.43000 MxB
3: 119.60000 xC
6: 202.10001 xC
9: 175.80000 MxB
12: 10.78000 MxB
15: 428.60001 MxB
18: 93.86000 MxB

ALMs: 0{HHHH}3

1: 35.90000 xC
4: 97.20000 xC
7: 205.10001 xC
10: -0.23000 MxB
13: 12.92000 MxB
16: 0.92000 MxB
19: 17.00000 MxB
DI/O: 0{HHHHHHHH}7

2: 56.60000 xC
5: 83.50000 xC
8: 204.89999 xC
11: 2.24000 MxB
14: 1.39000 MxB
17: 183.06000 MxB
20: 7.57000 MxB
Total: 0

07/22/93 13:11:12

Inst. Number = 1

0: 116.49000 MxB
3: 118.30000 xC
6: 203.60001 xC
9: 174.71001 MxB

1: 36.30000 xC
4: 97.20000 xC
7: 208.10001 xC
10: -0.35000 MxB

2: 62.70000 xC
5: 83.50000 xC
8: 207.20000 xC
11: 2.19000 MxB

15: 416.35999 MxB
 18: 110.22000 MxB
 ALMs: 0{HHHH}3

16: 0.90000 MxB
 19: 18.51000 MxB
 DI/O: 0{HHHHHHHH}7

17: 165.17999 MxB
 20: 7.57000 MxB
 Total: 0

07/22/93 13:14:12

Inst. Number = 1

0: 111.00000 MxB
 3: 117.50000 xC
 6: 204.60001 xC
 9: 165.00000 MxB
 12: 10.99000 MxB
 15: 419.26001 MxB
 18: 110.98000 MxB
 ALMs: 0{HHHH}3

1: 36.20000 xC
 4: 97.10000 xC
 7: 211.20000 xC
 10: -0.29000 MxB
 13: 13.08000 MxB
 16: 0.88000 MxB
 19: 18.51000 MxB
 DI/O: 0{HHHHHHHH}7

2: 67.70000 xC
 5: 83.50000 xC
 8: 209.30000 xC
 11: 2.19000 MxB
 14: 1.37000 MxB
 17: 167.67999 MxB
 20: 7.57000 MxB
 Total: 0

07/22/93 13:17:12

Inst. Number = 1

0: 117.52000 MxB
 3: 115.90000 xC
 6: 205.70000 xC
 9: 156.21001 MxB
 12: 10.03000 MxB
 15: 464.82999 MxB
 18: 103.22000 MxB
 ALMs: 0{HHHH}3

1: 36.20000 xC
 4: 96.80000 xC
 7: 213.89999 xC
 10: -0.22000 MxB
 13: 12.51000 MxB
 16: 0.92000 MxB
 19: 16.99000 MxB
 DI/O: 0{HHHHHHHH}7

2: 70.40000 xC
 5: 83.60000 xC
 8: 211.70000 xC
 11: 2.09000 MxB
 14: 1.41000 MxB
 17: 165.13000 MxB
 20: 7.80000 MxB
 Total: 0

07/22/93 13:20:12

Inst. Number = 1

0: 103.22000 MxB
 3: 118.60000 xC
 6: 207.30000 xC
 9: 154.28999 MxB
 12: 10.48000 MxB
 15: 437.79999 MxB
 18: 113.33000 MxB
 ALMs: 0{HHHH}3

1: 38.30000 xC
 4: 97.10000 xC
 7: 216.60001 xC
 10: -0.47000 MxB
 13: 12.64000 MxB
 16: 0.91000 MxB
 19: 19.52000 MxB
 DI/O: 0{HHHHHHHH}7

2: 73.10000 xC
 5: 83.70000 xC
 8: 214.10001 xC
 11: 2.29000 MxB
 14: 1.41000 MxB
 17: 172.81000 MxB
 20: 7.80000 MxB
 Total: 0

07/22/93 13:23:12

Inst. Number = 1

0: 117.97000 MxB
 3: 115.70000 xC
 6: 208.60001 xC
 9: 169.16000 MxB
 12: 10.30000 MxB
 15: 423.42999 MxB
 18: 114.10000 MxB
 ALMs: 0{HHHH}3

1: 36.10000 xC
 4: 96.80000 xC
 7: 219.10001 xC
 10: -0.37000 MxB
 13: 12.39000 MxB
 16: 0.90000 MxB
 19: 19.02000 MxB
 DI/O: 0{HHHHHHHH}7

2: 74.50000 xC
 5: 83.80000 xC
 8: 215.80000 xC
 11: 2.25000 MxB
 14: 1.39000 MxB
 17: 167.72000 MxB
 20: 8.03000 MxB
 Total: 0

07/22/93 13:26:12

Inst. Number = 1

0: 104.11000 MxB
 3: 116.40000 xC
 6: 210.10001 xC
 9: 167.27000 MxB
 12: 10.38000 MxB
 15: 510.54999 MxB
 18: 106.33000 MxB
 ALMs: 0{HHHH}3

1: 37.40000 xC
 4: 96.60000 xC
 7: 221.50000 xC
 10: -0.32000 MxB
 13: 12.46000 MxB
 16: 0.86000 MxB
 19: 18.01000 MxB
 DI/O: 0{HHHHHHHH}7

2: 73.90000 xC
 5: 83.80000 xC
 8: 217.39999 xC
 11: 2.28000 MxB
 14: 1.39000 MxB
 17: 169.28000 MxB
 20: 8.03000 MxB
 Total: 0

07/22/93 13:29:12

Inst. Number = 1

0: 110.84000 MxB
3: 113.00000 xC
6: 211.39999 xC
9: 175.38000 MxB
12: 10.61000 MxB
445.57999 MxB
110.22000 MxB

ALMs: 0{HHHH}3

1: 39.20000 xC
4: 96.40000 xC
7: 223.80000 xC
10: -0.34000 MxB
13: 12.63000 MxB
16: 0.89000 MxB
19: 18.51000 MxB
DI/O: 0{HHHHHHHH}7

2: 72.50000 xC
5: 83.70000 xC
8: 219.10001 xC
11: 2.12000 MxB
14: 1.37000 MxB
17: 167.72000 MxB
20: 8.03000 MxB
Total: 0

07/22/93 13:32:12

Inst. Number = 1

0: 111.41000 MxB
3: 109.00000 xC
6: 212.89999 xC
9: 159.98000 MxB
12: 10.10000 MxB
15: 425.41000 MxB
18: 118.00000 MxB

ALMs: 0{HHHH}3

1: 38.70000 xC
4: 95.20000 xC
7: 226.00000 xC
10: -0.46000 MxB
13: 12.41000 MxB
16: 0.88000 MxB
19: 20.03000 MxB
DI/O: 0{HHHHHHHH}7

2: 71.00000 xC
5: 83.40000 xC
8: 220.70000 xC
11: 2.35000 MxB
14: 1.39000 MxB
17: 170.25999 MxB
20: 8.26000 MxB
Total: 0

07/22/93 13:35:12

Inst. Number = 1

0: 112.82000 MxB
3: 109.00000 xC
6: 214.30000 xC
9: 170.75000 MxB
12: 10.39000 MxB
15: 457.54001 MxB
18: 103.11000 MxB

ALMs: 0{HHHH}3

1: 37.10000 xC
4: 95.00000 xC
7: 228.20000 xC
10: -0.35000 MxB
13: 12.56000 MxB
16: 0.87000 MxB
19: 18.01000 MxB
DI/O: 0{HHHHHHHH}7

2: 69.30000 xC
5: 83.20000 xC
8: 222.30000 xC
11: 2.12000 MxB
14: 1.38000 MxB
17: 177.89000 MxB
20: 8.27000 MxB
Total: 0

07/22/93 13:38:12

Inst. Number = 1

0: 110.33000 MxB
3: 108.90000 xC
6: 215.60001 xC
9: 158.80000 MxB
12: 9.55000 MxB
15: 414.29999 MxB
18: 115.19000 MxB

ALMs: 0{HHHH}3

1: 36.20000 xC
4: 94.50000 xC
7: 230.20000 xC
10: -0.39000 MxB
13: 11.80000 MxB
16: 0.88000 MxB
19: 19.52000 MxB
DI/O: 0{HHHHHHHH}7

2: 67.30000 xC
5: 83.00000 xC
8: 223.50000 xC
11: 1.84000 MxB
14: 1.37000 MxB
17: 167.67999 MxB
20: 8.50000 MxB
Total: 0

07/22/93 13:41:12

Inst. Number = 1

0: -2.06000 MxB
3: 97.30000 xC
6: 216.50000 xC
9: 149.11000 MxB
12: 9.97000 MxB
15: 406.45001 MxB
18: -0.94000 MxB

ALMs: 0{HHHH}3

1: 38.20000 xC
4: 93.20000 xC
7: 232.10001 xC
10: -0.71000 MxB
13: 12.21000 MxB
16: 0.84000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 67.20000 xC
5: 82.90000 xC
8: 225.00000 xC
11: 2.26000 MxB
14: 1.31000 MxB
17: -1.09000 MxB
20: 8.50000 MxB
Total: 0

22/93 13:44:12

Inst. Number = 1

0: -1.68000 MxB
3: 62.20000 xC
6: 217.50000 xC
9: 93.76000 MxB

1: 37.00000 xC
4: 83.90000 xC
7: 234.00000 xC
10: -1.10000 MxB

2: 61.10000 xC
5: 81.50000 xC
8: 226.60001 xC
11: 3.04000 MxB

15: 408.35999 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

16: 0.75000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

17: -1.09000 MxB
20: 8.50000 MxB
Total: 0

07/22/93 13:47:12

Inst. Number = 1
0: -1.01000 MxB
3: 101.70000 xC
6: 219.10001 xC
9: 57.15000 MxB
12: -0.08000 MxB
15: -2.30000 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

1: 36.50000 xC
4: 70.10000 xC
7: 235.89999 xC
10: -0.14000 MxB
13: -0.11000 MxB
16: 0.02000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 56.60000 xC
5: 77.10000 xC
8: 228.10001 xC
11: -0.09000 MxB
14: 0.15000 MxB
17: -1.09000 MxB
20: 8.50000 MxB
Total: 0

07/22/93 13:50:12

Inst. Number = 1
0: 0.84000 MxB
3: 77.90000 xC
6: 221.10001 xC
9: 57.15000 MxB
12: -0.09000 MxB
15: -2.23000 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

1: 51.70000 xC
4: 63.40000 xC
7: 237.70000 xC
10: -0.14000 MxB
13: 0.21000 MxB
16: 0.09000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 56.70000 xC
5: 73.90000 xC
8: 229.39999 xC
11: -0.08000 MxB
14: 0.32000 MxB
17: -1.18000 MxB
20: 8.50000 MxB
Total: 0

07/22/93 13:53:12

Inst. Number = 1
0: -2.06000 MxB
3: 74.90000 xC
6: 222.50000 xC
9: 57.15000 MxB
12: -0.09000 MxB
15: -2.30000 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

1: 39.90000 xC
4: 60.00000 xC
7: 239.50000 xC
10: -0.14000 MxB
13: 0.21000 MxB
16: 0.09000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: +DL
5: 69.80000 xC
8: 230.60001 xC
11: -0.08000 MxB
14: 0.32000 MxB
17: -1.14000 MxB
20: 8.50000 MxB
Total: 0

07/22/93 13:56:12

Inst. Number = 1
0: 0.00000 MxB
3: 69.30000 xC
6: 223.50000 xC
9: 57.15000 MxB
12: 0.80000 MxB
15: 90.76000 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

1: 32.40000 xC
4: 71.20000 xC
7: 241.10001 xC
10: -0.39000 MxB
13: 0.90000 MxB
16: 0.06000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 64.60000 xC
5: 64.50000 xC
8: 231.60001 xC
11: 0.28000 MxB
14: 0.23000 MxB
17: -1.14000 MxB
20: 8.50000 MxB
Total: 0

07/22/93 13:59:12

Inst. Number = 1
0: 1.48000 MxB
3: 66.40000 xC
6: 224.50000 xC
9: 57.15000 MxB
12: 1.10000 MxB
15: 92.24000 MxB
18: -0.93000 MxB
ALMs: 0{HHHH}3

1: 27.90000 xC
4: 75.00000 xC
7: 242.60001 xC
10: -0.46000 MxB
13: 1.13000 MxB
16: 0.06000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 82.20000 xC
5: 65.00000 xC
8: 232.10001 xC
11: 0.38000 MxB
14: 0.19000 MxB
17: -1.14000 MxB
20: 8.50000 MxB
Total: 0

07/22/93 14:02:12

Inst. Number = 1

0: -2.08000 MxB
3: 63.80000 xC
6: 225.50000 xC
9: 57.15000 MxB
12: -0.08000 MxB
15: -2.23000 MxB
18: -0.95000 MxB

ALMs: 0{HHHH}3

1: 28.40000 xC
4: 70.20000 xC
7: 244.00000 xC
10: -0.14000 MxB
13: 0.22000 MxB
16: 0.10000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 74.90000 xC
5: 62.70000 xC
8: 233.00000 xC
11: -0.08000 MxB
14: 0.32000 MxB
17: -1.14000 MxB
20: 8.50000 MxB
Total: 0

07/22/93 14:05:12

Inst. Number = 1

0: -1.89000 MxB
3: 62.30000 xC
6: 226.39999 xC
9: 57.15000 MxB
12: -0.02000 MxB
15: 5.27000 MxB
18: -0.94000 MxB

ALMs: 0{HHHH}3

1: 27.20000 xC
4: +OL
7: 245.39999 xC
10: -0.16000 MxB
13: 0.26000 MxB
16: 0.10000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 69.10000 xC
5: 58.50000 xC
8: 233.80000 xC
11: -0.06000 MxB
14: 0.32000 MxB
17: -1.09000 MxB
20: 8.50000 MxB
Total: 0

07/22/93 14:08:12

Inst. Number = 1

0: -1.96000 MxB
3: 57.30000 xC
6: 227.20000 xC
9: 57.15000 MxB
12: 10.54000 MxB
15: 413.60001 MxB
18: -0.95000 MxB

ALMs: 0{HHHH}3

1: 26.30000 xC
4: +OL
7: 246.60001 xC
10: -0.51000 MxB
13: 12.24000 MxB
16: 0.87000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 87.60000 xC
5: 59.80000 xC
8: 234.39999 xC
11: 1.72000 MxB
14: 1.27000 MxB
17: -1.14000 MxB
20: 8.50000 MxB
Total: 0

07/22/93 14:11:12

Inst. Number = 1

0: 89.55000 MxB
3: 62.00000 xC
6: 228.39999 xC
9: 57.15000 MxB
12: 10.62000 MxB
15: 387.06000 MxB
18: 114.11000 MxB

ALMs: 0{HHHH}3

1: 25.40000 xC
4: +OL
7: 247.70000 xC
10: -0.34000 MxB
13: 12.29000 MxB
16: 0.79000 MxB
19: 19.02000 MxB
DI/O: 0{HHHHHHHH}7

2: 135.30000 xC
5: 61.90000 xC
8: 235.10001 xC
11: 1.71000 MxB
14: 1.25000 MxB
17: 167.72000 MxB
20: 8.50000 MxB
Total: 0

07/22/93 14:14:12

Inst. Number = 1

0: 77.76000 MxB
3: 76.10000 xC
6: 229.39999 xC
9: 57.15000 MxB
12: 10.79000 MxB
15: 339.85999 MxB
18: 100.10000 MxB

ALMs: 0{HHHH}3

1: 24.90000 xC
4: +OL
7: 248.80000 xC
10: -0.27000 MxB
13: 12.55000 MxB
16: 0.82000 MxB
19: 17.50000 MxB
DI/O: 0{HHHHHHHH}7

2: 182.20000 xC
5: 63.60000 xC
8: 235.89999 xC
11: 1.66000 MxB
14: 1.26000 MxB
17: 173.74001 MxB
20: 8.50000 MxB
Total: 0

07/22/93 14:17:12

Inst. Number = 1

0: 87.56000 MxB
3: 78.70000 xC
6: 230.30000 xC
9: 57.15000 MxB

1: 24.60000 xC
4: 78.80000 xC
7: 249.80000 xC
10: -0.05000 MxB

2: 200.20000 xC
5: 65.00000 xC
8: 236.50000 xC
11: 1.58000 MxB

15: 373.75000 MxB
18: 103.22000 MxB
ALMs: 0{HHHH}3

16: 0.83000 MxB
19: 17.31000 MxB
DI/O: 0{HHHHHHHH}7

17: 162.59000 MxB
20: 8.73000 MxB
Total: 0

07/22/93 14:20:12

Inst. Number = 1

0: 126.50000 MxB
3: 84.00000 xC
6: 231.70000 xC
9: 57.15000 MxB
12: 10.96000 MxB
15: 367.38000 MxB
18: 113.34000 MxB
ALMs: 0{HHHH}3

1: 24.80000 xC
4: 80.70000 xC
7: 250.80000 xC
10: -0.08000 MxB
13: 12.70000 MxB
16: 0.83000 MxB
19: 19.02000 MxB
DI/O: 0{HHHHHHHH}7

2: 222.70000 xC
5: 66.20000 xC
8: 237.10001 xC
11: 1.61000 MxB
14: 1.27000 MxB
17: 170.25999 MxB
20: 8.73000 MxB
Total: 0

07/22/93 14:23:12

Inst. Number = 1

0: 104.39000 MxB
3: 83.40000 xC
6: 233.39999 xC
9: 57.15000 MxB
12: 10.81000 MxB
15: 347.57001 MxB
18: 123.39000 MxB
ALMs: 0{HHHH}3

1: 24.40000 xC
4: 81.60000 xC
7: 251.39999 xC
10: -0.13000 MxB
13: 12.60000 MxB
16: 0.81000 MxB
19: 20.53000 MxB
DI/O: 0{HHHHHHHH}7

2: 222.50000 xC
5: 67.00000 xC
8: 237.60001 xC
11: 1.63000 MxB
14: 1.28000 MxB
17: 165.09000 MxB
20: 8.96000 MxB
Total: 0

07/22/93 14:26:12

Inst. Number = 1

0: 117.50000 MxB
3: 85.80000 xC
6: 234.80000 xC
9: 57.15000 MxB
12: 10.78000 MxB
15: 376.66000 MxB
18: 90.75000 MxB
ALMs: 0{HHHH}3

1: 24.20000 xC
4: 82.70000 xC
7: 252.30000 xC
10: -0.19000 MxB
13: 12.66000 MxB
16: 0.89000 MxB
19: 17.00000 MxB
DI/O: 0{HHHHHHHH}7

2: 216.10001 xC
5: 67.90000 xC
8: 238.20000 xC
11: 1.63000 MxB
14: 1.33000 MxB
17: 193.32001 MxB
20: 8.96000 MxB
Total: 0

07/22/93 14:29:12

Inst. Number = 1

0: 106.91000 MxB
3: 83.90000 xC
6: 236.20000 xC
9: 57.15000 MxB
12: 10.97000 MxB
15: 359.73999 MxB
18: 114.88000 MxB
ALMs: 0{HHHH}3

1: 24.20000 xC
4: 82.90000 xC
7: 253.30000 xC
10: -0.20000 MxB
13: 12.78000 MxB
16: 0.83000 MxB
19: 20.03000 MxB
DI/O: 0{HHHHHHHH}7

2: 171.20000 xC
5: 68.50000 xC
8: 238.60001 xC
11: 1.66000 MxB
14: 1.30000 MxB
17: 172.75999 MxB
20: 9.19000 MxB
Total: 0

07/22/93 14:32:12

Inst. Number = 1

0: 111.63000 MxB
3: 84.90000 xC
6: 237.30000 xC
9: 57.15000 MxB
12: 10.94000 MxB
15: 396.12000 MxB
18: 112.56000 MxB
ALMs: 0{HHHH}3

1: 24.10000 xC
4: 83.40000 xC
7: 254.10001 xC
10: -0.17000 MxB
13: 12.76000 MxB
16: 0.86000 MxB
19: 19.02000 MxB
DI/O: 0{HHHHHHHH}7

2: 142.00000 xC
5: 69.20000 xC
8: 239.10001 xC
11: 1.67000 MxB
14: 1.30000 MxB
17: 170.25999 MxB
20: 9.19000 MxB
Total: 0

07/22/93 14:35:12

Inst. Number = 1

0: 114.45000 MxB
3: 88.50000 xC
6: 238.39999 xC
9: 57.15000 MxB
12: 11.01000 MxB
358.32999 MxB
130.42000 MxB

ALMs: 0{HHHH}3

1: 24.10000 xC
4: 84.50000 xC
7: 254.89999 xC
10: -0.29000 MxB
13: 12.93000 MxB
16: 0.88000 MxB
19: 22.55000 MxB
DI/O: 0{HHHHHHHH}7

2: 144.50000 xC
5: 69.90000 xC
8: 239.50000 xC
11: 1.76000 MxB
14: 1.33000 MxB
17: 170.25999 MxB
20: 9.19000 MxB
Total: 0

07/22/93 14:38:12

Inst. Number = 1

0: 111.39000 MxB
3: 93.00000 xC
6: 239.50000 xC
9: 167.89000 MxB
12: 11.08000 MxB
15: 476.57999 MxB
18: 100.87000 MxB

ALMs: 0{HHHH}3

1: 30.20000 xC
4: 85.50000 xC
7: 255.70000 xC
10: -0.28000 MxB
13: 12.97000 MxB
16: 0.86000 MxB
19: 16.49000 MxB
DI/O: 0{HHHHHHHH}7

2: 117.80000 xC
5: 70.40000 xC
8: 240.20000 xC
11: 1.82000 MxB
14: 1.33000 MxB
17: 165.13000 MxB
20: 9.43000 MxB
Total: 0

07/22/93 14:41:12

Inst. Number = 1

0: 105.40000 MxB
3: 92.60000 xC
6: 240.20000 xC
9: 161.47000 MxB
12: 11.11000 MxB
15: 460.01999 MxB
18: 108.67000 MxB

ALMs: 0{HHHH}3

1: 33.30000 xC
4: 86.20000 xC
7: 256.39999 xC
10: -0.44000 MxB
13: 12.98000 MxB
16: 0.86000 MxB
19: 19.52000 MxB
DI/O: 0{HHHHHHHH}7

2: 108.10000 xC
5: 70.90000 xC
8: 241.00000 xC
11: 1.88000 MxB
14: 1.32000 MxB
17: 177.89000 MxB
20: 9.43000 MxB
Total: 0

07/22/93 14:44:12

Inst. Number = 1

0: 114.53000 MxB
3: 103.70000 xC
6: 241.00000 xC
9: 160.77000 MxB
12: 11.09000 MxB
15: 393.70999 MxB
18: 107.88000 MxB

ALMs: 0{HHHH}3

1: 34.30000 xC
4: 88.30000 xC
7: 257.10001 xC
10: -0.28000 MxB
13: 13.02000 MxB
16: 0.84000 MxB
19: 18.51000 MxB
DI/O: 0{HHHHHHHH}7

2: 107.90000 xC
5: 71.60000 xC
8: 241.70000 xC
11: 1.76000 MxB
14: 1.31000 MxB
17: 172.85001 MxB
20: 9.66000 MxB
Total: 0

07/22/93 14:47:12

Inst. Number = 1

0: 106.55000 MxB
3: 101.50000 xC
6: 242.00000 xC
9: 149.73000 MxB
12: 10.78000 MxB
15: 391.66000 MxB
18: 121.11000 MxB

ALMs: 0{HHHH}3

1: 32.90000 xC
4: 88.90000 xC
7: 257.79999 xC
10: -0.25000 MxB
13: 12.77000 MxB
16: 0.89000 MxB
19: 20.17000 MxB
DI/O: 0{HHHHHHHH}7

2: 97.30000 xC
5: 72.30000 xC
8: 242.30000 xC
11: 1.64000 MxB
14: 1.35000 MxB
17: 175.35001 MxB
20: 9.66000 MxB
Total: 0

07/22/93 14:50:12

Inst. Number = 1

0: 112.59000 MxB
3: 103.60000 xC
6: 243.20000 xC
9: 151.64000 MxB

1: 32.30000 xC
4: 89.80000 xC
7: 258.60001 xC
10: -0.25000 MxB

2: 90.80000 xC
5: 73.00000 xC
8: 242.89999 xC
11: 1.79000 MxB

15: 372.48001 MxB	16: 0.86000 MxB	17: 172.81000 MxB
18: 117.99000 MxB	19: 19.52000 MxB	20: 9.90000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 14:53:12

Inst. Number = 1		
0: 100.78000 MxB	1: 33.20000 xC	2: 87.40000 xC
3: 98.60000 xC	4: 89.40000 xC	5: 73.40000 xC
6: 244.30000 xC	7: 259.29999 xC	8: 243.30000 xC
9: 149.86000 MxB	10: -0.29000 MxB	11: 1.79000 MxB
12: 10.96000 MxB	13: 12.90000 MxB	14: 1.32000 MxB
15: 436.45001 MxB	16: 0.84000 MxB	17: 175.35001 MxB
18: 124.19000 MxB	19: 22.05000 MxB	20: 9.90000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 14:56:12

Inst. Number = 1		
0: 112.03000 MxB	1: 32.50000 xC	2: 84.60000 xC
3: 103.40000 xC	4: 90.30000 xC	5: 73.80000 xC
6: 245.30000 xC	7: 260.10001 xC	8: 243.89999 xC
9: 145.77000 MxB	10: -0.22000 MxB	11: 1.79000 MxB
12: 10.95000 MxB	13: 12.90000 MxB	14: 1.31000 MxB
15: 368.73001 MxB	16: 0.90000 MxB	17: 180.48000 MxB
18: 110.98000 MxB	19: 19.52000 MxB	20: 9.90000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 14:59:12

Inst. Number = 1		
0: 113.59000 MxB	1: 32.40000 xC	2: 82.70000 xC
3: 100.40000 xC	4: 90.10000 xC	5: 74.30000 xC
6: 246.30000 xC	7: 260.79999 xC	8: 244.39999 xC
9: 148.42999 MxB	10: -0.27000 MxB	11: 1.82000 MxB
12: 10.82000 MxB	13: 12.79000 MxB	14: 1.33000 MxB
15: 376.23001 MxB	16: 0.84000 MxB	17: 172.81000 MxB
18: 107.09000 MxB	19: 18.01000 MxB	20: 10.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 15:02:12

Inst. Number = 1		
0: 107.51000 MxB	1: 33.00000 xC	2: 82.50000 xC
3: 99.70000 xC	4: 90.20000 xC	5: 74.70000 xC
6: 247.60001 xC	7: 261.70001 xC	8: 244.89999 xC
9: 145.74001 MxB	10: -0.32000 MxB	11: 1.83000 MxB
12: 10.90000 MxB	13: 12.86000 MxB	14: 1.31000 MxB
15: 393.50000 MxB	16: 0.87000 MxB	17: 167.72000 MxB
18: 110.99000 MxB	19: 18.52000 MxB	20: 10.12000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 15:05:12

Inst. Number = 1		
0: 114.91000 MxB	1: 33.30000 xC	2: 81.60000 xC
3: 99.20000 xC	4: 90.20000 xC	5: 75.10000 xC
6: 248.70000 xC	7: 262.60001 xC	8: 245.00000 xC
9: 142.97000 MxB	10: -0.31000 MxB	11: 1.84000 MxB
12: 10.81000 MxB	13: 12.83000 MxB	14: 1.32000 MxB
15: 406.87000 MxB	16: 0.83000 MxB	17: 167.72000 MxB
18: 110.98000 MxB	19: 18.01000 MxB	20: 10.36000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 15:08:12

Inst. Number = 1

0: 119.34000 MxB
3: 99.90000 xC
6: 249.89999 xC
9: 141.00000 MxB
12: 10.31000 MxB
411.32999 MxB
118.00000 MxB

ALMs: 0{HHHH}3

1: 34.60000 xC
4: 90.50000 xC
7: 263.39999 xC
10: -0.39000 MxB
13: 12.45000 MxB
16: 0.91000 MxB
19: 20.03000 MxB
DI/O: 0{HHHHHHHH}7

2: 80.70000 xC
5: 75.50000 xC
8: 245.30000 xC
11: 1.63000 MxB
14: 1.36000 MxB
17: 170.25999 MxB
20: 10.36000 MxB
Total: 0

07/22/93 15:11:12

Inst. Number = 1

0: 106.72000 MxB
3: 101.50000 xC
6: 251.39999 xC
9: 141.42000 MxB
12: 10.85000 MxB
15: 371.76999 MxB
18: 119.56000 MxB

ALMs: 0{HHHH}3

1: 34.00000 xC
4: 90.70000 xC
7: 264.50000 xC
10: -0.27000 MxB
13: 12.82000 MxB
16: 0.84000 MxB
19: 20.53000 MxB
DI/O: 0{HHHHHHHH}7

2: 81.40000 xC
5: 75.70000 xC
8: 245.20000 xC
11: 1.73000 MxB
14: 1.32000 MxB
17: 175.35001 MxB
20: 10.36000 MxB
Total: 0

07/22/93 15:14:12

Inst. Number = 1

0: 132.06000 MxB
3: 100.70000 xC
6: 253.00000 xC
9: 140.96001 MxB
12: 10.71000 MxB
15: 405.32001 MxB
18: 115.65000 MxB

ALMs: 0{HHHH}3

1: 33.40000 xC
4: 90.80000 xC
7: 265.60001 xC
10: -0.32000 MxB
13: 12.73000 MxB
16: 0.82000 MxB
19: 20.53000 MxB
DI/O: 0{HHHHHHHH}7

2: 83.60000 xC
5: 75.90000 xC
8: 245.30000 xC
11: 1.80000 MxB
14: 1.32000 MxB
17: 180.48000 MxB
20: 10.59000 MxB
Total: 0

07/22/93 15:17:12

Inst. Number = 1

0: 136.80000 MxB
3: 101.20000 xC
6: 255.00000 xC
9: 146.25000 MxB
12: 10.81000 MxB
15: 424.98999 MxB
18: 87.01000 MxB

ALMs: 0{HHHH}3

1: 34.80000 xC
4: 91.10000 xC
7: 266.60001 xC
10: -0.29000 MxB
13: 12.84000 MxB
16: 0.82000 MxB
19: 15.99000 MxB
DI/O: 0{HHHHHHHH}7

2: 85.20000 xC
5: 76.30000 xC
8: 245.50000 xC
11: 1.83000 MxB
14: 1.33000 MxB
17: 188.19000 MxB
20: 10.58000 MxB
Total: 0

07/22/93 15:20:12

Inst. Number = 1

0: 138.21001 MxB
3: 103.50000 xC
6: 256.89999 xC
9: 145.87000 MxB
12: 10.71000 MxB
15: 393.50000 MxB
18: 124.18000 MxB

ALMs: 0{HHHH}3

1: 34.10000 xC
4: 91.40000 xC
7: 267.89999 xC
10: -0.28000 MxB
13: 12.81000 MxB
16: 0.85000 MxB
19: 22.05000 MxB
DI/O: 0{HHHHHHHH}7

2: 84.70000 xC
5: 76.60000 xC
8: 245.39999 xC
11: 1.79000 MxB
14: 1.34000 MxB
17: 175.35001 MxB
20: 10.82000 MxB
Total: 0

07/22/93 15:23:12

Inst. Number = 1

0: 140.10001 MxB
3: 105.90000 xC
6: 258.50000 xC
9: 143.61000 MxB

1: 34.30000 xC
4: 92.00000 xC
7: 269.10001 xC
10: -0.25000 MxB

2: 84.00000 xC
5: 76.90000 xC
8: 245.30000 xC
11: 1.86000 MxB

15: 393.14001 MxB
18: 110.99000 MxB
ALMs: 0{HHHH}3

16: 0.84000 MxB
19: 19.02000 MxB
DI/O: 0{HHHHHHHH}7

17: 170.25999 MxB
20: 10.82000 MxB
Total: 0

07/22/93 15:26:12

Inst. Number = 1
142.38000 MxB
3: 108.90000 xC
6: 259.79999 xC
9: 57.15000 MxB
12: 10.80000 MxB
15: 395.04999 MxB
18: 124.18000 MxB
ALMs: 0{HHHH}3

1: 34.00000 xC
4: 92.70000 xC
7: 270.50000 xC
10: -0.20000 MxB
13: 12.88000 MxB
16: 0.86000 MxB
19: 21.49000 MxB
DI/O: 0{HHHHHHHH}7

2: 83.60000 xC
5: 77.10000 xC
8: 245.39999 xC
11: 1.81000 MxB
14: 1.33000 MxB
17: 170.31000 MxB
20: 11.05000 MxB
Total: 0

07/22/93 15:29:12

Inst. Number = 1
0: 136.27000 MxB
3: 106.90000 xC
6: 260.89999 xC
9: 156.71001 MxB
12: 9.09000 MxB
15: 392.22000 MxB
18: 113.33000 MxB
ALMs: 0{HHHH}3

1: 32.90000 xC
4: 92.50000 xC
7: 271.79999 xC
10: -0.22000 MxB
13: 12.16000 MxB
16: 0.91000 MxB
19: 19.52000 MxB
DI/O: 0{HHHHHHHH}7

2: 82.40000 xC
5: 77.40000 xC
8: 244.89999 xC
11: 1.71000 MxB
14: 1.40000 MxB
17: 172.45000 MxB
20: 11.05000 MxB
Total: 0

07/22/93 15:32:12

Inst. Number = 1
0: 145.53999 MxB
3: 109.80000 xC
6: 261.60001 xC
9: 147.58000 MxB
12: 10.76000 MxB
15: 393.42999 MxB
18: 114.11000 MxB
ALMs: 0{HHHH}3

1: 32.20000 xC
4: 93.20000 xC
7: 273.10001 xC
10: -0.08000 MxB
13: 12.85000 MxB
16: 0.83000 MxB
19: 19.27000 MxB
DI/O: 0{HHHHHHHH}7

2: 81.30000 xC
5: 77.80000 xC
8: 244.50000 xC
11: 1.64000 MxB
14: 1.33000 MxB
17: 177.98000 MxB
20: 11.29000 MxB
Total: 0

07/22/93 15:35:12

Inst. Number = 1
0: 131.96001 MxB
3: 106.10000 xC
6: 262.70001 xC
9: 147.92000 MxB
12: 10.64000 MxB
15: 373.39999 MxB
18: 96.95000 MxB
ALMs: 0{HHHH}3

1: 31.70000 xC
4: 93.00000 xC
7: 274.60001 xC
10: -0.22000 MxB
13: 12.75000 MxB
16: 0.84000 MxB
19: 17.00000 MxB
DI/O: 0{HHHHHHHH}7

2: 80.40000 xC
5: 78.00000 xC
8: 244.10001 xC
11: 1.86000 MxB
14: 1.34000 MxB
17: 180.48000 MxB
20: 11.29000 MxB
Total: 0

07/22/93 15:38:12

Inst. Number = 1
0: 139.34000 MxB
3: 104.80000 xC
6: 263.70001 xC
9: 144.57001 MxB
12: 10.55000 MxB
15: 373.89999 MxB
18: 113.31000 MxB
ALMs: 0{HHHH}3

1: 31.70000 xC
4: 92.80000 xC
7: 276.10001 xC
10: -0.28000 MxB
13: 12.70000 MxB
16: 0.84000 MxB
19: 20.03000 MxB
DI/O: 0{HHHHHHHH}7

2: 80.60000 xC
5: 78.30000 xC
8: 244.00000 xC
11: 1.81000 MxB
14: 1.34000 MxB
17: 179.85001 MxB
20: 11.29000 MxB
Total: 0

07/22/93 15:41:12

Inst. Number = 1

0: 140.85001 MxB	1: 32.40000 xC	2: 80.60000 xC
3: 108.20000 xC	4: 93.00000 xC	5: 78.50000 xC
6: 264.60001 xC	7: 277.50000 xC	8: 243.50000 xC
9: 147.07001 MxB	10: -0.12000 MxB	11: 1.59000 MxB
12: 10.45000 MxB	13: 12.63000 MxB	14: 1.35000 MxB
413.81000 MxB	16: 0.88000 MxB	17: 167.72000 MxB
123.39000 MxB	19: 20.53000 MxB	20: 11.52000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 15:44:12

Inst. Number = 1

0: 138.38000 MxB	1: 32.60000 xC	2: 82.10000 xC
3: 105.10000 xC	4: 92.70000 xC	5: 78.70000 xC
6: 265.70001 xC	7: 278.89999 xC	8: 243.20000 xC
9: 145.89000 MxB	10: -0.17000 MxB	11: 1.78000 MxB
12: 10.56000 MxB	13: 12.68000 MxB	14: 1.33000 MxB
15: 348.98999 MxB	16: 0.84000 MxB	17: 175.39000 MxB
18: 107.88000 MxB	19: 18.51000 MxB	20: 11.51000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 15:47:12

Inst. Number = 1

0: 142.52000 MxB	1: 32.70000 xC	2: 83.80000 xC
3: 109.80000 xC	4: 93.60000 xC	5: 78.80000 xC
6: 266.79999 xC	7: 280.50000 xC	8: 243.10001 xC
9: 148.32001 MxB	10: -0.12000 MxB	11: 1.81000 MxB
12: 10.61000 MxB	13: 12.74000 MxB	14: 1.32000 MxB
15: 380.69000 MxB	16: 0.84000 MxB	17: 165.17999 MxB
18: 114.30000 MxB	19: 19.02000 MxB	20: 11.75000 MxB
/ : 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 15:50:12

Inst. Number = 1

0: 128.58000 MxB	1: 34.00000 xC	2: 83.50000 xC
3: 112.30000 xC	4: 94.10000 xC	5: 79.30000 xC
6: 268.00000 xC	7: 282.20001 xC	8: 242.89999 xC
9: 145.89999 MxB	10: -0.19000 MxB	11: 1.87000 MxB
12: 10.71000 MxB	13: 12.83000 MxB	14: 1.34000 MxB
15: 371.63000 MxB	16: 0.77000 MxB	17: 175.35001 MxB
18: 121.20000 MxB	19: 20.53000 MxB	20: 11.75000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 15:53:12

Inst. Number = 1

0: 135.91000 MxB	1: 34.00000 xC	2: 83.10000 xC
3: 110.00000 xC	4: 94.30000 xC	5: 79.70000 xC
6: 269.00000 xC	7: 283.79999 xC	8: 242.70000 xC
9: 146.36000 MxB	10: -0.14000 MxB	11: 1.75000 MxB
12: 10.70000 MxB	13: 12.79000 MxB	14: 1.33000 MxB
15: 414.29999 MxB	16: 0.84000 MxB	17: 175.39000 MxB
18: 119.56000 MxB	19: 21.04000 MxB	20: 11.98000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 15:56:12

Inst. Number = 1

0: 141.23000 MxB	1: 34.20000 xC	2: 82.90000 xC
3: 110.30000 xC	4: 94.40000 xC	5: 79.90000 xC
6: 269.89999 xC	7: 285.50000 xC	8: 242.60001 xC
9: 144.56000 MxB	10: -0.22000 MxB	11: 1.82000 MxB

15: 336.73999 MxB
18: 111.77000 MxB
ALMs: 0{HHHH}3

16: 0.84000 MxB
19: 18.51000 MxB
DI/O: 0{HHHHHHHH}7

17: 172.85001 MxB
20: 11.98000 MxB
Total: 0

07/22/93 15:59:12

Inst. Number = 1
0: 134.42999 MxB
3: 111.00000 xC
6: 270.89999 xC
9: 144.58000 MxB
12: 10.66000 MxB
15: 345.94000 MxB
18: 107.11000 MxB
ALMs: 0{HHHH}3

1: 34.80000 xC
4: 94.30000 xC
7: 286.00000 xC
10: -0.22000 MxB
13: 12.83000 MxB
16: 0.83000 MxB
19: 19.02000 MxB
DI/O: 0{HHHHHHHH}7

2: 81.40000 xC
5: 79.90000 xC
8: 242.30000 xC
11: 1.90000 MxB
14: 1.33000 MxB
17: 176.02000 MxB
20: 11.98000 MxB
Total: 0

07/22/93 16:02:12

Inst. Number = 1
0: 133.39999 MxB
3: 113.50000 xC
6: 271.70001 xC
9: 142.50999 MxB
12: 8.78000 MxB
15: 374.25000 MxB
18: 95.41000 MxB
ALMs: 0{HHHH}3

1: 36.40000 xC
4: 94.70000 xC
7: 287.50000 xC
10: -0.27000 MxB
13: 11.98000 MxB
16: 0.89000 MxB
19: 16.00000 MxB
DI/O: 0{HHHHHHHH}7

2: 79.90000 xC
5: 80.10000 xC
8: 242.20000 xC
11: 1.97000 MxB
14: 1.41000 MxB
17: 172.85001 MxB
20: 12.21000 MxB
Total: 0

07/22/93 16:05:12

Inst. Number = 1
0: 138.03999 MxB
3: 114.90000 xC
6: 272.50000 xC
9: 145.13000 MxB
12: 10.60000 MxB
15: 368.29999 MxB
18: 112.54000 MxB
ALMs: 0{HHHH}3

1: 34.90000 xC
4: 95.10000 xC
7: 289.29999 xC
10: -0.24000 MxB
13: 12.76000 MxB
16: 0.86000 MxB
19: 20.03000 MxB
DI/O: 0{HHHHHHHH}7

2: 77.90000 xC
5: 80.20000 xC
8: 242.20000 xC
11: 1.77000 MxB
14: 1.35000 MxB
17: 183.11000 MxB
20: 12.22000 MxB
Total: 0

07/22/93 16:08:12

Inst. Number = 1
0: 135.34000 MxB
3: 115.10000 xC
6: 273.29999 xC
9: 143.97000 MxB
12: 10.71000 MxB
15: 346.51001 MxB
18: 113.34000 MxB
ALMs: 0{HHHH}3

1: 35.20000 xC
4: 95.40000 xC
7: 291.10001 xC
10: -0.20000 MxB
13: 12.84000 MxB
16: 0.85000 MxB
19: 20.04000 MxB
DI/O: 0{HHHHHHHH}7

2: 76.10000 xC
5: 80.60000 xC
8: 242.30000 xC
11: 1.84000 MxB
14: 1.33000 MxB
17: 177.94000 MxB
20: 12.45000 MxB
Total: 0

07/22/93 16:11:12

Inst. Number = 1
0: 140.73000 MxB
3: 107.20000 xC
6: 273.50000 xC
9: 142.53000 MxB
12: 10.96000 MxB
15: 354.79001 MxB
18: 124.18000 MxB
ALMs: 0{HHHH}3

1: 33.00000 xC
4: 94.30000 xC
7: 292.89999 xC
10: -0.28000 MxB
13: 13.19000 MxB
16: 0.86000 MxB
19: 21.03000 MxB
DI/O: 0{HHHHHHHH}7

2: 78.10000 xC
5: 80.80000 xC
8: 241.89999 xC
11: 1.82000 MxB
14: 1.36000 MxB
17: 170.25999 MxB
20: 12.44000 MxB
Total: 0

07/22/93 16:14:12

Inst. Number = 1

0: 139.72000 MxB
3: 109.00000 xC
6: 274.29999 xC
9: 140.11000 MxB
12: 10.86000 MxB
350.67999 MxB
103.99000 MxB

ALMs: 0{HHHH}3

1: 32.70000 xC
4: 94.60000 xC
7: 294.60001 xC
10: -0.34000 MxB
13: 13.07000 MxB
16: 0.88000 MxB
19: 17.50000 MxB

DI/O: 0{HHHHHHHH}7

2: 82.00000 xC
5: 81.10000 xC
8: 241.70000 xC
11: 1.75000 MxB
14: 1.38000 MxB
17: 170.22000 MxB
20: 12.44000 MxB

Total: 0

07/22/93 16:17:12

Inst. Number = 1

0: 138.52000 MxB
3: 102.60000 xC
6: 274.79999 xC
9: 140.96001 MxB
12: 10.93000 MxB
15: 359.95001 MxB
18: 117.21000 MxB

ALMs: 0{HHHH}3

1: 32.10000 xC
4: 93.60000 xC
7: 296.39999 xC
10: -0.53000 MxB
13: 13.14000 MxB
16: 0.84000 MxB
19: 20.03000 MxB

DI/O: 0{HHHHHHHH}7

2: 84.10000 xC
5: 81.10000 xC
8: 241.70000 xC
11: 2.08000 MxB
14: 1.36000 MxB
17: 175.39000 MxB
20: 12.68000 MxB

Total: 0

07/22/93 16:20:12

Inst. Number = 1

0: 145.61000 MxB
3: 120.30000 xC
6: 276.20001 xC
9: 144.39000 MxB
12: 10.90000 MxB
15: 345.94000 MxB
18: 113.31000 MxB

ALMs: 0{HHHH}3

1: 32.20000 xC
4: 96.20000 xC
7: 298.10001 xC
10: -0.15000 MxB
13: 13.15000 MxB
16: 0.86000 MxB
19: 20.03000 MxB

DI/O: 0{HHHHHHHH}7

2: 87.00000 xC
5: 81.40000 xC
8: 241.60001 xC
11: 1.87000 MxB
14: 1.35000 MxB
17: 185.28999 MxB
20: 12.68000 MxB

Total: 0

07/22/93 16:23:12

Inst. Number = 1

0: 133.59000 MxB
3: 114.50000 xC
6: 278.10001 xC
9: 141.55000 MxB
12: 10.95000 MxB
15: 371.91000 MxB
18: 112.54000 MxB

ALMs: 0{HHHH}3

1: 32.60000 xC
4: 95.90000 xC
7: 299.89999 xC
10: -0.23000 MxB
13: 13.19000 MxB
16: 0.83000 MxB
19: 18.79000 MxB

DI/O: 0{HHHHHHHH}7

2: 86.70000 xC
5: 81.80000 xC
8: 241.60001 xC
11: 1.91000 MxB
14: 1.35000 MxB
17: 175.35001 MxB
20: 12.91000 MxB

Total: 0

07/22/93 16:26:12

Inst. Number = 1

0: 123.84000 MxB
3: 111.10000 xC
6: 279.70001 xC
9: 140.78000 MxB
12: 10.73000 MxB
15: 354.92999 MxB
18: 110.21000 MxB

ALMs: 0{HHHH}3

1: 33.90000 xC
4: 95.50000 xC
7: 301.60001 xC
10: -0.28000 MxB
13: 12.95000 MxB
16: 0.88000 MxB
19: 20.94000 MxB

DI/O: 0{HHHHHHHH}7

2: 85.00000 xC
5: 81.90000 xC
8: 241.50000 xC
11: 1.90000 MxB
14: 1.35000 MxB
17: 165.13000 MxB
20: 12.91000 MxB

Total: 0

12/93 16:29:12

Inst. Number = 1

0: 118.43000 MxB
3: 108.80000 xC
6: 281.10001 xC
9: 138.95000 MxB

1: 35.30000 xC
4: 95.00000 xC
7: 303.29999 xC
10: -0.38000 MxB

2: 83.20000 xC
5: 82.00000 xC
8: 241.20000 xC
11: 2.07000 MxB

15: 374.95999 MxB
18: 106.33000 MxB
ALMs: 0{HHHH}3

16: 0.85000 MxB
19: 18.52000 MxB
DI/O: 0{HHHHHHHH}7

17: 175.48000 MxB
20: 13.15000 MxB
Total: 0

07/22/93 16:32:12

Inst. Number = 1
0: 124.68000 MxB
3: 109.40000 xC
6: 282.10001 xC
9: 142.38000 MxB
12: 10.76000 MxB
15: 394.28000 MxB
18: 124.95000 MxB
ALMs: 0{HHHH}3

1: 36.70000 xC
4: 94.90000 xC
7: 304.89999 xC
10: -0.39000 MxB
13: 13.01000 MxB
16: 0.86000 MxB
19: 21.04000 MxB
DI/O: 0{HHHHHHHH}7

2: 81.40000 xC
5: 81.90000 xC
8: 241.00000 xC
11: 2.00000 MxB
14: 1.36000 MxB
17: 172.81000 MxB
20: 13.14000 MxB
Total: 0

07/22/93 16:35:12

Inst. Number = 1
0: 124.37000 MxB
3: 108.80000 xC
6: 283.10001 xC
9: 140.27000 MxB
12: 10.73000 MxB
15: 359.10999 MxB
18: 122.64000 MxB
ALMs: 0{HHHH}3

1: 34.70000 xC
4: 94.50000 xC
7: 306.50000 xC
10: -0.43000 MxB
13: 13.28000 MxB
16: 0.80000 MxB
19: 21.04000 MxB
DI/O: 0{HHHHHHHH}7

2: 79.30000 xC
5: 81.80000 xC
8: 240.50000 xC
11: 2.14000 MxB
14: 1.25000 MxB
17: 175.35001 MxB
20: 13.14000 MxB
Total: 0

07/22/93 16:38:12

Inst. Number = 1
0: 124.66000 MxB
3: 110.80000 xC
6: 284.00000 xC
9: 139.28000 MxB
12: 10.84000 MxB
15: 346.92999 MxB
18: 95.52000 MxB
ALMs: 0{HHHH}3

1: 36.00000 xC
4: 94.80000 xC
7: 308.20001 xC
10: -0.48000 MxB
13: 13.07000 MxB
16: 0.83000 MxB
19: 15.99000 MxB
DI/O: 0{HHHHHHHH}7

2: 78.50000 xC
5: 81.80000 xC
8: 240.50000 xC
11: 2.09000 MxB
14: 1.35000 MxB
17: 175.35001 MxB
20: 13.37000 MxB
Total: 0

07/22/93 16:41:12

Inst. Number = 1
0: 120.18000 MxB
3: 110.90000 xC
6: 285.20001 xC
9: 139.30000 MxB
12: 10.80000 MxB
15: 360.17001 MxB
18: 138.38000 MxB
ALMs: 0{HHHH}3

1: 36.50000 xC
4: 94.90000 xC
7: 309.70001 xC
10: -0.46000 MxB
13: 13.09000 MxB
16: 0.87000 MxB
19: 23.57000 MxB
DI/O: 0{HHHHHHHH}7

2: 77.70000 xC
5: 81.90000 xC
8: 240.39999 xC
11: 2.00000 MxB
14: 1.36000 MxB
17: 180.48000 MxB
20: 13.37000 MxB
Total: 0

07/22/93 16:44:12

Inst. Number = 1
0: 123.65000 MxB
3: 106.10000 xC
6: 286.50000 xC
9: 140.47000 MxB
12: 10.72000 MxB
15: 359.60001 MxB
18: 110.98000 MxB
ALMs: 0{HHHH}3

1: 32.40000 xC
4: 94.10000 xC
7: 311.29999 xC
10: -0.48000 MxB
13: 13.01000 MxB
16: 0.84000 MxB
19: 18.51000 MxB
DI/O: 0{HHHHHHHH}7

2: 77.00000 xC
5: 81.90000 xC
8: 240.00000 xC
11: 2.01000 MxB
14: 1.36000 MxB
17: 172.81000 MxB
20: 13.61000 MxB
Total: 0

07/22/93 16:47:12

Inst. Number = 1		
0: 117.61000 MxB	1: 31.70000 xC	2: 76.90000 xC
3: 102.50000 xC	4: 93.50000 xC	5: 82.10000 xC
6: 288.29999 xC	7: 312.79999 xC	8: 239.10001 xC
9: 141.22000 MxB	10: -0.34000 MxB	11: 1.70000 MxB
12: 10.36000 MxB	13: 12.71000 MxB	14: 1.39000 MxB
15: 337.95001 MxB	16: 0.89000 MxB	17: 170.22000 MxB
18: 121.87000 MxB	19: 20.03000 MxB	20: 13.61000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 16:50:12

Inst. Number = 1		
0: 128.82001 MxB	1: 31.10000 xC	2: 77.90000 xC
3: 110.20000 xC	4: 94.30000 xC	5: 81.90000 xC
6: 290.29999 xC	7: 314.29999 xC	8: 238.60001 xC
9: 141.00000 MxB	10: -0.29000 MxB	11: 1.89000 MxB
12: 10.70000 MxB	13: 12.98000 MxB	14: 1.36000 MxB
15: 356.84000 MxB	16: 0.86000 MxB	17: 177.89000 MxB
18: 124.18000 MxB	19: 21.19000 MxB	20: 13.84000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 16:53:12

Inst. Number = 1		
0: 135.05000 MxB	1: 31.60000 xC	2: 76.70000 xC
3: 111.90000 xC	4: 94.70000 xC	5: 81.90000 xC
6: 292.29999 xC	7: 315.70001 xC	8: 238.10001 xC
9: 143.41000 MxB	10: -0.21000 MxB	11: 1.82000 MxB
12: 10.70000 MxB	13: 13.01000 MxB	14: 1.36000 MxB
15: 338.94000 MxB	16: 0.87000 MxB	17: 180.17000 MxB
18: 120.33000 MxB	19: 21.04000 MxB	20: 13.84000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 16:56:12

Inst. Number = 1		
0: 126.60000 MxB	1: 31.20000 xC	2: 75.20000 xC
3: 110.70000 xC	4: 94.90000 xC	5: 82.10000 xC
6: 294.20001 xC	7: 317.20001 xC	8: 237.70000 xC
9: 142.92000 MxB	10: -0.23000 MxB	11: 1.81000 MxB
12: 10.77000 MxB	13: 13.05000 MxB	14: 1.35000 MxB
15: 341.76999 MxB	16: 0.85000 MxB	17: 167.67999 MxB
18: 128.07001 MxB	19: 21.04000 MxB	20: 14.07000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 16:59:12

Inst. Number = 1		
0: 144.58000 MxB	1: 31.30000 xC	2: 73.90000 xC
3: 110.60000 xC	4: 94.90000 xC	5: 82.20000 xC
6: 295.79999 xC	7: 318.60001 xC	8: 237.70000 xC
9: 147.19000 MxB	10: -0.07000 MxB	11: 1.61000 MxB
12: 10.60000 MxB	13: 12.92000 MxB	14: 1.37000 MxB
15: 323.16000 MxB	16: 0.89000 MxB	17: 177.94000 MxB
18: 117.99000 MxB	19: 20.53000 MxB	20: 14.07000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

2/93 17:02:12

Inst. Number = 1		
0: 137.97000 MxB	1: 31.60000 xC	2: 72.50000 xC
3: 112.10000 xC	4: 95.40000 xC	5: 82.40000 xC
6: 297.29999 xC	7: 320.00000 xC	8: 237.30000 xC
9: 139.14999 MxB	10: -0.26000 MxB	11: 1.78000 MxB

15: 345.01999 MxB
18: 112.54000 MxB
ALMs: 0{HHHH}3

16: 0.86000 MxB
19: 19.02000 MxB
DI/O: 0{HHHHHHHH}7

17: 170.25999 MxB
20: 14.07000 MxB
Total: 0

07/22/93 17:05:12

t. Number = 1
130.81000 MxB
3: 111.00000 xC
6: 298.50000 xC
9: 139.44000 MxB
12: 10.64000 MxB
15: 330.01999 MxB
18: 109.44000 MxB
ALMs: 0{HHHH}3

1: 32.50000 xC
4: 95.30000 xC
7: 321.39999 xC
10: -0.35000 MxB
13: 12.95000 MxB
16: 0.87000 MxB
19: 19.02000 MxB
DI/O: 0{HHHHHHHH}7

2: 71.10000 xC
5: 82.40000 xC
8: 236.60001 xC
11: 1.86000 MxB
14: 1.36000 MxB
17: 175.35001 MxB
20: 14.30000 MxB
Total: 0

07/22/93 17:08:12

Inst. Number = 1
0: 146.02000 MxB
3: 110.40000 xC
6: 299.29999 xC
9: 144.89000 MxB
12: 10.60000 MxB
15: 311.76001 MxB
18: 114.88000 MxB
ALMs: 0{HHHH}3

1: 32.90000 xC
4: 95.20000 xC
7: 322.70001 xC
10: -0.39000 MxB
13: 12.94000 MxB
16: 0.75000 MxB
19: 20.03000 MxB
DI/O: 0{HHHHHHHH}7

2: 69.70000 xC
5: 82.40000 xC
8: 236.30000 xC
11: 1.87000 MxB
14: 1.37000 MxB
17: 177.94000 MxB
20: 14.30000 MxB
Total: 0

07/22/93 17:11:12

Inst. Number = 1
0: 133.71001 MxB
3: 110.50000 xC
6: 300.10001 xC
9: 144.98000 MxB
12: 10.70000 MxB
15: 325.70001 MxB
18: 114.09000 MxB
ALMs: 0{HHHH}3

1: 34.00000 xC
4: 95.00000 xC
7: 324.10001 xC
10: -0.37000 MxB
13: 12.97000 MxB
16: 0.89000 MxB
19: 19.02000 MxB
DI/O: 0{HHHHHHHH}7

2: 68.40000 xC
5: 82.50000 xC
8: 235.89999 xC
11: 1.87000 MxB
14: 1.36000 MxB
17: 167.72000 MxB
20: 14.53000 MxB
Total: 0

07/22/93 17:14:12

Inst. Number = 1
0: 137.59000 MxB
3: 110.60000 xC
6: 300.79999 xC
9: 144.30000 MxB
12: 10.54000 MxB
15: 356.20001 MxB
18: 113.33000 MxB
ALMs: 0{HHHH}3

1: 34.60000 xC
4: 95.00000 xC
7: 325.29999 xC
10: -0.42000 MxB
13: 12.82000 MxB
16: 0.86000 MxB
19: 19.40000 MxB
DI/O: 0{HHHHHHHH}7

2: 69.40000 xC
5: 82.40000 xC
8: 235.89999 xC
11: 1.80000 MxB
14: 1.38000 MxB
17: 172.85001 MxB
20: 14.53000 MxB
Total: 0

07/22/93 17:17:12

Inst. Number = 1
0: 133.49001 MxB
3: 113.30000 xC
6: 301.29999 xC
9: 140.37000 MxB
12: 10.52000 MxB
15: 324.57001 MxB
18: 121.08000 MxB
ALMs: 0{HHHH}3

1: 35.40000 xC
4: 95.50000 xC
7: 326.60001 xC
10: -0.48000 MxB
13: 12.82000 MxB
16: 0.84000 MxB
19: 19.71000 MxB
DI/O: 0{HHHHHHHH}7

2: 75.60000 xC
5: 82.70000 xC
8: 235.60001 xC
11: 1.90000 MxB
14: 1.37000 MxB
17: 180.48000 MxB
20: 14.77000 MxB
Total: 0

07/22/93 17:20:12

Inst. Number = 1

0: 152.70000 MxB	1: 36.70000 xC	2: 78.50000 xC
3: 119.20000 xC	4: 96.70000 xC	5: 83.00000 xC
6: 302.20001 xC	7: 327.70001 xC	8: 235.60001 xC
9: 144.50000 MxB	10: -0.42000 MxB	11: 1.94000 MxB
12: 9.87000 MxB	13: 12.50000 MxB	14: 1.39000 MxB
361.94000 MxB	16: 0.89000 MxB	17: 172.81000 MxB
113.31000 MxB	19: 19.02000 MxB	20: 14.78000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 17:23:12

Inst. Number = 1

0: 139.24001 MxB	1: 35.50000 xC	2: 79.10000 xC
3: 119.70000 xC	4: 97.50000 xC	5: 83.30000 xC
6: 302.89999 xC	7: 328.70001 xC	8: 235.39999 xC
9: 144.24001 MxB	10: -0.34000 MxB	11: 1.75000 MxB
12: 10.46000 MxB	13: 12.75000 MxB	14: 1.37000 MxB
15: 352.10001 MxB	16: 0.85000 MxB	17: 175.39000 MxB
18: 110.22000 MxB	19: 19.02000 MxB	20: 14.77000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 17:26:12

Inst. Number = 1

0: 142.86000 MxB	1: 36.10000 xC	2: 79.60000 xC
3: 120.00000 xC	4: 97.80000 xC	5: 83.40000 xC
6: 303.29999 xC	7: 329.79999 xC	8: 235.00000 xC
9: 141.75999 MxB	10: -0.39000 MxB	11: 1.69000 MxB
12: 10.63000 MxB	13: 12.93000 MxB	14: 1.35000 MxB
15: 372.20001 MxB	16: 0.84000 MxB	17: 172.81000 MxB
18: 116.44000 MxB	19: 20.53000 MxB	20: 15.00000 MxB
: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 17:29:12

Inst. Number = 1

0: 139.82001 MxB	1: 34.80000 xC	2: 78.50000 xC
3: 111.00000 xC	4: 96.30000 xC	5: 83.60000 xC
6: 303.29999 xC	7: 330.79999 xC	8: 234.60001 xC
9: 141.19000 MxB	10: -0.38000 MxB	11: 1.79000 MxB
12: 10.55000 MxB	13: 12.82000 MxB	14: 1.37000 MxB
15: 390.67001 MxB	16: 0.87000 MxB	17: 170.25999 MxB
18: 124.96000 MxB	19: 21.04000 MxB	20: 15.00000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 17:32:12

Inst. Number = 1

0: 132.77000 MxB	1: 35.40000 xC	2: 77.20000 xC
3: 114.80000 xC	4: 96.70000 xC	5: 83.70000 xC
6: 303.79999 xC	7: 331.79999 xC	8: 234.50000 xC
9: 147.19000 MxB	10: -0.41000 MxB	11: 1.79000 MxB
12: 10.14000 MxB	13: 12.56000 MxB	14: 1.39000 MxB
15: 389.17999 MxB	16: 0.88000 MxB	17: 175.35001 MxB
18: 114.09000 MxB	19: 19.52000 MxB	20: 15.01000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

2/93 17:35:12

Inst. Number = 1

0: 135.91000 MxB	1: 34.20000 xC	2: 76.80000 xC
3: 116.20000 xC	4: 97.00000 xC	5: 83.80000 xC
6: 304.10001 xC	7: 332.70001 xC	8: 234.50000 xC
9: 149.07001 MxB	10: -0.31000 MxB	11: 1.86000 MxB

15: 365.82999 MxB
18: 126.50000 MxB
ALMs: 0{HHHH}3

16: 0.86000 MxB
19: 21.41000 MxB
DI/O: 0{HHHHHHHH}7

17: 177.94000 MxB
20: 15.24000 MxB
Total: 0

07/22/93 17:38:12

Inst. Number = 1
0: 136.49001 MxB
3: 116.50000 xC
6: 304.60001 xC
9: 148.69000 MxB
12: 10.66000 MxB
15: 385.70999 MxB
18: 117.99000 MxB
ALMs: 0{HHHH}3

1: 35.20000 xC
4: 97.30000 xC
7: 333.50000 xC
10: -0.36000 MxB
13: 12.92000 MxB
16: 0.85000 MxB
19: 20.02000 MxB
DI/O: 0{HHHHHHHH}7

2: 76.20000 xC
5: 83.90000 xC
8: 234.39999 xC
11: 1.75000 MxB
14: 1.35000 MxB
17: 177.94000 MxB
20: 15.24000 MxB
Total: 0

07/22/93 17:41:12

Inst. Number = 1
0: 147.67000 MxB
3: 116.40000 xC
6: 305.29999 xC
9: 146.32001 MxB
12: 10.61000 MxB
15: 379.13000 MxB
18: 110.21000 MxB
ALMs: 0{HHHH}3

1: 36.50000 xC
4: 97.20000 xC
7: 330.29999 xC
10: -0.42000 MxB
13: 12.91000 MxB
16: 0.84000 MxB
19: 19.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 75.80000 xC
5: 84.00000 xC
8: 234.00000 xC
11: 1.88000 MxB
14: 1.35000 MxB
17: 180.48000 MxB
20: 15.47000 MxB
Total: 0

07/22/93 17:44:12

Inst. Number = 1
0: 141.83000 MxB
3: 117.40000 xC
6: 306.10001 xC
9: 147.22000 MxB
12: 10.28000 MxB
15: 397.60001 MxB
18: 121.87000 MxB
ALMs: 0{HHHH}3

1: 36.80000 xC
4: 97.40000 xC
7: 331.10001 xC
10: -0.34000 MxB
13: 12.65000 MxB
16: 0.87000 MxB
19: 22.05000 MxB
DI/O: 0{HHHHHHHH}7

2: 75.70000 xC
5: 84.20000 xC
8: 233.70000 xC
11: 1.56000 MxB
14: 1.38000 MxB
17: 185.92000 MxB
20: 15.47000 MxB
Total: 0

07/22/93 17:47:12

Inst. Number = 1
0: 147.77000 MxB
3: 117.10000 xC
6: 307.00000 xC
9: 145.88000 MxB
12: 10.57000 MxB
15: 374.95999 MxB
18: 110.11000 MxB
ALMs: 0{HHHH}3

1: 36.50000 xC
4: 97.50000 xC
7: 331.70001 xC
10: -0.42000 MxB
13: 12.90000 MxB
16: 0.85000 MxB
19: 18.01000 MxB
DI/O: 0{HHHHHHHH}7

2: 75.00000 xC
5: 84.20000 xC
8: 233.50000 xC
11: 1.90000 MxB
14: 1.35000 MxB
17: 172.81000 MxB
20: 15.70000 MxB
Total: 0

07/22/93 17:50:12

Inst. Number = 1
0: 221.99001 MxB
3: 117.20000 xC
6: 307.79999 xC
9: 148.00000 MxB
12: 10.72000 MxB
15: 449.26001 MxB
18: 122.61000 MxB
ALMs: 0{HHHH}3

1: 40.90000 xC
4: 97.60000 xC
7: 332.50000 xC
10: -0.50000 MxB
13: 13.01000 MxB
16: 0.83000 MxB
19: 21.04000 MxB
DI/O: 0{HHHHHHHH}7

2: 75.00000 xC
5: 84.20000 xC
8: 233.39999 xC
11: 2.00000 MxB
14: 1.34000 MxB
17: 177.89000 MxB
20: 15.71000 MxB
Total: 0

07/22/93 17:53:12

Inst. Number = 1

0: 227.13000 MxB
3: 98.80000 xC
6: 308.60001 xC
9: 141.39000 MxB
12: 10.63000 MxB
15: 417.13000 MxB
18: 77.53000 MxB
ALMs: 0{HHHH}3

1: 36.50000 xC
4: 94.90000 xC
7: +OL
10: -0.71000 MxB
13: 12.93000 MxB
16: 0.85000 MxB
19: 9.95000 MxB
DI/O: 0{HHHHHHHH}7

2: 76.10000 xC
5: 84.30000 xC
8: 233.00000 xC
11: 2.13000 MxB
14: 1.36000 MxB
17: 131.86000 MxB
20: 15.71000 MxB
Total: 0

07/22/93 17:56:12

Inst. Number = 1

0: 223.73000 MxB
3: 75.30000 xC
6: 309.00000 xC
9: 208.41000 MxB
12: 10.16000 MxB
15: 402.56000 MxB
18: 88.42000 MxB
ALMs: 0{HHHH}3

1: 29.30000 xC
4: 90.10000 xC
7: +OL
10: -0.66000 MxB
13: 12.58000 MxB
16: 0.87000 MxB
19: 11.97000 MxB
DI/O: 0{HHHHHHHH}7

2: 71.20000 xC
5: 83.80000 xC
8: 235.30000 xC
11: 1.93000 MxB
14: 1.40000 MxB
17: 136.95000 MxB
20: 15.94000 MxB
Total: 0

07/22/93 17:59:12

Inst. Number = 1

0: 1.15000 MxB
3: 66.10000 xC
6: 310.89999 xC
9: 239.21001 MxB
12: 8.84000 MxB
15: 362.14999 MxB
18: 84.92000 MxB
ALMs: 0{HHHH}3

1: 30.90000 xC
4: 86.90000 xC
7: +OL
10: -0.35000 MxB
13: 10.96000 MxB
16: 0.76000 MxB
19: 10.95000 MxB
DI/O: 0{HHHHHHHH}7

2: 67.10000 xC
5: 82.90000 xC
8: 246.00000 xC
11: 1.59000 MxB
14: 1.24000 MxB
17: 134.39999 MxB
20: 15.94000 MxB
Total: 0

07/22/93 18:02:12

Inst. Number = 1

0: -1.70000 MxB
3: 60.80000 xC
6: 313.89999 xC
9: 169.35001 MxB
12: 8.64000 MxB
15: 366.10999 MxB
18: 89.96000 MxB
ALMs: 0{HHHH}3

1: 30.60000 xC
4: 84.20000 xC
7: +OL
10: -0.30000 MxB
13: 10.69000 MxB
16: 0.73000 MxB
19: 11.96000 MxB
DI/O: 0{HHHHHHHH}7

2: 62.60000 xC
5: 81.90000 xC
8: 255.30000 xC
11: 1.49000 MxB
14: 1.21000 MxB
17: 134.45000 MxB
20: 15.94000 MxB
Total: 0

07/22/93 18:05:12

Inst. Number = 1

0: -2.16000 MxB
3: 54.40000 xC
6: 317.70001 xC
9: 219.38000 MxB
12: 8.04000 MxB
15: -2.23000 MxB
18: 97.72000 MxB
ALMs: 0{HHHH}3

1: 29.70000 xC
4: 81.70000 xC
7: +OL
10: -0.15000 MxB
13: 9.98000 MxB
16: 0.61000 MxB
19: 12.45000 MxB
DI/O: 0{HHHHHHHH}7

2: 59.80000 xC
5: 80.80000 xC
8: 262.89999 xC
11: 1.31000 MxB
14: 1.16000 MxB
17: 136.99001 MxB
20: 15.94000 MxB
Total: 0

07/22/93 18:08:12

Inst. Number = 1

0: 1.87000 MxB
3: 51.50000 xC
6: 321.79999 xC
9: 226.07001 MxB

1: 31.60000 xC
4: 79.70000 xC
7: +OL
10: -0.14000 MxB

2: 59.20000 xC
5: 79.70000 xC
8: 269.39999 xC
11: 1.21000 MxB

18: 83.76000 MxB	19: 11.46000 MxB	17: 136.95000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	20: 16.17000 MxB
		Total: 0

07/22/93 18:11:12

Inst. Number = 1		
0: 0.69000 MxB	1: 29.40000 xC	2: 59.90000 xC
3: 49.50000 xC	4: 78.30000 xC	5: 78.60000 xC
6: 326.00000 xC	7: +DL	8: 275.00000 xC
9: 213.75000 MxB	10: -0.17000 MxB	11: 1.13000 MxB
12: 7.39000 MxB	13: 9.16000 MxB	14: 1.08000 MxB
15: -2.23000 MxB	16: 0.63000 MxB	17: 136.99001 MxB
18: 109.44000 MxB	19: 14.99000 MxB	20: 16.17000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 18:14:12

Inst. Number = 1		
0: -1.77000 MxB	1: 30.20000 xC	2: 61.20000 xC
3: 49.40000 xC	4: 77.20000 xC	5: 77.40000 xC
6: 330.00000 xC	7: +DL	8: 280.10001 xC
9: 224.81000 MxB	10: -0.26000 MxB	11: 1.28000 MxB
12: 7.48000 MxB	13: 9.22000 MxB	14: 1.07000 MxB
15: -2.23000 MxB	16: 0.64000 MxB	17: 167.67999 MxB
18: -0.97000 MxB	19: -0.14000 MxB	20: 16.17000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 18:17:12

Inst. Number = 1		
0: 2.01000 MxB	1: 31.30000 xC	2: 61.00000 xC
3: 47.80000 xC	4: 76.10000 xC	5: 76.60000 xC
6: 334.00000 xC	7: +DL	8: 284.60001 xC
9: 47.81000 MxB	10: -0.27000 MxB	11: 1.36000 MxB
12: 7.46000 MxB	13: 9.38000 MxB	14: 1.00000 MxB
15: -2.23000 MxB	16: 0.61000 MxB	17: -1.14000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: 16.17000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 18:20:12

Inst. Number = 1		
0: 1.96000 MxB	1: 31.20000 xC	2: 60.30000 xC
3: 47.60000 xC	4: 75.40000 xC	5: 75.70000 xC
6: 337.20001 xC	7: +DL	8: 288.60001 xC
9: 249.06000 MxB	10: -0.25000 MxB	11: 1.35000 MxB
12: 7.49000 MxB	13: 9.26000 MxB	14: 1.07000 MxB
15: -2.23000 MxB	16: 0.63000 MxB	17: 75.62000 MxB
18: -0.95000 MxB	19: -0.14000 MxB	20: 16.17000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 18:23:12

Inst. Number = 1		
0: 2.04000 MxB	1: 33.90000 xC	2: 59.10000 xC
3: 47.10000 xC	4: 74.80000 xC	5: 74.80000 xC
6: 339.89999 xC	7: +DL	8: 292.29999 xC
9: 24.45000 MxB	10: -0.37000 MxB	11: 1.40000 MxB
12: 7.48000 MxB	13: 9.19000 MxB	14: 1.08000 MxB
15: -2.23000 MxB	16: 0.65000 MxB	17: -1.14000 MxB
18: -0.94000 MxB	19: -0.13000 MxB	20: 16.17000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/22/93 18:24:12

.. 2.11000 MxB
3: 46.20000 xC
6: 341.60001 xC
9: 30.35000 MxB
12: 7.59000 MxB
15: -2.23000 MxB
18: -0.95000 MxB
ALMs: 0{HHHH}3

1: 34.80000 xC
4: 74.20000 xC
7: +0L
10: -0.42000 MxB
13: 9.29000 MxB
16: 0.63000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 56.80000 xC
5: 74.00000 xC
8: 295.70001 xC
11: 1.45000 MxB
14: 1.07000 MxB
17: -1.09000 MxB
20: 16.17000 MxB
Total: 0

07/22/93 18:29:12

Inst. Number = 1

0: -0.10000 MxB
3: 46.40000 xC
6: 342.60001 xC
9: 17.74000 MxB
12: 5.76000 MxB
15: -2.30000 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

1: 38.00000 xC
4: 73.90000 xC
7: +0L
10: -0.15000 MxB
13: 7.61000 MxB
16: 0.58000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 56.40000 xC
5: 73.30000 xC
8: 298.89999 xC
11: 1.03000 MxB
14: 1.01000 MxB
17: -1.09000 MxB
20: 16.17000 MxB
Total: 0

07/22/93 18:32:12

Inst. Number = 1

0: -1.87000 MxB
3: 47.40000 xC
6: 342.60001 xC
9: -13.16000 MxB
12: 6.57000 MxB
15: -2.23000 MxB
18: -0.95000 MxB
ALMs: 0{HHHH}3

1: 36.20000 xC
4: 73.70000 xC
7: +0L
10: -0.11000 MxB
13: 8.05000 MxB
16: 0.57000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 56.70000 xC
5: 72.60000 xC
8: 302.00000 xC
11: 1.04000 MxB
14: 0.97000 MxB
17: -1.14000 MxB
20: 16.17000 MxB
Total: 0

Appendix A-6

**Facility DAS Printer Output
23 July 1993, M60 and N80-IV-MOD Melts**

Friday 7/23/93

Hydra Printer Output 07/23/93 08:18:11
Skipping 5 Scans Between Outputs

07/23/93 08:18:19

Inst. Number = 1

0: 2.82000 MxB	1: 19.30000 xC	2: 18.20000 xC
3: 20.50000 xC	4: 59.60000 xC	5: 45.70000 xC
6: 72.40000 xC	7: +0L	8: 118.80000 xC
9: 59.87000 MxB	10: -0.75000 MxB	11: 2.13000 MxB
12: 11.38000 MxB	13: 13.31000 MxB	14: 1.29000 MxB
15: 336.81000 MxB	16: 0.84000 MxB	17: -1.14000 MxB
18: -0.93000 MxB	19: -0.14000 MxB	20: -0.12000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 08:21:19

Inst. Number = 1

0: 46.86000 MxB	1: 19.50000 xC	2: 42.80000 xC
3: 153.10001 xC	4: 81.50000 xC	5: 48.30000 xC
6: 73.50000 xC	7: +0L	8: 118.30000 xC
9: 257.01001 MxB	10: -0.27000 MxB	11: 2.22000 MxB
12: 12.03000 MxB	13: 13.91000 MxB	14: 1.21000 MxB
15: 361.51001 MxB	16: 0.79000 MxB	17: 129.32001 MxB
18: 106.37000 MxB	19: 11.95000 MxB	20: -0.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 08:24:19

Inst. Number = 1

0: 85.86000 MxB	1: 20.10000 xC	2: 58.00000 xC
3: 198.80000 xC	4: 99.40000 xC	5: 52.60000 xC
6: 74.90000 xC	7: +0L	8: 117.70000 xC
9: 313.28000 MxB	10: -0.50000 MxB	11: 2.52000 MxB
12: 13.28000 MxB	13: 15.19000 MxB	14: 1.25000 MxB
15: 352.23999 MxB	16: 0.82000 MxB	17: 131.91000 MxB
18: 72.92000 MxB	19: 8.42000 MxB	20: -0.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 08:27:19

Inst. Number = 1

0: 44.48000 MxB	1: 19.80000 xC	2: 66.40000 xC
3: 238.89999 xC	4: 114.70000 xC	5: 57.40000 xC

9: 314.12000 MxB
 12: 14.56000 MxB
 15: 364.76999 MxB
 18: 109.48000 MxB
 ALMs: 0{HHHH}3

10: -0.31000 MxB
 13: 16.52000 MxB
 16: 0.85000 MxB
 19: 11.96000 MxB
 DI/O: 0{HHHHHHHH}7

11: 2.87000 MxB
 14: 1.28000 MxB
 17: 131.86000 MxB
 20: -0.13000 MxB
 Total: 0

3/93 08:30:19

Inst. Number = 1

0: 55.62000 MxB
 3: 203.00000 xC
 6: 78.70000 xC
 9: 297.87000 MxB
 12: 13.80000 MxB
 15: 386.48999 MxB
 18: 82.23000 MxB
 ALMs: 0{HHHH}3

1: 19.90000 xC
 4: 116.80000 xC
 7: +0L
 10: -0.57000 MxB
 13: 16.09000 MxB
 16: 0.85000 MxB
 19: 10.94000 MxB
 DI/O: 0{HHHHHHHH}7

2: 73.40000 xC
 5: 62.40000 xC
 8: 116.60000 xC
 11: 2.60000 MxB
 14: 1.31000 MxB
 17: 134.45000 MxB
 20: -0.12000 MxB
 Total: 0

07/23/93 08:33:19

Inst. Number = 1

0: 26.09000 MxB
 3: 145.80000 xC
 6: 79.60000 xC
 9: 264.04999 MxB
 12: 12.60000 MxB
 15: 407.07999 MxB
 18: 87.66000 MxB
 ALMs: 0{HHHH}3

1: 20.00000 xC
 4: 109.80000 xC
 7: +0L
 10: -0.67000 MxB
 13: 14.89000 MxB
 16: 0.85000 MxB
 19: 11.46000 MxB
 DI/O: 0{HHHHHHHH}7

2: 75.20000 xC
 5: 66.30000 xC
 8: 115.90000 xC
 11: 2.26000 MxB
 14: 1.32000 MxB
 17: 131.86000 MxB
 20: 0.11000 MxB
 Total: 0

07/23/93 08:36:19

Inst. Number = 1

0: 1.12000 MxB
 3: 86.00000 xC
 6: 80.50000 xC
 9: 231.14000 MxB
 12: 11.65000 MxB
 15: 404.10999 MxB
 18: 92.32000 MxB
 ALMs: 0{HHHH}3

1: 20.60000 xC
 4: 95.70000 xC
 7: +0L
 10: -0.65000 MxB
 13: 14.00000 MxB
 16: 0.83000 MxB
 19: 11.96000 MxB
 DI/O: 0{HHHHHHHH}7

2: 70.20000 xC
 5: 67.70000 xC
 8: 115.40000 xC
 11: 2.07000 MxB
 14: 1.31000 MxB
 17: 131.86000 MxB
 20: 0.11000 MxB
 Total: 0

07/23/93 08:39:19

Inst. Number = 1

0: 1.87000 MxB
 3: 68.30000 xC
 6: 81.70000 xC
 9: 186.10001 MxB
 12: 10.52000 MxB
 15: 354.72000 MxB
 18: 88.44000 MxB
 ALMs: 0{HHHH}3

1: 20.70000 xC
 4: 88.60000 xC
 7: +0L
 10: -0.49000 MxB
 13: 12.84000 MxB
 16: 0.79000 MxB
 19: 12.46000 MxB
 DI/O: 0{HHHHHHHH}7

2: 65.10000 xC
 5: 68.30000 xC
 8: 115.00000 xC
 11: 1.79000 MxB
 14: 1.25000 MxB
 17: 142.17000 MxB
 20: 0.11000 MxB
 Total: 0

07/23/93 08:42:19

Inst. Number = 1

0: 2.68000 MxB
 3: 58.70000 xC
 6: 83.30000 xC
 9: 203.48000 MxB
 12: 10.47000 MxB
 15: 419.60999 MxB
 18: 91.55000 MxB
 ALMs: 0{HHHH}3

1: 21.00000 xC
 4: 83.60000 xC
 7: +0L
 10: -0.53000 MxB
 13: 12.75000 MxB
 16: 0.77000 MxB
 19: 12.97000 MxB
 DI/O: 0{HHHHHHHH}7

2: 60.60000 xC
 5: 68.10000 xC
 8: 114.50000 xC
 11: 1.81000 MxB
 14: 1.25000 MxB
 17: 144.66000 MxB
 20: 0.34000 MxB
 Total: 0

07/23/93 08:45:19

Inst. Number = 1

0: -0.92000 MxB	1: 20.50000 xC	2: 58.10000 xC
3: 53.30000 xC	4: 80.30000 xC	5: 67.70000 xC
6: 85.10000 xC	7: +DL	8: 114.20000 xC
9: 199.05000 MxB	10: -0.48000 MxB	11: 1.73000 MxB
12: 10.33000 MxB	13: 12.68000 MxB	14: 1.26000 MxB
15: 386.20999 MxB	16: 0.81000 MxB	17: 147.25000 MxB
18: 94.66000 MxB	19: 13.46000 MxB	20: 0.34000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 08:48:19

Inst. Number = 1

0: 2.96000 MxB	1: 21.20000 xC	2: 53.30000 xC
3: 43.90000 xC	4: 79.00000 xC	5: 65.80000 xC
6: 89.10000 xC	7: +DL	8: 113.70000 xC
9: 249.32001 MxB	10: 2.11000 MxB	11: -0.50000 MxB
12: -1.07000 MxB	13: -1.42000 MxB	14: 0.25000 MxB
15: 154.09000 MxB	16: 0.03000 MxB	17: 147.21001 MxB
18: 83.00000 MxB	19: 12.46000 MxB	20: 0.35000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 08:51:19

Inst. Number = 1

0: -1.02000 MxB	1: 21.00000 xC	2: 53.30000 xC
3: 49.30000 xC	4: 76.10000 xC	5: 66.50000 xC
6: 90.80000 xC	7: +DL	8: 113.40000 xC
9: 212.72000 MxB	10: -0.89000 MxB	11: 2.30000 MxB
12: 11.62000 MxB	13: 13.63000 MxB	14: 1.36000 MxB
15: 380.62000 MxB	16: 0.80000 MxB	17: 144.71001 MxB
18: 88.44000 MxB	19: 12.46000 MxB	20: 0.34000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 08:54:19

Inst. Number = 1

0: 77.74000 MxB	1: 21.20000 xC	2: 52.90000 xC
3: 51.60000 xC	4: 75.30000 xC	5: 66.10000 xC
6: 93.60000 xC	7: +DL	8: 112.90000 xC
9: 216.97000 MxB	10: -0.44000 MxB	11: 1.76000 MxB
12: 10.52000 MxB	13: 12.51000 MxB	14: 1.28000 MxB
15: 422.23001 MxB	16: 0.81000 MxB	17: 147.21001 MxB
18: 94.66000 MxB	19: 13.98000 MxB	20: 0.58000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 08:57:19

Inst. Number = 1

0: 91.64000 MxB	1: 21.20000 xC	2: 53.50000 xC
3: 54.20000 xC	4: 75.10000 xC	5: 65.70000 xC
6: 96.20000 xC	7: 46.60000 xC	8: 112.40000 xC
9: 206.63000 MxB	10: -0.40000 MxB	11: 1.74000 MxB
12: 10.43000 MxB	13: 12.49000 MxB	14: 1.28000 MxB
15: 423.64001 MxB	16: 0.80000 MxB	17: 147.25000 MxB
18: 82.23000 MxB	19: 11.95000 MxB	20: 0.57000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 09:00:19

Inst. Number = 1

0: 127.11000 MxB	1: 21.60000 xC	2: 59.40000 xC
3: 44.60000 xC	4: 77.70000 xC	5: 45.80000 xC

9: 141.48000 MxB	10: -0.55000 MxB	11: 1.94000 MxB
12: 11.43000 MxB	13: 13.47000 MxB	14: 1.34000 MxB
15: 386.28000 MxB	16: 0.88000 MxB	17: 144.66000 MxB
18: 86.09000 MxB	19: 12.46000 MxB	20: 0.58000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

3/93 09:03:19

Inst. Number = 1		
0: 173.22000 MxB	1: 21.30000 xC	2: 66.90000 xC
3: 106.40000 xC	4: 88.10000 xC	5: 67.20000 xC
6: 101.30000 xC	7: 46.00000 xC	8: 111.60000 xC
9: 194.28999 MxB	10: -0.74000 MxB	11: 2.35000 MxB
12: 12.61000 MxB	13: 14.63000 MxB	14: 1.34000 MxB
15: 412.89001 MxB	16: 0.88000 MxB	17: 147.28999 MxB
18: 87.66000 MxB	19: 12.96000 MxB	20: 0.57000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 09:06:19

Inst. Number = 1		
0: 161.19000 MxB	1: 21.30000 xC	2: 60.60000 xC
3: 66.80000 xC	4: 78.70000 xC	5: 66.70000 xC
6: 102.50000 xC	7: 45.90000 xC	8: 111.30000 xC
9: 137.75999 MxB	10: -0.63000 MxB	11: 2.10000 MxB
12: 11.61000 MxB	13: 13.61000 MxB	14: 1.32000 MxB
15: 406.45001 MxB	16: 0.83000 MxB	17: 147.25000 MxB
18: 89.98000 MxB	19: 13.46000 MxB	20: 0.81000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 09:09:19

Inst. Number = 1		
0: 157.86000 MxB	1: 21.20000 xC	2: 58.30000 xC
3: 66.80000 xC	4: 78.70000 xC	5: 67.00000 xC
6: 103.80000 xC	7: 45.50000 xC	8: 111.00000 xC
9: 208.36000 MxB	10: -0.47000 MxB	11: 1.79000 MxB
12: 11.51000 MxB	13: 13.45000 MxB	14: 1.35000 MxB
15: 374.89001 MxB	16: 0.89000 MxB	17: 147.25000 MxB
18: 83.78000 MxB	19: 12.46000 MxB	20: 0.80000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 09:12:19

Inst. Number = 1		
0: 159.19000 MxB	1: 21.30000 xC	2: 56.80000 xC
3: 73.30000 xC	4: 79.50000 xC	5: 67.10000 xC
6: 105.20000 xC	7: 45.30000 xC	8: 110.90000 xC
9: 193.86000 MxB	10: 0.64000 MxB	11: 1.17000 MxB
12: 11.35000 MxB	13: 13.42000 MxB	14: 1.34000 MxB
15: 386.35001 MxB	16: 0.86000 MxB	17: 144.71001 MxB
18: 65.92000 MxB	19: 9.43000 MxB	20: 0.80000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 09:15:19

Inst. Number = 1		
0: 149.60001 MxB	1: 21.00000 xC	2: 57.90000 xC
3: 72.20000 xC	4: 79.90000 xC	5: 67.40000 xC
6: 106.60000 xC	7: 45.30000 xC	8: 110.90000 xC
9: 212.83000 MxB	10: -0.50000 MxB	11: 1.95000 MxB
12: 11.47000 MxB	13: 13.58000 MxB	14: 1.33000 MxB
15: 408.50000 MxB	16: 0.85000 MxB	17: 144.66000 MxB
18: 90.00000 MxB	19: 12.97000 MxB	20: 1.04000 MxB

9: 141.48000 MxB
 12: 11.43000 MxB
 15: 386.28000 MxB
 18: 86.09000 MxB
 ALMs: 0{HHHH}3

10: -0.55000 MxB
 13: 13.47000 MxB
 16: 0.88000 MxB
 19: 12.46000 MxB
 DI/O: 0{HHHHHHHH}7

11: 1.94000 MxB
 14: 1.34000 MxB
 17: 144.66000 MxB
 20: 0.58000 MxB
 Total: 0

3/93 09:03:19

Inst. Number = 1

0: 173.22000 MxB
 3: 106.40000 xC
 6: 101.30000 xC
 9: 194.28999 MxB
 12: 12.61000 MxB
 15: 412.89001 MxB
 18: 87.66000 MxB
 ALMs: 0{HHHH}3

1: 21.30000 xC
 4: 88.10000 xC
 7: 46.00000 xC
 10: -0.74000 MxB
 13: 14.63000 MxB
 16: 0.88000 MxB
 19: 12.96000 MxB
 DI/O: 0{HHHHHHHH}7

2: 66.90000 xC
 5: 67.20000 xC
 8: 111.60000 xC
 11: 2.35000 MxB
 14: 1.34000 MxB
 17: 147.28999 MxB
 20: 0.57000 MxB
 Total: 0

07/23/93 09:06:19

Inst. Number = 1

0: 161.19000 MxB
 3: 66.80000 xC
 6: 102.50000 xC
 9: 137.75999 MxB
 12: 11.61000 MxB
 15: 406.45001 MxB
 18: 89.98000 MxB
 ALMs: 0{HHHH}3

1: 21.30000 xC
 4: 78.70000 xC
 7: 45.90000 xC
 10: -0.63000 MxB
 13: 13.61000 MxB
 16: 0.83000 MxB
 19: 13.46000 MxB
 DI/O: 0{HHHHHHHH}7

2: 60.60000 xC
 5: 66.70000 xC
 8: 111.30000 xC
 11: 2.10000 MxB
 14: 1.32000 MxB
 17: 147.25000 MxB
 20: 0.81000 MxB
 Total: 0

07/23/93 09:09:19

Inst. Number = 1

0: 157.86000 MxB
 3: 66.80000 xC
 6: 103.80000 xC
 9: 208.36000 MxB
 12: 11.51000 MxB
 15: 374.89001 MxB
 18: 83.78000 MxB
 ALMs: 0{HHHH}3

1: 21.20000 xC
 4: 78.70000 xC
 7: 45.50000 xC
 10: -0.47000 MxB
 13: 13.45000 MxB
 16: 0.89000 MxB
 19: 12.46000 MxB
 DI/O: 0{HHHHHHHH}7

2: 58.30000 xC
 5: 67.00000 xC
 8: 111.00000 xC
 11: 1.79000 MxB
 14: 1.35000 MxB
 17: 147.25000 MxB
 20: 0.80000 MxB
 Total: 0

07/23/93 09:12:19

Inst. Number = 1

0: 159.19000 MxB
 3: 73.30000 xC
 6: 105.20000 xC
 9: 193.86000 MxB
 12: 11.35000 MxB
 15: 386.35001 MxB
 18: 65.92000 MxB
 ALMs: 0{HHHH}3

1: 21.30000 xC
 4: 79.50000 xC
 7: 45.30000 xC
 10: 0.64000 MxB
 13: 13.42000 MxB
 16: 0.86000 MxB
 19: 9.43000 MxB
 DI/O: 0{HHHHHHHH}7

2: 56.80000 xC
 5: 67.10000 xC
 8: 110.90000 xC
 11: 1.17000 MxB
 14: 1.34000 MxB
 17: 144.71001 MxB
 20: 0.80000 MxB
 Total: 0

07/23/93 09:15:19

Inst. Number = 1

0: 149.60001 MxB
 3: 72.20000 xC
 6: 106.60000 xC
 9: 212.83000 MxB
 12: 11.47000 MxB
 15: 408.50000 MxB
 18: 90.00000 MxB
 ALMs: 0{HHHH}3

1: 21.00000 xC
 4: 79.90000 xC
 7: 45.30000 xC
 10: -0.50000 MxB
 13: 13.58000 MxB
 16: 0.85000 MxB
 19: 12.97000 MxB
 DI/O: 0{HHHHHHHH}7

2: 57.90000 xC
 5: 67.40000 xC
 8: 110.90000 xC
 11: 1.95000 MxB
 14: 1.33000 MxB
 17: 144.66000 MxB
 20: 1.04000 MxB
 Total: 0

07/23/93 09:18:19

Inst. Number = 1

0: 162.00999 MxB	1: 21.30000 xC	2: 57.80000 xC
3: 72.40000 xC	4: 80.20000 xC	5: 67.80000 xC
6: 108.00000 xC	7: 45.20000 xC	8: 111.10000 xC
9: 190.78000 MxB	10: -0.55000 MxB	11: 1.86000 MxB
12: 11.29000 MxB	13: 13.33000 MxB	14: 1.35000 MxB
15: 426.76001 MxB	16: 0.89000 MxB	17: 154.92000 MxB
18: 89.20000 MxB	19: 13.97000 MxB	20: 1.04000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 09:21:19

Inst. Number = 1

0: 159.53000 MxB	1: 21.50000 xC	2: 58.90000 xC
3: 72.90000 xC	4: 80.40000 xC	5: 68.00000 xC
6: 109.80000 xC	7: 45.00000 xC	8: 111.40000 xC
9: 209.22000 MxB	10: -0.55000 MxB	11: 2.02000 MxB
12: 11.49000 MxB	13: 13.54000 MxB	14: 1.33000 MxB
15: 416.64001 MxB	16: 0.84000 MxB	17: 152.38000 MxB
18: 83.77000 MxB	19: 12.97000 MxB	20: 1.04000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 09:24:19

Inst. Number = 1

0: 110.70000 MxB	1: 21.80000 xC	2: 59.20000 xC
3: 71.70000 xC	4: 80.20000 xC	5: 68.30000 xC
6: 111.70000 xC	7: 44.90000 xC	8: 111.90000 xC
9: 287.09000 MxB	10: -0.63000 MxB	11: 2.05000 MxB
12: 11.49000 MxB	13: 13.48000 MxB	14: 1.33000 MxB
15: 375.23999 MxB	16: 0.83000 MxB	17: 149.78999 MxB
18: 84.55000 MxB	19: 12.97000 MxB	20: 1.04000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 09:27:19

Inst. Number = 1

0: 119.36000 MxB	1: 21.80000 xC	2: 56.40000 xC
3: 67.70000 xC	4: 78.90000 xC	5: 68.40000 xC
6: 113.70000 xC	7: 44.70000 xC	8: 112.60000 xC
9: 247.52000 MxB	10: -0.57000 MxB	11: 2.00000 MxB
12: 10.08000 MxB	13: 12.82000 MxB	14: 1.39000 MxB
15: 408.50000 MxB	16: 0.90000 MxB	17: 144.66000 MxB
18: 91.55000 MxB	19: 13.47000 MxB	20: 1.28000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 09:30:19

Inst. Number = 1

0: 136.78999 MxB	1: 21.60000 xC	2: 60.90000 xC
3: 121.00000 xC	4: 90.50000 xC	5: 69.20000 xC
6: 116.10000 xC	7: 44.70000 xC	8: 113.60000 xC
9: 266.38000 MxB	10: -0.39000 MxB	11: 2.11000 MxB
12: 11.82000 MxB	13: 13.75000 MxB	14: 1.31000 MxB
15: 408.70999 MxB	16: 0.83000 MxB	17: 149.78999 MxB
18: 86.11000 MxB	19: 12.97000 MxB	20: 1.27000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 09:33:19

Inst. Number = 1

0: 129.32001 MxB	1: 22.00000 xC	2: 68.10000 xC
3: 152.30000 xC	4: 88.40000 xC	5: 70.80000 xC

9: 251.05000 MxB
 12: 11.72000 MxB
 15: 383.23999 MxB
 18: 86.88000 MxB
 ALMs: 0{HHHH}3

10: -0.33000 MxB
 13: 13.82000 MxB
 16: 0.83000 MxB
 19: 13.47000 MxB
 DI/O: 0{HHHHHHHH}7

11: 2.18000 MxB
 14: 1.31000 MxB
 17: 152.33000 MxB
 20: 1.28000 MxB
 Total: 0

3/93 09:36:19

Inst. Number = 1
 0: 154.53000 MxB
 3: 152.60001 xC
 6: 121.50000 xC
 9: 270.35001 MxB
 12: 11.91000 MxB
 15: 382.32001 MxB
 18: 89.21000 MxB
 ALMs: 0{HHHH}3

1: 22.40000 xC
 4: 103.00000 xC
 7: 45.00000 xC
 10: -0.33000 MxB
 13: 13.97000 MxB
 16: 0.76000 MxB
 19: 13.46000 MxB
 DI/O: 0{HHHHHHHH}7

2: 71.40000 xC
 5: 73.20000 xC
 8: 116.10000 xC
 11: 2.16000 MxB
 14: 1.26000 MxB
 17: 147.25000 MxB
 20: 1.27000 MxB
 Total: 0

0//23/93 09:39:19

Inst. Number = 1
 0: 137.71001 MxB
 3: 169.80000 xC
 6: 124.20000 xC
 9: 272.29999 MxB
 12: 11.89000 MxB
 15: 419.82001 MxB
 18: 75.22000 MxB
 ALMs: 0{HHHH}3

1: 22.10000 xC
 4: 109.10000 xC
 7: 45.30000 xC
 10: -0.14000 MxB
 13: 13.91000 MxB
 16: 0.84000 MxB
 19: 12.97000 MxB
 DI/O: 0{HHHHHHHH}7

2: 74.90000 xC
 5: 75.30000 xC
 8: 117.60000 xC
 11: 2.02000 MxB
 14: 1.28000 MxB
 17: 172.81000 MxB
 20: 1.51000 MxB
 Total: 0

0//23/93 09:42:19

Inst. Number = 1
 0: 170.67000 MxB
 3: 183.80000 xC
 6: 126.60000 xC
 9: 186.88000 MxB
 12: 12.41000 MxB
 15: 414.51999 MxB
 18: 75.22000 MxB
 ALMs: 0{HHHH}3

1: 22.00000 xC
 4: 114.20000 xC
 7: 45.60000 xC
 10: -0.28000 MxB
 13: 14.38000 MxB
 16: 0.84000 MxB
 19: 12.97000 MxB
 DI/O: 0{HHHHHHHH}7

2: 77.50000 xC
 5: 77.50000 xC
 8: 119.20000 xC
 11: 2.19000 MxB
 14: 1.31000 MxB
 17: 172.81000 MxB
 20: 1.50000 MxB
 Total: 0

0//23/93 09:45:19

Inst. Number = 1
 0: 198.02000 MxB
 3: 182.39999 xC
 6: 128.89999 xC
 9: 230.72000 MxB
 12: 12.31000 MxB
 15: 404.04001 MxB
 18: 76.78000 MxB
 ALMs: 0{HHHH}3

1: 21.90000 xC
 4: 116.20000 xC
 7: 45.80000 xC
 10: -0.32000 MxB
 13: 14.33000 MxB
 16: 0.91000 MxB
 19: 13.60000 MxB
 DI/O: 0{HHHHHHHH}7

2: 78.90000 xC
 5: 79.60000 xC
 8: 121.10000 xC
 11: 2.03000 MxB
 14: 1.31000 MxB
 17: 177.94000 MxB
 20: 1.51000 MxB
 Total: 0

0//23/93 09:48:19

Inst. Number = 1
 0: 183.75000 MxB
 3: 194.20000 xC
 6: 131.30000 xC
 9: 202.80000 MxB
 12: 12.15000 MxB
 15: 385.22000 MxB
 18: 79.88000 MxB

1: 21.70000 xC
 4: 120.30000 xC
 7: 46.10000 xC
 10: -0.21000 MxB
 13: 14.17000 MxB
 16: 0.84000 MxB
 19: 13.98000 MxB

2: 80.30000 xC
 5: 81.90000 xC
 8: 123.10000 xC
 11: 2.02000 MxB
 14: 1.31000 MxB
 17: 175.35001 MxB
 20: 1.74000 MxB

07/23/93 09:51:19

Inst. Number = 1

0: 6.22000 MxB	1: 21.80000 xC	2: 81.10000 xC
3: 189.00000 xC	4: 121.70000 xC	5: 84.20000 xC
6: 133.30000 xC	7: 46.30000 xC	8: 125.20000 xC
9: 177.75999 MxB	10: -0.05000 MxB	11: 1.42000 MxB
12: 9.98000 MxB	13: 11.65000 MxB	14: 0.95000 MxB
15: 406.66000 MxB	16: 0.44000 MxB	17: 170.25999 MxB
18: 80.66000 MxB	19: 13.98000 MxB	20: 1.74000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 09:54:19

Inst. Number = 1

0: -2.58000 MxB	1: 21.80000 xC	2: 75.60000 xC
3: 112.50000 xC	4: 104.80000 xC	5: 84.40000 xC
6: 134.10001 xC	7: 46.40000 xC	8: 127.50000 xC
9: 170.64000 MxB	10: -0.20000 MxB	11: 1.93000 MxB
12: 11.66000 MxB	13: 14.04000 MxB	14: 1.43000 MxB
15: 401.48999 MxB	16: 0.89000 MxB	17: 170.25999 MxB
18: 8.41000 MxB	19: 1.36000 MxB	20: 1.74000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 09:57:19

Inst. Number = 1

0: -0.78000 MxB	1: 21.30000 xC	2: 79.80000 xC
3: 102.60000 xC	4: 100.30000 xC	5: 84.50000 xC
6: 134.10001 xC	7: 46.60000 xC	8: 129.89999 xC
9: 110.37000 MxB	10: -0.74000 MxB	11: 2.39000 MxB
12: 11.77000 MxB	13: 13.89000 MxB	14: 1.44000 MxB
15: 397.67001 MxB	16: 0.93000 MxB	17: -1.14000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: 1.74000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 10:00:19

Inst. Number = 1

0: 128.71001 MxB	1: 21.60000 xC	2: 75.20000 xC
3: 88.40000 xC	4: 93.80000 xC	5: 83.30000 xC
6: 134.70000 xC	7: 46.50000 xC	8: 132.39999 xC
9: 217.25000 MxB	10: -0.57000 MxB	11: 2.53000 MxB
12: 11.92000 MxB	13: 13.98000 MxB	14: 1.42000 MxB
15: 400.14999 MxB	16: 0.93000 MxB	17: 144.71001 MxB
18: 79.11000 MxB	19: 11.45000 MxB	20: 1.74000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 10:03:19

Inst. Number = 1

0: 120.38000 MxB	1: 21.70000 xC	2: 92.40000 xC
3: 124.30000 xC	4: 100.80000 xC	5: 83.50000 xC
6: 136.39999 xC	7: 46.30000 xC	8: 135.00000 xC
9: 260.48999 MxB	10: -0.52000 MxB	11: 2.55000 MxB
12: 11.79000 MxB	13: 14.08000 MxB	14: 1.41000 MxB
15: 425.26999 MxB	16: 0.90000 MxB	17: 147.25000 MxB
18: 79.50000 MxB	19: 11.96000 MxB	20: 1.97000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 10:06:19

Inst. Number = 1

0: 117.94000 MxB	1: 22.10000 xC	2: 98.90000 xC
3: 125.00000 xC	4: 101.50000 xC	5: 84.10000 xC

9: 247.92000 MxB
12: 11.48000 MxB
15: 400.72000 MxB
18: 81.43000 MxB
ALMs: 0{HHHH}3

10: -0.61000 MxB
13: 13.87000 MxB
16: 0.91000 MxB
19: 11.96000 MxB
DI/O: 0{HHHHHHHH}7

11: 2.65000 MxB
14: 1.42000 MxB
17: 149.78999 MxB
20: 1.97000 MxB
Total: 0

3/93 10:09:19

Inst. Number = 1

0: 117.36000 MxB
3: 132.70000 xC
6: 139.20000 xC
9: 211.92000 MxB
12: 11.78000 MxB
15: 419.26001 MxB
18: 80.66000 MxB
ALMs: 0{HHHH}3

1: 22.10000 xC
4: 102.90000 xC
7: 46.30000 xC
10: -0.52000 MxB
13: 14.07000 MxB
16: 0.87000 MxB
19: 11.96000 MxB
DI/O: 0{HHHHHHHH}7

2: 99.40000 xC
5: 84.30000 xC
8: 140.50000 xC
11: 2.61000 MxB
14: 1.40000 MxB
17: 149.78999 MxB
20: 1.97000 MxB
Total: 0

0//23/93 10:12:19

Inst. Number = 1

0: 119.84000 MxB
3: 144.60001 xC
6: 140.89999 xC
9: 285.72000 MxB
12: 11.93000 MxB
15: 385.50000 MxB
18: 76.00000 MxB
ALMs: 0{HHHH}3

1: 22.20000 xC
4: 106.30000 xC
7: 46.40000 xC
10: -0.46000 MxB
13: 14.17000 MxB
16: 0.87000 MxB
19: 13.47000 MxB
DI/O: 0{HHHHHHHH}7

2: 102.00000 xC
5: 85.20000 xC
8: 143.39999 xC
11: 2.59000 MxB
14: 1.39000 MxB
17: 172.81000 MxB
20: 2.20000 MxB
Total: 0

0//23/93 10:15:19

Inst. Number = 1

0: 123.78000 MxB
3: 170.80000 xC
6: 143.39999 xC
9: 228.36000 MxB
12: 11.72000 MxB
15: 397.60001 MxB
18: 80.67000 MxB
ALMs: 0{HHHH}3

1: 22.30000 xC
4: 111.70000 xC
7: 46.70000 xC
10: -0.38000 MxB
13: 14.09000 MxB
16: 0.90000 MxB
19: 14.48000 MxB
DI/O: 0{HHHHHHHH}7

2: 103.60000 xC
5: 86.10000 xC
8: 146.30000 xC
11: 2.31000 MxB
14: 1.40000 MxB
17: 175.35001 MxB
20: 2.20000 MxB
Total: 0

0//23/93 10:18:19

Inst. Number = 1

0: 123.75000 MxB
3: 163.39999 xC
6: 146.00000 xC
9: 179.66000 MxB
12: 11.84000 MxB
15: 451.88000 MxB
18: 89.98000 MxB
ALMs: 0{HHHH}3

1: 22.20000 xC
4: 112.70000 xC
7: 47.10000 xC
10: -0.36000 MxB
13: 14.18000 MxB
16: 0.87000 MxB
19: 15.49000 MxB
DI/O: 0{HHHHHHHH}7

2: 104.70000 xC
5: 87.20000 xC
8: 149.39999 xC
11: 2.26000 MxB
14: 1.38000 MxB
17: 172.81000 MxB
20: 2.21000 MxB
Total: 0

0//23/93 10:21:19

Inst. Number = 1

0: 117.63000 MxB
3: 207.30000 xC
6: 148.50000 xC
9: 218.24001 MxB
12: 12.38000 MxB
15: 501.56000 MxB
18: 71.35000 MxB
ALMs: 0{HHHH}3

1: 22.70000 xC
4: 122.30000 xC
7: 47.60000 xC
10: -0.29000 MxB
13: 14.81000 MxB
16: 0.89000 MxB
19: 13.98000 MxB
DI/O: 0{HHHHHHHH}7

2: 110.10000 xC
5: 89.20000 xC
8: 152.39999 xC
11: 2.43000 MxB
14: 1.40000 MxB
17: 198.36000 MxB
20: 2.20000 MxB
Total: 0

07/23/93 10:24:19

Inst. Number = 1

0: 149.64000 MxB	1: 22.50000 xC	2: 116.60000 xC
3: 202.30000 xC	4: 124.90000 xC	5: 91.30000 xC
6: 150.89999 xC	7: 48.20000 xC	8: 155.50000 xC
9: 232.35001 MxB	10: -0.38000 MxB	11: 2.17000 MxB
12: 11.93000 MxB	13: 14.53000 MxB	14: 1.42000 MxB
15: 460.01999 MxB	16: 0.89000 MxB	17: 198.41000 MxB
18: 77.55000 MxB	19: 15.49000 MxB	20: 2.44000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 10:27:19

Inst. Number = 1

0: 155.96001 MxB	1: 22.80000 xC	2: 120.10000 xC
3: 228.50000 xC	4: 132.00000 xC	5: 93.60000 xC
6: 153.10001 xC	7: 48.90000 xC	8: 158.60001 xC
9: 188.95000 MxB	10: -0.22000 MxB	11: 2.40000 MxB
12: 12.18000 MxB	13: 14.64000 MxB	14: 1.40000 MxB
15: 405.60001 MxB	16: 0.88000 MxB	17: 193.28000 MxB
18: 81.15000 MxB	19: 15.49000 MxB	20: 2.44000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 10:30:19

Inst. Number = 1

0: 96.94000 MxB	1: 23.00000 xC	2: 119.20000 xC
3: 227.80000 xC	4: 134.30000 xC	5: 95.50000 xC
6: 155.10001 xC	7: 49.90000 xC	8: 161.89999 xC
9: 208.56000 MxB	10: -0.28000 MxB	11: 2.35000 MxB
12: 12.46000 MxB	13: 14.76000 MxB	14: 1.38000 MxB
15: 481.32001 MxB	16: 0.87000 MxB	17: 193.32001 MxB
18: 81.44000 MxB	19: 15.99000 MxB	20: 2.44000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 10:33:19

Inst. Number = 1

0: 86.71000 MxB	1: 23.10000 xC	2: 122.90000 xC
3: 200.60001 xC	4: 130.70000 xC	5: 97.20000 xC
6: 157.00000 xC	7: 51.00000 xC	8: 165.20000 xC
9: 215.42000 MxB	10: -0.39000 MxB	11: 2.27000 MxB
12: 12.21000 MxB	13: 14.82000 MxB	14: 1.30000 MxB
15: 444.45001 MxB	16: 0.79000 MxB	17: 170.25999 MxB
18: 79.89000 MxB	19: 13.97000 MxB	20: 2.67000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 10:36:19

Inst. Number = 1

0: 94.59000 MxB	1: 23.60000 xC	2: 124.60000 xC
3: 205.80000 xC	4: 132.00000 xC	5: 98.60000 xC
6: 158.10001 xC	7: 52.20000 xC	8: 168.80000 xC
9: 138.47000 MxB	10: -0.39000 MxB	11: 2.44000 MxB
12: 12.21000 MxB	13: 14.63000 MxB	14: 1.38000 MxB
15: 426.54999 MxB	16: 0.86000 MxB	17: 170.25999 MxB
18: 72.14000 MxB	19: 12.46000 MxB	20: 2.67000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 10:39:19

Inst. Number = 1

0: 92.73000 MxB	1: 23.50000 xC	2: 125.20000 xC
3: 200.70000 xC	4: 132.00000 xC	5: 98.60000 xC

9: 144.25999 MxB	10: -0.32000 MxB	11: 2.24000 MxB
12: 12.35000 MxB	13: 14.69000 MxB	14: 1.36000 MxB
15: 453.57999 MxB	16: 0.87000 MxB	17: 167.72000 MxB
18: 74.43000 MxB	19: 12.45000 MxB	20: 2.67000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

3/93 10:42:19

Inst. Number = 1		
0: 47.98000 MxB	1: 23.20000 xC	2: 128.89999 xC
3: 222.00000 xC	4: 135.20000 xC	5: 101.10000 xC
6: 160.60001 xC	7: 54.70000 xC	8: 176.00000 xC
9: 160.89000 MxB	10: -0.18000 MxB	11: 2.39000 MxB
12: 12.87000 MxB	13: 15.36000 MxB	14: 1.38000 MxB
15: 456.13000 MxB	16: 0.91000 MxB	17: 165.17999 MxB
18: 90.00000 MxB	19: 14.98000 MxB	20: 2.67000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 10:45:19

Inst. Number = 1		
0: 90.11000 MxB	1: 23.30000 xC	2: 130.50000 xC
3: 220.00000 xC	4: 137.10001 xC	5: 102.40000 xC
6: 161.89999 xC	7: 56.10000 xC	8: 178.70000 xC
9: 153.06000 MxB	10: -0.33000 MxB	11: 2.30000 MxB
12: 12.85000 MxB	13: 15.33000 MxB	14: 1.39000 MxB
15: 471.06000 MxB	16: 0.86000 MxB	17: 167.72000 MxB
18: 90.75000 MxB	19: 15.48000 MxB	20: 2.90000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 10:48:19

Inst. Number = 1		
0: 84.13000 MxB	1: 22.50000 xC	2: 133.30000 xC
3: 228.50000 xC	4: 140.20000 xC	5: 103.50000 xC
6: 163.89999 xC	7: 57.70000 xC	8: 167.70000 xC
9: 158.74001 MxB	10: -0.34000 MxB	11: 2.32000 MxB
12: 13.16000 MxB	13: 15.78000 MxB	14: 1.43000 MxB
15: 460.23001 MxB	16: 0.89000 MxB	17: 167.67999 MxB
18: 92.32000 MxB	19: 15.49000 MxB	20: 2.90000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 10:51:19

Inst. Number = 1		
0: 91.57000 MxB	1: 22.40000 xC	2: 133.30000 xC
3: 222.70000 xC	4: 139.60001 xC	5: 104.90000 xC
6: 165.50000 xC	7: 59.40000 xC	8: 164.10001 xC
9: 152.30000 MxB	10: -0.29000 MxB	11: 2.43000 MxB
12: 13.05000 MxB	13: 15.70000 MxB	14: 1.42000 MxB
15: 434.54001 MxB	16: 0.89000 MxB	17: 165.17999 MxB
18: 92.31000 MxB	19: 15.48000 MxB	20: 2.90000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 10:54:19

Inst. Number = 1		
0: 85.56000 MxB	1: 22.50000 xC	2: 135.39999 xC
3: 225.10001 xC	4: 141.80000 xC	5: 106.30000 xC
6: 167.30000 xC	7: 61.10000 xC	8: 162.50000 xC
9: 176.14000 MxB	10: -0.22000 MxB	11: 2.54000 MxB
12: 13.54000 MxB	13: 16.25000 MxB	14: 1.44000 MxB
15: 458.39001 MxB	16: 0.93000 MxB	17: 172.81000 MxB
18: 96.20000 MxB	19: 17.00000 MxB	20: 3.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 10:57:19

Inst. Number = 1

0: -2.79000 MxB	1: 22.10000 xC	2: 136.00000 xC
3: 245.10001 xC	4: 137.20000 xC	5: 105.00000 xC
6: 168.89999 xC	7: 62.90000 xC	8: 161.89999 xC
122.69000 MxB	10: -0.99000 MxB	11: 2.75000 MxB
13.58000 MxB	13: 15.99000 MxB	14: 1.48000 MxB
15: 465.89001 MxB	16: 0.94000 MxB	17: -1.14000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: 3.14000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 11:00:19

Inst. Number = 1

0: 85.76000 MxB	1: 22.80000 xC	2: 132.30000 xC
3: 178.89999 xC	4: 132.89999 xC	5: 107.70000 xC
6: 170.00000 xC	7: 64.20000 xC	8: 161.60001 xC
9: 154.60001 MxB	10: -0.37000 MxB	11: 2.33000 MxB
12: 12.88000 MxB	13: 15.26000 MxB	14: 1.47000 MxB
15: 437.87000 MxB	16: 0.93000 MxB	17: -1.14000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: 3.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 11:03:19

Inst. Number = 1

0: 85.18000 MxB	1: 22.80000 xC	2: 149.10001 xC
3: 186.10001 xC	4: 133.10001 xC	5: 108.00000 xC
6: 171.30000 xC	7: 65.70000 xC	8: 161.60001 xC
9: 174.42000 MxB	10: -0.49000 MxB	11: 2.18000 MxB
12: 12.44000 MxB	13: 14.92000 MxB	14: 1.50000 MxB
15: 468.23001 MxB	16: 0.96000 MxB	17: 180.42999 MxB
18: 33.27000 MxB	19: 5.91000 MxB	20: 3.13000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 11:06:19

Inst. Number = 1

0: 91.60000 MxB	1: 22.50000 xC	2: 148.00000 xC
3: 189.39999 xC	4: 132.50000 xC	5: 108.20000 xC
6: 172.20000 xC	7: 67.20000 xC	8: 161.89999 xC
9: 250.50999 MxB	10: -0.35000 MxB	11: 2.41000 MxB
12: 12.60000 MxB	13: 15.05000 MxB	14: 1.47000 MxB
15: 455.48999 MxB	16: 0.92000 MxB	17: 170.25999 MxB
18: 91.54000 MxB	19: 15.49000 MxB	20: 3.36000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 11:09:19

Inst. Number = 1

0: 96.22000 MxB	1: 22.60000 xC	2: 146.39999 xC
3: 189.70000 xC	4: 132.50000 xC	5: 108.60000 xC
6: 173.80000 xC	7: 68.80000 xC	8: 162.30000 xC
9: 152.56000 MxB	10: -0.32000 MxB	11: 2.29000 MxB
12: 12.64000 MxB	13: 15.11000 MxB	14: 1.47000 MxB
15: 445.79001 MxB	16: 0.93000 MxB	17: 172.81000 MxB
18: 91.54000 MxB	19: 15.99000 MxB	20: 3.37000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 11:12:19

Inst. Number = 1

0: 94.80000 MxB	1: 22.60000 xC	2: 143.00000 xC
3: 185.70000 xC	4: 132.50000 xC	5: 108.70000 xC

9: 143.42999 MxB
12: 11.52000 MxB
15: 432.28000 MxB
18: 91.54000 MxB
ALMs: 0{HHHH}3

10: -0.26000 MxB
13: 14.64000 MxB
16: 0.96000 MxB
19: 15.98000 MxB
DI/O: 0{HHHHHHHH}7

11: 2.18000 MxB
14: 1.51000 MxB
17: 172.85001 MxB
20: 3.36000 MxB
Total: 0

3/93 11:15:19

Inst. Number = 1

0: 83.35000 MxB
3: 217.80000 xC
6: 178.30000 xC
9: 158.17000 MxB
12: 12.68000 MxB
15: 433.76001 MxB
18: 91.54000 MxB
ALMs: 0{HHHH}3

1: 22.90000 xC
4: 137.70000 xC
7: 72.50000 xC
10: -0.21000 MxB
13: 15.17000 MxB
16: 0.92000 MxB
19: 15.49000 MxB
DI/O: 0{HHHHHHHH}7

2: 138.20000 xC
5: 109.90000 xC
8: 163.80000 xC
11: 2.29000 MxB
14: 1.46000 MxB
17: 170.22000 MxB
20: 3.60000 MxB
Total: 0

07/23/93 11:18:19

Inst. Number = 1

0: 93.47000 MxB
3: 216.80000 xC
6: 180.50000 xC
9: 153.71001 MxB
12: 13.00000 MxB
15: 442.04001 MxB
18: 87.65000 MxB
ALMs: 0{HHHH}3

1: 22.90000 xC
4: 139.60001 xC
7: 75.70000 xC
10: -0.14000 MxB
13: 15.42000 MxB
16: 0.91000 MxB
19: 14.98000 MxB
DI/O: 0{HHHHHHHH}7

2: 134.80000 xC
5: 110.60000 xC
8: 165.00000 xC
11: 2.30000 MxB
14: 1.43000 MxB
17: 172.81000 MxB
20: 3.60000 MxB
Total: 0

07/23/93 11:21:19

Inst. Number = 1

0: 109.82000 MxB
3: 222.39999 xC
6: 183.10001 xC
9: 189.57001 MxB
12: 12.90000 MxB
15: 454.64001 MxB
18: 92.31000 MxB
ALMs: 0{HHHH}3

1: 23.00000 xC
4: 141.60001 xC
7: 79.20000 xC
10: -0.16000 MxB
13: 15.36000 MxB
16: 1.03000 MxB
19: 15.99000 MxB
DI/O: 0{HHHHHHHH}7

2: 135.20000 xC
5: 111.20000 xC
8: 166.00000 xC
11: 2.26000 MxB
14: 1.43000 MxB
17: 170.22000 MxB
20: 3.60000 MxB
Total: 0

07/23/93 11:24:19

Inst. Number = 1

0: 104.92000 MxB
3: 227.30000 xC
6: 185.80000 xC
9: 203.96001 MxB
12: 12.72000 MxB
15: 469.85001 MxB
18: 91.54000 MxB
ALMs: 0{HHHH}3

1: 23.50000 xC
4: 143.30000 xC
7: 82.50000 xC
10: -0.06000 MxB
13: 15.21000 MxB
16: 0.89000 MxB
19: 16.49000 MxB
DI/O: 0{HHHHHHHH}7

2: 134.89999 xC
5: 112.10000 xC
8: 167.39999 xC
11: 2.15000 MxB
14: 1.41000 MxB
17: 175.35001 MxB
20: 3.83000 MxB
Total: 0

FD
FRN
Power
off

07/23/93 11:27:19

Inst. Number = 1

0: 0.20000 MxB
3: 163.39999 xC
6: 187.39999 xC
9: 57.87000 MxB
12: 1.13000 MxB
15: 81.49000 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

1: 22.90000 xC
4: 130.50000 xC
7: 84.60000 xC
10: -0.50000 MxB
13: 1.20000 MxB
16: 0.02000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 131.00000 xC
5: 111.60000 xC
8: 168.89999 xC
11: 0.38000 MxB
14: 0.19000 MxB
17: -1.09000 MxB
20: 3.83000 MxB
Total: 0

```

9: 143.42999 MxB
12: 11.52000 MxB
15: 432.28000 MxB
18: 91.54000 MxB
ALMs: 0{HHHH}3

```

```

10: -0.26000 MxB
13: 14.64000 MxB
16: 0.96000 MxB
19: 15.98000 MxB
DI/O: 0{HHHHHHHH}7

```

```

11: 2.18000 MxB
14: 1.51000 MxB
17: 172.85001 MxB
20: 3.36000 MxB
Total: 0

```

3/93 11:15:19

Inst. Number = 1

```

0: 83.35000 MxB
3: 217.80000 xC
6: 178.30000 xC
9: 158.17000 MxB
12: 12.68000 MxB
15: 433.76001 MxB
18: 91.54000 MxB
ALMs: 0{HHHH}3

```

```

1: 22.90000 xC
4: 137.70000 xC
7: 72.50000 xC
10: -0.21000 MxB
13: 15.17000 MxB
16: 0.92000 MxB
19: 15.49000 MxB
DI/O: 0{HHHHHHHH}7

```

```

2: 138.20000 xC
5: 109.90000 xC
8: 163.80000 xC
11: 2.29000 MxB
14: 1.46000 MxB
17: 170.22000 MxB
20: 3.60000 MxB
Total: 0

```

0//23/93 11:18:19

Inst. Number = 1

```

0: 93.47000 MxB
3: 216.80000 xC
6: 180.50000 xC
9: 153.71001 MxB
12: 13.00000 MxB
15: 442.04001 MxB
18: 87.65000 MxB
ALMs: 0{HHHH}3

```

```

1: 22.90000 xC
4: 139.60001 xC
7: 75.70000 xC
10: -0.14000 MxB
13: 15.42000 MxB
16: 0.91000 MxB
19: 14.98000 MxB
DI/O: 0{HHHHHHHH}7

```

```

2: 134.80000 xC
5: 110.60000 xC
8: 165.00000 xC
11: 2.30000 MxB
14: 1.43000 MxB
17: 172.81000 MxB
20: 3.60000 MxB
Total: 0

```

0//23/93 11:21:19

Inst. Number = 1

```

0: 109.82000 MxB
3: 222.39999 xC
6: 183.10001 xC
9: 189.57001 MxB
12: 12.90000 MxB
15: 454.64001 MxB
18: 92.31000 MxB
ALMs: 0{HHHH}3

```

```

1: 23.00000 xC
4: 141.60001 xC
7: 79.20000 xC
10: -0.16000 MxB
13: 15.36000 MxB
16: 1.03000 MxB
19: 15.99000 MxB
DI/O: 0{HHHHHHHH}7

```

```

2: 135.20000 xC
5: 111.20000 xC
8: 166.00000 xC
11: 2.26000 MxB
14: 1.43000 MxB
17: 170.22000 MxB
20: 3.60000 MxB
Total: 0

```

0//23/93 11:24:19

Inst. Number = 1

```

0: 104.92000 MxB
3: 227.30000 xC
6: 185.80000 xC
9: 203.96001 MxB
12: 12.72000 MxB
15: 469.85001 MxB
18: 91.54000 MxB
ALMs: 0{HHHH}3

```

```

1: 23.50000 xC
4: 143.30000 xC
7: 82.50000 xC
10: -0.06000 MxB
13: 15.21000 MxB
16: 0.89000 MxB
19: 16.49000 MxB
DI/O: 0{HHHHHHHH}7

```

```

2: 134.89999 xC
5: 112.10000 xC
8: 167.39999 xC
11: 2.15000 MxB
14: 1.41000 MxB
17: 175.35001 MxB
20: 3.83000 MxB
Total: 0

```

0//23/93 11:27:19

Inst. Number = 1

```

0: 0.20000 MxB
3: 163.39999 xC
6: 187.39999 xC
9: 57.87000 MxB
12: 1.13000 MxB
15: 81.49000 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

```

```

1: 22.90000 xC
4: 130.50000 xC
7: 84.60000 xC
10: -0.50000 MxB
13: 1.20000 MxB
16: 0.02000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

```

```

2: 131.00000 xC
5: 111.60000 xC
8: 168.89999 xC
11: 0.38000 MxB
14: 0.19000 MxB
17: -1.09000 MxB
20: 3.83000 MxB
Total: 0

```

1 x
F
P
2/11

07/23/93 11:30:19

Inst. Number = 1

0: -2.89000 MxB
3: 137.80000 xC
6: 189.00000 xC
37.26000 MxB
-0.10000 MxB
15: 4.21000 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

1: 46.90000 xC
4: 106.50000 xC
7: 86.20000 xC
10: -0.14000 MxB
13: -0.39000 MxB
16: -0.02000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 114.60000 xC
5: 86.60000 xC
8: 170.60001 xC
11: -0.10000 MxB
14: 0.00000 MxB
17: -1.14000 MxB
20: 3.83000 MxB
Total: 0

07/23/93 11:33:19

Inst. Number = 1

0: 2.92000 MxB
3: 123.40000 xC
6: 191.00000 xC
9: 32.61000 MxB
12: -0.09000 MxB
15: 9.16000 MxB
18: -0.93000 MxB
ALMs: 0{HHHH}3

1: 34.40000 xC
4: 97.60000 xC
7: 87.20000 xC
10: -0.14000 MxB
13: -0.39000 MxB
16: -0.02000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 93.10000 xC
5: 78.70000 xC
8: 172.20000 xC
11: -0.08000 MxB
14: 0.00000 MxB
17: -1.14000 MxB
20: 3.83000 MxB
Total: 0

07/23/93 11:36:19

Inst. Number = 1

0: 2.82000 MxB
3: 109.50000 xC
6: 192.60001 xC
9: 24.88000 MxB
12: -0.08000 MxB
15: 1.31000 MxB
18: -0.93000 MxB
ALMs: 0{HHHH}3

1: 32.50000 xC
4: 102.10000 xC
7: 88.00000 xC
10: -0.14000 MxB
13: -0.39000 MxB
16: -0.02000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 78.40000 xC
5: 65.50000 xC
8: 173.89999 xC
11: -0.08000 MxB
14: -0.01000 MxB
17: -1.14000 MxB
20: 3.83000 MxB
Total: 0

07/23/93 11:39:19

Inst. Number = 1

0: 2.41000 MxB
3: 101.00000 xC
6: 193.60001 xC
9: 39.30000 MxB
12: -0.11000 MxB
15: -2.23000 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

1: 47.50000 xC
4: 95.70000 xC
7: 88.70000 xC
10: -0.13000 MxB
13: -0.39000 MxB
16: -0.02000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 69.60000 xC
5: 68.30000 xC
8: 175.70000 xC
11: -0.10000 MxB
14: 0.00000 MxB
17: -1.14000 MxB
20: 3.83000 MxB
Total: 0

07/23/93 11:42:19

Inst. Number = 1

0: -0.44000 MxB
3: 91.80000 xC
6: 194.00000 xC
9: 55.95000 MxB
12: -0.12000 MxB
15: -2.30000 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

1: 51.80000 xC
4: 93.40000 xC
7: 89.50000 xC
10: -0.12000 MxB
13: -0.39000 MxB
16: -0.02000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 63.40000 xC
5: 76.20000 xC
8: 177.60001 xC
11: -0.11000 MxB
14: 0.00000 MxB
17: -1.14000 MxB
20: 3.83000 MxB
Total: 0

07/23/93 11:45:19

Inst. Number = 1

0: -2.24000 MxB
3: 83.40000 xC

1: 69.60000 xC
4: 85.50000 xC

2: 59.60000 xC
5: 78.20000 xC

9: 56.99000 MxB
12: -0.12000 MxB
15: -2.30000 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

10: -0.12000 MxB
13: -0.39000 MxB
16: -0.02000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

11: -0.12000 MxB
14: 0.01000 MxB
17: -1.14000 MxB
20: 3.83000 MxB
Total: 0

3/93 11:48:19

Inst. Number = 1

0: -1.26000 MxB
3: 78.10000 xC
6: 192.60001 xC
9: 53.33000 MxB
12: -0.10000 MxB
15: -2.30000 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

1: 76.30000 xC
4: 94.10000 xC
7: 91.10000 xC
10: -0.13000 MxB
13: -0.38000 MxB
16: -0.02000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 56.50000 xC
5: 76.60000 xC
8: 181.20000 xC
11: -0.11000 MxB
14: 0.00000 MxB
17: -1.09000 MxB
20: 3.83000 MxB
Total: 0

0//23/93 11:51:19

Inst. Number = 1

0: 1.29000 MxB
3: 76.00000 xC
6: 191.60001 xC
9: 31.75000 MxB
12: -0.10000 MxB
15: -2.23000 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

1: 45.30000 xC
4: 88.40000 xC
7: 91.90000 xC
10: -0.14000 MxB
13: -0.38000 MxB
16: -0.02000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 54.50000 xC
5: 66.90000 xC
8: 182.89999 xC
11: -0.10000 MxB
14: 0.00000 MxB
17: -1.18000 MxB
20: 3.83000 MxB
Total: 0

0//23/93 11:54:19

Inst. Number = 1

0: -1.63000 MxB
3: 72.80000 xC
6: 190.50000 xC
9: -16.26000 MxB
12: -0.10000 MxB
15: -2.23000 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

1: 36.80000 xC
4: 84.90000 xC
7: 92.80000 xC
10: -0.14000 MxB
13: -0.38000 MxB
16: -0.02000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 52.70000 xC
5: 59.40000 xC
8: 184.89999 xC
11: -0.09000 MxB
14: 0.00000 MxB
17: -1.14000 MxB
20: 3.83000 MxB
Total: 0

0//23/93 11:57:19

Inst. Number = 1

0: -0.82000 MxB
3: 67.80000 xC
6: 189.50000 xC
9: 18.12000 MxB
12: -0.09000 MxB
15: -2.23000 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

1: 32.90000 xC
4: 84.30000 xC
7: 93.40000 xC
10: -0.14000 MxB
13: -0.37000 MxB
16: -0.02000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 50.70000 xC
5: 57.60000 xC
8: 186.80000 xC
11: -0.08000 MxB
14: 0.00000 MxB
17: -1.09000 MxB
20: 3.83000 MxB
Total: 0

0//23/93 12:00:19

Inst. Number = 1

0: 1.97000 MxB
3: 54.80000 xC
6: 188.80000 xC
9: 44.65000 MxB
12: 9.50000 MxB
15: 412.25000 MxB
18: -0.94000 MxB
ALMs: 0{HHHH}3

1: 22.80000 xC
4: 88.60000 xC
7: 93.50000 xC
10: -0.39000 MxB
13: 11.41000 MxB
16: 0.75000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

2: 48.90000 xC
5: 92.60000 xC
8: 188.60001 xC
11: 1.47000 MxB
14: 1.30000 MxB
17: -1.14000 MxB
20: 3.83000 MxB
Total: 0

07/23/93 12:03:19

Inst. Number = 1

0: -2.85000 MxB	1: 22.10000 xC	2: 47.30000 xC
3: 49.50000 xC	4: 84.20000 xC	5: 91.40000 xC
6: 188.10001 xC	7: 93.20000 xC	8: 190.50000 xC
9: 188.41000 MxB	10: -0.38000 MxB	11: 1.56000 MxB
12: 9.55000 MxB	13: 11.53000 MxB	14: 1.32000 MxB
15: 407.01001 MxB	16: 0.76000 MxB	17: 160.05000 MxB
18: 101.67000 MxB	19: 16.49000 MxB	20: 3.83000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 12:06:19

Inst. Number = 1

0: -1.90000 MxB	1: 22.20000 xC	2: 45.80000 xC
3: 46.80000 xC	4: 80.90000 xC	5: 89.80000 xC
6: 187.80000 xC	7: 93.10000 xC	8: 192.50000 xC
9: 179.85001 MxB	10: -0.42000 MxB	11: 1.53000 MxB
12: 9.43000 MxB	13: 11.43000 MxB	14: 1.33000 MxB
15: 413.51999 MxB	16: 0.77000 MxB	17: 162.59000 MxB
18: 124.97000 MxB	19: 20.53000 MxB	20: 3.83000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 12:09:19

Inst. Number = 1

0: 2.31000 MxB	1: 22.30000 xC	2: 45.60000 xC
3: 45.30000 xC	4: 78.70000 xC	5: 88.20000 xC
6: 187.89999 xC	7: 93.20000 xC	8: 194.39999 xC
9: 248.73000 MxB	10: -0.38000 MxB	11: 1.51000 MxB
12: 9.36000 MxB	13: 11.39000 MxB	14: 1.32000 MxB
15: 383.94000 MxB	16: 0.74000 MxB	17: 142.17000 MxB
18: 105.97000 MxB	19: 15.49000 MxB	20: 3.83000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 12:12:19

Inst. Number = 1

0: 49.34000 MxB	1: 22.90000 xC	2: 45.30000 xC
3: 56.80000 xC	4: 79.20000 xC	5: 86.50000 xC
6: 188.50000 xC	7: 93.80000 xC	8: 196.39999 xC
9: 217.39999 MxB	10: -0.42000 MxB	11: 1.60000 MxB
12: 9.51000 MxB	13: 11.53000 MxB	14: 1.31000 MxB
15: 421.31000 MxB	16: 0.73000 MxB	17: 162.55000 MxB
18: 3.74000 MxB	19: 0.36000 MxB	20: 4.06000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 12:15:19

Inst. Number = 1

0: 0.95000 MxB	1: 23.10000 xC	2: 51.60000 xC
3: 103.40000 xC	4: 88.00000 xC	5: 85.70000 xC
6: 191.10001 xC	7: 94.60000 xC	8: 198.30000 xC
9: 250.87000 MxB	10: -0.42000 MxB	11: 1.88000 MxB
12: 10.50000 MxB	13: 12.70000 MxB	14: 1.35000 MxB
15: 401.98999 MxB	16: 0.78000 MxB	17: 144.66000 MxB
18: 91.54000 MxB	19: 13.47000 MxB	20: 4.06000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 12:18:19

Inst. Number = 1

0: 2.55000 MxB	1: 23.10000 xC	2: 65.40000 xC
3: 124.40000 xC	4: 85.10000 xC	5: 84.00000 xC

9: 232.41000 MxB
 12: 10.60000 MxB
 15: 396.82001 MxB
 18: 95.41000 MxB
 ALMs: 0{HHHH}3

10: -0.27000 MxB
 13: 12.89000 MxB
 16: 0.78000 MxB
 19: 13.98000 MxB
 DI/O: 0{HHHHHHHH}7

11: 1.89000 MxB
 14: 1.33000 MxB
 17: 147.25000 MxB
 20: 4.06000 MxB
 Total: 0

3/93 12:21:19

Inst. Number = 1

0: -1.66000 MxB
 3: 124.40000 xC
 6: 199.70000 xC
 9: 200.61000 MxB
 12: 10.57000 MxB
 15: 457.39999 MxB
 18: 93.09000 MxB
 ALMs: 0{HHHH}3

1: 23.80000 xC
 4: 97.00000 xC
 7: 96.20000 xC
 10: -0.31000 MxB
 13: 12.95000 MxB
 16: 0.77000 MxB
 19: 13.46000 MxB
 DI/O: 0{HHHHHHHH}7

2: 76.70000 xC
 5: 86.30000 xC
 8: 202.30000 xC
 11: 1.79000 MxB
 14: 1.32000 MxB
 17: 144.71001 MxB
 20: 4.30000 MxB
 Total: 0

0//23/93 12:24:19

Inst. Number = 1

0: -2.85000 MxB
 3: 111.60000 xC
 6: 203.30000 xC
 9: 219.31000 MxB
 12: 10.47000 MxB
 15: 411.60999 MxB
 18: 90.75000 MxB
 ALMs: 0{HHHH}3

1: 23.80000 xC
 4: 95.70000 xC
 7: 96.70000 xC
 10: -0.34000 MxB
 13: 12.90000 MxB
 16: 0.76000 MxB
 19: 12.96000 MxB
 DI/O: 0{HHHHHHHH}7

2: 80.80000 xC
 5: 86.50000 xC
 8: 204.20000 xC
 11: 1.75000 MxB
 14: 1.33000 MxB
 17: 144.71001 MxB
 20: 4.30000 MxB
 Total: 0

0//23/93 12:27:19

Inst. Number = 1

0: 2.72000 MxB
 3: 70.50000 xC
 6: 204.30000 xC
 9: 28.85000 MxB
 12: 10.03000 MxB
 15: 447.35001 MxB
 18: -0.94000 MxB
 ALMs: 0{HHHH}3

1: 24.00000 xC
 4: 86.80000 xC
 7: 97.20000 xC
 10: -0.42000 MxB
 13: 12.64000 MxB
 16: 0.78000 MxB
 19: -0.14000 MxB
 DI/O: 0{HHHHHHHH}7

2: 77.30000 xC
 5: 86.10000 xC
 8: 206.00000 xC
 11: 1.64000 MxB
 14: 1.36000 MxB
 17: -1.14000 MxB
 20: 4.30000 MxB
 Total: 0

0//23/93 12:30:19

Inst. Number = 1

0: 2.75000 MxB
 3: 59.40000 xC
 6: 204.39999 xC
 9: 25.47000 MxB
 12: 9.99000 MxB
 15: 491.57999 MxB
 18: -0.94000 MxB
 ALMs: 0{HHHH}3

1: 24.30000 xC
 4: 82.50000 xC
 7: 97.70000 xC
 10: -0.54000 MxB
 13: 12.59000 MxB
 16: 0.77000 MxB
 19: -0.14000 MxB
 DI/O: 0{HHHHHHHH}7

2: 65.60000 xC
 5: 84.90000 xC
 8: 207.80000 xC
 11: 1.76000 MxB
 14: 1.36000 MxB
 17: -1.14000 MxB
 20: 4.30000 MxB
 Total: 0

0//23/93 12:33:19

Inst. Number = 1

0: -2.89000 MxB
 3: 70.50000 xC
 6: 205.20000 xC
 9: 251.31000 MxB
 12: 10.16000 MxB
 15: 388.97000 MxB
 18: 79.86000 MxB
 ALMs: 0{HHHH}3

1: 24.40000 xC
 4: 82.90000 xC
 7: 98.40000 xC
 10: -0.45000 MxB
 13: 12.71000 MxB
 16: 0.77000 MxB
 19: 11.95000 MxB
 DI/O: 0{HHHHHHHH}7

2: 57.00000 xC
 5: 83.60000 xC
 8: 209.89999 xC
 11: 1.73000 MxB
 14: 1.35000 MxB
 17: 149.84000 MxB
 20: 4.30000 MxB
 Total: 0

07/23/93 12:36:19

Inst. Number = 1

0: 2.65000 MxB	1: 24.20000 xC	2: 56.60000 xC
3: 85.60000 xC	4: 85.80000 xC	5: 83.00000 xC
6: 206.70000 xC	7: 99.10000 xC	8: 211.70000 xC
9: 211.03000 MxB	10: -0.46000 MxB	11: 1.76000 MxB
12: 10.26000 MxB	13: 12.85000 MxB	14: 1.34000 MxB
15: 403.41000 MxB	16: 0.78000 MxB	17: 145.91000 MxB
18: 86.88000 MxB	19: 12.97000 MxB	20: 4.30000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 12:39:19

Inst. Number = 1

0: 0.65000 MxB	1: 23.40000 xC	2: 59.80000 xC
3: 84.20000 xC	4: 85.70000 xC	5: 82.50000 xC
6: 209.00000 xC	7: 100.00000 xC	8: 213.50000 xC
9: 214.30000 MxB	10: -0.47000 MxB	11: 1.77000 MxB
12: 10.24000 MxB	13: 12.86000 MxB	14: 1.34000 MxB
15: 430.72000 MxB	16: 0.76000 MxB	17: 180.42999 MxB
18: 74.42000 MxB	19: 13.47000 MxB	20: 4.53000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 12:42:19

Inst. Number = 1

0: -1.70000 MxB	1: 23.20000 xC	2: 62.00000 xC
3: 84.70000 xC	4: 85.90000 xC	5: 82.10000 xC
6: 211.70000 xC	7: 101.10000 xC	8: 215.30000 xC
9: 252.69000 MxB	10: -0.48000 MxB	11: 1.79000 MxB
12: 10.13000 MxB	13: 12.82000 MxB	14: 1.34000 MxB
15: 431.07001 MxB	16: 0.78000 MxB	17: 170.22000 MxB
18: 92.29000 MxB	19: 15.80000 MxB	20: 4.53000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 12:45:19

Inst. Number = 1

0: 82.80000 MxB	1: 23.90000 xC	2: 63.30000 xC
3: 95.30000 xC	4: 87.70000 xC	5: 81.70000 xC
6: 215.60001 xC	7: 102.10000 xC	8: 217.00000 xC
9: 283.79001 MxB	10: -0.26000 MxB	11: 1.58000 MxB
12: 10.13000 MxB	13: 12.81000 MxB	14: 1.33000 MxB
15: 433.54999 MxB	16: 0.76000 MxB	17: 142.17000 MxB
18: 94.64000 MxB	19: 13.46000 MxB	20: 4.52000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 12:48:19

Inst. Number = 1

0: 88.85000 MxB	1: 24.20000 xC	2: 70.90000 xC
3: 154.20000 xC	4: 101.40000 xC	5: 82.70000 xC
6: 221.60001 xC	7: 103.50000 xC	8: 218.80000 xC
9: 249.25000 MxB	10: -0.48000 MxB	11: 2.22000 MxB
12: 11.62000 MxB	13: 14.58000 MxB	14: 1.41000 MxB
15: 415.01001 MxB	16: 0.85000 MxB	17: 147.25000 MxB
18: 86.09000 MxB	19: 12.89000 MxB	20: 4.76000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 12:51:19

Inst. Number = 1

0: 130.92000 MxB	1: 31.20000 xC	2: 78.70000 xC
3: 170.00000 xC	4: 110.00000 xC	5: 84.50000 xC

7: 158.24001 MxB
 12: 11.81000 MxB
 15: 452.38000 MxB
 18: 90.75000 MxB
 ALMs: 0{HHHH}3

10: -0.51000 MxB
 13: 14.78000 MxB
 16: 0.81000 MxB
 19: 15.47000 MxB
 DI/O: 0{HHHHHHHH}7

11: 2.19000 MxB
 14: 1.38000 MxB
 17: 167.67999 MxB
 20: 4.76000 MxB
 Total: 0

3/93 12:54:19

Inst. Number = 1

0: 111.14000 MxB
 3: 185.60001 xC
 6: 232.89999 xC
 9: 142.07001 MxB
 12: 11.57000 MxB
 15: 407.07999 MxB
 18: 93.08000 MxB
 ALMs: 0{HHHH}3

1: 31.00000 xC
 4: 114.40000 xC
 7: 106.20000 xC
 10: -0.41000 MxB
 13: 14.69000 MxB
 16: 0.81000 MxB
 19: 15.48000 MxB
 DI/O: 0{HHHHHHHH}7

2: 84.30000 xC
 5: 86.40000 xC
 8: 222.20000 xC
 11: 2.16000 MxB
 14: 1.39000 MxB
 17: 167.63000 MxB
 20: 4.76000 MxB
 Total: 0

07/23/93 12:57:19

Inst. Number = 1

0: 187.83000 MxB
 3: 208.89999 xC
 6: 237.20000 xC
 9: 122.68000 MxB
 12: 11.60000 MxB
 15: 443.25000 MxB
 18: 94.64000 MxB
 ALMs: 0{HHHH}3

1: 30.40000 xC
 4: 121.40000 xC
 7: 107.50000 xC
 10: -0.23000 MxB
 13: 14.81000 MxB
 16: 0.80000 MxB
 19: 16.49000 MxB
 DI/O: 0{HHHHHHHH}7

2: 89.90000 xC
 5: 88.70000 xC
 8: 224.00000 xC
 11: 1.99000 MxB
 14: 1.37000 MxB
 17: 170.22000 MxB
 20: 4.76000 MxB
 Total: 0

07/23/93 13:00:19

Inst. Number = 1

0: 196.28999 MxB
 3: 236.00000 xC
 6: 241.10001 xC
 9: 117.10000 MxB
 12: 11.68000 MxB
 15: 424.92001 MxB
 18: 89.19000 MxB
 ALMs: 0{HHHH}3

1: 30.50000 xC
 4: 129.89999 xC
 7: 109.10000 xC
 10: -0.06000 MxB
 13: 14.96000 MxB
 16: 0.79000 MxB
 19: 15.48000 MxB
 DI/O: 0{HHHHHHHH}7

2: 98.70000 xC
 5: 91.10000 xC
 8: 225.70000 xC
 11: 1.99000 MxB
 14: 1.35000 MxB
 17: 170.22000 MxB
 20: 4.99000 MxB
 Total: 0

07/23/93 13:03:19

Inst. Number = 1

0: 190.24001 MxB
 3: 245.30000 xC
 6: 243.39999 xC
 9: 126.08000 MxB
 12: 12.82000 MxB
 15: 474.38000 MxB
 18: 87.08000 MxB
 ALMs: 0{HHHH}3

1: 30.70000 xC
 4: 136.80000 xC
 7: 110.50000 xC
 10: -0.32000 MxB
 13: 16.51000 MxB
 16: 0.87000 MxB
 19: 14.98000 MxB
 DI/O: 0{HHHHHHHH}7

2: 103.00000 xC
 5: 94.30000 xC
 8: 227.20000 xC
 11: 2.33000 MxB
 14: 1.45000 MxB
 17: 167.67999 MxB
 20: 4.99000 MxB
 Total: 0

07/23/93 13:06:19

Inst. Number = 1

0: 193.88000 MxB
 3: 224.89999 xC
 6: 244.30000 xC
 9: 115.02000 MxB
 12: 12.70000 MxB
 15: 461.92999 MxB
 18: 88.43000 MxB
 ALMs: 0{HHHH}3

1: 31.60000 xC
 4: 134.89999 xC
 7: 112.10000 xC
 10: -0.22000 MxB
 13: 16.50000 MxB
 16: 0.89000 MxB
 19: 15.48000 MxB
 DI/O: 0{HHHHHHHH}7

2: 103.30000 xC
 5: 96.60000 xC
 8: 228.70000 xC
 11: 2.18000 MxB
 14: 1.43000 MxB
 17: 172.75999 MxB
 20: 4.99000 MxB
 Total: 0

07/23/93 13:09:19

Inst. Number = 1

0: 125.96000 MxB	1: 28.90000 xC	2: 105.60000 xC
3: 234.70000 xC	4: 138.89999 xC	5: 98.70000 xC
4: 245.80000 xC	7: 113.80000 xC	8: 230.10001 xC
67.70000 MxB	10: -0.14000 MxB	11: 2.06000 MxB
12.36000 MxB	13: 16.35000 MxB	14: 1.44000 MxB
15: 462.98999 MxB	16: 0.88000 MxB	17: 167.67999 MxB
18: 102.44000 MxB	19: 17.49000 MxB	20: 5.22000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 13:12:19

Inst. Number = 1

0: 164.38000 MxB	1: 25.70000 xC	2: 111.60000 xC
3: 225.10001 xC	4: 139.10001 xC	5: 100.60000 xC
6: 247.70000 xC	7: 115.40000 xC	8: 231.39999 xC
9: 57.15000 MxB	10: -0.13000 MxB	11: 1.85000 MxB
12: 12.33000 MxB	13: 16.43000 MxB	14: 1.43000 MxB
15: 414.29999 MxB	16: 0.87000 MxB	17: 144.71001 MxB
18: 96.20000 MxB	19: 14.25000 MxB	20: 5.22000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 13:15:19

Inst. Number = 1

0: 157.35001 MxB	1: 26.00000 xC	2: 120.00000 xC
3: 232.50000 xC	4: 141.60001 xC	5: 102.60000 xC
6: 249.60001 xC	7: 117.00000 xC	8: 232.70000 xC
9: 57.15000 MxB	10: -0.21000 MxB	11: 2.15000 MxB
12: 12.73000 MxB	13: 17.09000 MxB	14: 1.46000 MxB
421.03000 MxB	16: 0.89000 MxB	17: 142.12000 MxB
102.45000 MxB	19: 14.93000 MxB	20: 5.22000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 13:18:19

Inst. Number = 1

0: 155.75000 MxB	1: 25.60000 xC	2: 122.00000 xC
3: 246.50000 xC	4: 146.60001 xC	5: 104.50000 xC
6: 251.89999 xC	7: 118.80000 xC	8: 234.00000 xC
9: 57.15000 MxB	10: -0.46000 MxB	11: 2.42000 MxB
12: 13.80000 MxB	13: 16.11000 MxB	14: 1.54000 MxB
15: 422.51001 MxB	16: 0.94000 MxB	17: 144.66000 MxB
18: 98.52000 MxB	19: 14.47000 MxB	20: 5.46000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 13:21:19

Inst. Number = 1

0: 138.53000 MxB	1: 25.10000 xC	2: 122.10000 xC
3: 233.60001 xC	4: 145.70000 xC	5: 106.90000 xC
6: 254.60001 xC	7: 120.40000 xC	8: 235.10001 xC
9: 57.15000 MxB	10: -0.47000 MxB	11: 2.39000 MxB
12: 12.99000 MxB	13: 15.63000 MxB	14: 1.58000 MxB
450.32001 MxB	16: 0.95000 MxB	17: 149.78999 MxB
98.14000 MxB	19: 14.48000 MxB	20: 5.46000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 13:24:19

Inst. Number = 1

0: 114.23000 MxB	1: 27.30000 xC	2: 122.10000 xC
3: 231.00000 xC	4: 145.00000 xC	5: 102.00000 xC

9: 122.78000 MxB
 12: 13.35000 MxB
 15: 392.44000 MxB
 18: 103.99000 MxB
 ALMs: 0{HHHH}3

10: -0.46000 MxB
 13: 15.81000 MxB
 16: 0.89000 MxB
 19: 15.48000 MxB
 DI/O: 0{HHHHHHHH}7

11: 2.12000 MxB
 14: 1.55000 MxB
 17: 147.28999 MxB
 20: 5.46000 MxB
 Total: 0

3/93 13:27:19

Inst. Number = 1

0: 100.17000 MxB
 3: 218.70000 xC
 6: 260.79999 xC
 9: 64.67000 MxB
 12: 13.41000 MxB
 15: 519.32001 MxB
 18: 96.97000 MxB
 ALMs: 0{HHHH}3

1: 28.60000 xC
 4: 144.50000 xC
 7: 123.50000 xC
 10: -0.50000 MxB
 13: 15.93000 MxB
 16: 0.91000 MxB
 19: 14.48000 MxB
 DI/O: 0{HHHHHHHH}7

2: 122.70000 xC
 5: 110.10000 xC
 8: 237.70000 xC
 11: 2.39000 MxB
 14: 1.54000 MxB
 17: 147.25000 MxB
 20: 5.69000 MxB
 Total: 0

07/23/93 13:30:19

Inst. Number = 1

0: -2.79000 MxB
 3: 201.10001 xC
 6: 264.39999 xC
 9: 57.15000 MxB
 12: 12.37000 MxB
 15: 446.85999 MxB
 18: 86.85000 MxB
 ALMs: 0{HHHH}3

1: 26.90000 xC
 4: 141.20000 xC
 7: 125.10000 xC
 10: -0.55000 MxB
 13: 15.10000 MxB
 16: 1.00000 MxB
 19: 14.47000 MxB
 DI/O: 0{HHHHHHHH}7

2: 123.60000 xC
 5: 111.00000 xC
 8: 239.00000 xC
 11: 2.08000 MxB
 14: 1.63000 MxB
 17: 170.22000 MxB
 20: 5.69000 MxB
 Total: 0

07/23/93 13:33:19

Inst. Number = 1

0: 1.87000 MxB
 3: 133.80000 xC
 6: 267.39999 xC
 9: 57.15000 MxB
 12: 12.63000 MxB
 15: 425.13000 MxB
 18: 92.31000 MxB
 ALMs: 0{HHHH}3

1: 25.70000 xC
 4: 126.00000 xC
 7: 126.50000 xC
 10: -0.60000 MxB
 13: 15.17000 MxB
 16: 0.95000 MxB
 19: 15.99000 MxB
 DI/O: 0{HHHHHHHH}7

2: 119.50000 xC
 5: 110.50000 xC
 8: 240.00000 xC
 11: 2.27000 MxB
 14: 1.62000 MxB
 17: 172.75999 MxB
 20: 5.69000 MxB
 Total: 0

07/23/93 13:36:19

Inst. Number = 1

0: 1.12000 MxB
 3: 104.20000 xC
 6: 268.70001 xC
 9: 57.15000 MxB
 12: 12.57000 MxB
 15: 510.32999 MxB
 18: 96.18000 MxB
 ALMs: 0{HHHH}3

1: 25.80000 xC
 4: 115.80000 xC
 7: 127.90000 xC
 10: -0.96000 MxB
 13: 15.04000 MxB
 16: 0.96000 MxB
 19: 15.99000 MxB
 DI/O: 0{HHHHHHHH}7

2: 110.20000 xC
 5: 109.30000 xC
 8: 241.20000 xC
 11: 2.40000 MxB
 14: 1.63000 MxB
 17: 167.63000 MxB
 20: 5.92000 MxB
 Total: 0

07/23/93 13:39:19

Inst. Number = 1

0: 1.19000 MxB
 3: 94.80000 xC
 6: 269.10001 xC
 9: 57.15000 MxB
 12: 12.49000 MxB
 15: 464.48001 MxB
 18: 130.42000 MxB
 ALMs: 0{HHHH}3

1: 26.70000 xC
 4: 108.90000 xC
 7: 129.30000 xC
 10: -0.91000 MxB
 13: 15.06000 MxB
 16: 0.94000 MxB
 19: 22.05000 MxB
 DI/O: 0{HHHHHHHH}7

2: 99.30000 xC
 5: 107.30000 xC
 8: 242.30000 xC
 11: 2.43000 MxB
 14: 1.62000 MxB
 17: 176.69000 MxB
 20: 5.92000 MxB
 Total: 0

07/23/93 13:42:19

Inst. Number = 1

0: -1.97000 MxB	1: 25.90000 xC	2: 90.30000 xC
3: 90.10000 xC	4: 103.70000 xC	5: 104.90000 xC
6: 270.00000 xC	7: 130.80000 xC	8: 243.50000 xC
9: 57.15000 MxB	10: -1.00000 MxB	11: 2.66000 MxB
12: 12.71000 MxB	13: 15.04000 MxB	14: 1.64000 MxB
15: 472.89999 MxB	16: 1.00000 MxB	17: 172.85001 MxB
18: 89.19000 MxB	19: 14.98000 MxB	20: 5.92000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 13:45:19

Inst. Number = 1

0: 0.78000 MxB	1: 25.80000 xC	2: 85.40000 xC
3: 87.30000 xC	4: 99.80000 xC	5: 102.60000 xC
6: 272.50000 xC	7: 132.30000 xC	8: 244.39999 xC
9: 57.15000 MxB	10: -0.95000 MxB	11: 2.62000 MxB
12: 12.63000 MxB	13: 15.03000 MxB	14: 1.65000 MxB
15: 488.32001 MxB	16: 0.98000 MxB	17: 169.64000 MxB
18: 96.97000 MxB	19: 16.49000 MxB	20: 6.15000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 13:48:19

Inst. Number = 1

0: -2.92000 MxB	1: 25.60000 xC	2: 83.40000 xC
3: 84.90000 xC	4: 96.50000 xC	5: 100.60000 xC
6: 276.70001 xC	7: 133.80000 xC	8: 245.50000 xC
9: 57.15000 MxB	10: -1.00000 MxB	11: 2.64000 MxB
12: 12.64000 MxB	13: 15.01000 MxB	14: 1.65000 MxB
15: 479.69000 MxB	16: 0.97000 MxB	17: 175.35001 MxB
18: 97.72000 MxB	19: 16.99000 MxB	20: 6.15000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 13:51:19

Inst. Number = 1

0: -2.96000 MxB	1: 28.30000 xC	2: 83.10000 xC
3: 85.10000 xC	4: 94.20000 xC	5: 98.80000 xC
6: 282.50000 xC	7: 135.20000 xC	8: 246.20000 xC
9: 153.86000 MxB	10: -0.95000 MxB	11: 2.41000 MxB
12: 12.55000 MxB	13: 14.94000 MxB	14: 1.65000 MxB
15: 479.97000 MxB	16: 0.98000 MxB	17: 175.35001 MxB
18: 69.79000 MxB	19: 11.95000 MxB	20: 6.15000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 13:54:19

Inst. Number = 1

0: 125.48000 MxB	1: 35.90000 xC	2: 87.40000 xC
3: 114.70000 xC	4: 99.40000 xC	5: 97.80000 xC
6: 290.10001 xC	7: 136.50000 xC	8: 247.10001 xC
9: 149.50999 MxB	10: -0.96000 MxB	11: 2.64000 MxB
12: 12.60000 MxB	13: 14.93000 MxB	14: 1.59000 MxB
15: 519.39001 MxB	16: 0.93000 MxB	17: 165.13000 MxB
18: 97.72000 MxB	19: 15.98000 MxB	20: 6.38000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 13:57:19

Inst. Number = 1

0: 160.31000 MxB	1: 36.30000 xC	2: 91.30000 xC
3: 120.70000 xC	4: 101.00000 xC	5: 97.00000 xC

9: 149.39999 MxB
 12: 12.54000 MxB
 15: 558.03003 MxB
 18: 92.31000 MxB
 ALMs: 0{HHHH}3

10: -0.91000 MxB
 13: 14.93000 MxB
 16: 0.94000 MxB
 19: 15.98000 MxB
 DI/O: 0{HHHHHHHH}7

11: 2.64000 MxB
 14: 1.59000 MxB
 17: 172.81000 MxB
 20: 6.38000 MxB
 Total: 0

3/93 14:00:19

Inst. Number = 1

0: 170.13000 MxB
 3: 118.20000 xC
 6: 301.70001 xC
 9: 149.38000 MxB
 12: 12.43000 MxB
 15: 522.28998 MxB
 18: 92.29000 MxB
 ALMs: 0{HHHH}3

1: 38.40000 xC
 4: 100.90000 xC
 7: 139.10001 xC
 10: -0.91000 MxB
 13: 14.78000 MxB
 16: 0.98000 MxB
 19: 15.48000 MxB
 DI/O: 0{HHHHHHHH}7

2: 91.90000 xC
 5: 96.40000 xC
 8: 249.20000 xC
 11: 2.59000 MxB
 14: 1.62000 MxB
 17: 170.25999 MxB
 20: 6.38000 MxB
 Total: 0

07/23/93 14:03:19

Inst. Number = 1

0: 177.23000 MxB
 3: 109.90000 xC
 6: 305.60001 xC
 9: 145.69000 MxB
 12: 12.58000 MxB
 15: 538.78003 MxB
 18: 96.97000 MxB
 ALMs: 0{HHHH}3

1: 38.00000 xC
 4: 99.20000 xC
 7: 140.30000 xC
 10: -0.94000 MxB
 13: 14.89000 MxB
 16: 0.93000 MxB
 19: 16.49000 MxB
 DI/O: 0{HHHHHHHH}7

2: 89.70000 xC
 5: 95.60000 xC
 8: 250.20000 xC
 11: 2.69000 MxB
 14: 1.61000 MxB
 17: 170.25999 MxB
 20: 6.62000 MxB
 Total: 0

07/23/93 14:06:19

Inst. Number = 1

0: 179.71001 MxB
 3: 102.30000 xC
 6: 308.00000 xC
 9: 140.98000 MxB
 12: 11.39000 MxB
 15: 479.82999 MxB
 18: 102.43000 MxB
 ALMs: 0{HHHH}3

1: 37.00000 xC
 4: 97.10000 xC
 7: 141.60001 xC
 10: -0.59000 MxB
 13: 13.54000 MxB
 16: 0.86000 MxB
 19: 16.99000 MxB
 DI/O: 0{HHHHHHHH}7

2: 86.10000 xC
 5: 94.80000 xC
 8: 251.30000 xC
 11: 2.23000 MxB
 14: 1.48000 MxB
 17: 170.25999 MxB
 20: 6.62000 MxB
 Total: 0

07/23/93 14:09:19

Inst. Number = 1

0: 167.14000 MxB
 3: 96.70000 xC
 6: 309.00000 xC
 9: 135.48000 MxB
 12: 12.41000 MxB
 15: 466.95001 MxB
 18: 104.76000 MxB
 ALMs: 0{HHHH}3

1: 36.90000 xC
 4: 94.00000 xC
 7: 142.89999 xC
 10: -0.76000 MxB
 13: 14.88000 MxB
 16: 0.98000 MxB
 19: 17.50000 MxB
 DI/O: 0{HHHHHHHH}7

2: 80.70000 xC
 5: 93.80000 xC
 8: 252.30000 xC
 11: 2.26000 MxB
 14: 1.69000 MxB
 17: 167.63000 MxB
 20: 6.62000 MxB
 Total: 0

07/23/93 14:12:19

Inst. Number = 1

0: 176.85001 MxB
 3: 100.90000 xC
 6: 308.89999 xC
 9: 142.75999 MxB
 12: 13.09000 MxB
 15: 513.31000 MxB
 18: 102.44000 MxB
 ALMs: 0{HHHH}3

1: 35.70000 xC
 4: 94.80000 xC
 7: 144.10001 xC
 10: -0.96000 MxB
 13: 15.45000 MxB
 16: 0.98000 MxB
 19: 16.99000 MxB
 DI/O: 0{HHHHHHHH}7

2: 75.70000 xC
 5: 93.10000 xC
 8: 253.60001 xC
 11: 3.02000 MxB
 14: 1.64000 MxB
 17: 170.25999 MxB
 20: 6.85000 MxB
 Total: 0

07/23/93 14:15:19

Inst. Number = 1

0: 178.42000 MxB	1: 37.20000 xC	2: 73.50000 xC
3: 97.20000 xC	4: 94.30000 xC	5: 92.40000 xC
6: 308.70001 xC	7: 145.50000 xC	8: 254.70000 xC
139.62000 MxB	10: -1.10000 MxB	11: 3.04000 MxB
13.08000 MxB	13: 15.43000 MxB	14: 1.62000 MxB
15: 608.20001 MxB	16: 0.98000 MxB	17: 188.14999 MxB
18: 79.08000 MxB	19: 14.47000 MxB	20: 6.85000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 14:18:19

Inst. Number = 1

0: 174.53999 MxB	1: 36.30000 xC	2: 71.30000 xC
3: 100.60000 xC	4: 94.10000 xC	5: 91.60000 xC
6: 308.89999 xC	7: 146.60001 xC	8: 255.80000 xC
9: 141.53999 MxB	10: -0.89000 MxB	11: 2.98000 MxB
12: 13.00000 MxB	13: 15.37000 MxB	14: 1.64000 MxB
15: 538.21997 MxB	16: 0.98000 MxB	17: 170.22000 MxB
18: 102.93000 MxB	19: 17.50000 MxB	20: 6.85000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 14:21:19

Inst. Number = 1

0: 172.44000 MxB	1: 36.00000 xC	2: 69.60000 xC
3: 108.00000 xC	4: 95.30000 xC	5: 91.10000 xC
6: 309.00000 xC	7: 147.89999 xC	8: 256.79999 xC
9: 135.71001 MxB	10: -0.83000 MxB	11: 2.84000 MxB
13.07000 MxB	13: 15.41000 MxB	14: 1.64000 MxB
496.60001 MxB	16: 0.98000 MxB	17: 165.13000 MxB
103.22000 MxB	19: 17.00000 MxB	20: 7.08000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 14:24:19

Inst. Number = 1

0: 168.19000 MxB	1: 35.70000 xC	2: 68.50000 xC
3: 111.10000 xC	4: 96.20000 xC	5: 90.60000 xC
6: 309.00000 xC	7: 149.10001 xC	8: 257.70001 xC
9: 134.24001 MxB	10: -0.84000 MxB	11: 2.89000 MxB
12: 13.23000 MxB	13: 15.54000 MxB	14: 1.64000 MxB
15: 496.89001 MxB	16: 0.96000 MxB	17: 180.42999 MxB
18: 89.97000 MxB	19: 15.99000 MxB	20: 7.08000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 14:27:19

Inst. Number = 1

0: 174.64999 MxB	1: 35.80000 xC	2: 67.70000 xC
3: 105.50000 xC	4: 96.60000 xC	5: 90.50000 xC
6: 308.79999 xC	7: 150.30000 xC	8: 258.29999 xC
9: 131.03999 MxB	10: -0.98000 MxB	11: 3.10000 MxB
12: 13.07000 MxB	13: 15.42000 MxB	14: 1.65000 MxB
536.79999 MxB	16: 0.98000 MxB	17: 167.67999 MxB
116.45000 MxB	19: 19.52000 MxB	20: 7.08000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 14:30:19

Inst. Number = 1

0: 170.84000 MxB	1: 37.60000 xC	2: 65.90000 xC
3: 110.10000 xC	4: 96.10000 xC	5: 90.00000 xC

9: 132.67999 MxB
12: 12.99000 MxB
15: 543.65997 MxB
18: 111.76000 MxB
ALMs: 0{HHHH}3

10: -0.84000 MxB
13: 15.35000 MxB
16: 1.01000 MxB
19: 18.00000 MxB
DI/O: 0{HHHHHHHH}7

11: 2.74000 MxB
14: 1.66000 MxB
17: 163.84000 MxB
20: 7.34000 MxB
Total: 0

3/93 14:33:19

Inst. Number = 1

0: 189.94000 MxB
3: 116.00000 xC
6: 308.20001 xC
9: 134.78999 MxB
12: 13.20000 MxB
15: 503.89001 MxB
18: 104.78000 MxB
ALMs: 0{HHHH}3

1: 38.70000 xC
4: 97.20000 xC
7: 152.70000 xC
10: -0.90000 MxB
13: 15.56000 MxB
16: 0.97000 MxB
19: 17.50000 MxB
DI/O: 0{HHHHHHHH}7

2: 64.80000 xC
5: 89.70000 xC
8: 259.89999 xC
11: 2.92000 MxB
14: 1.64000 MxB
17: 167.72000 MxB
20: 7.33000 MxB
Total: 0

07/23/93 14:36:19

Inst. Number = 1

0: 166.28999 MxB
3: 115.40000 xC
6: 308.00000 xC
9: 134.06000 MxB
12: 13.15000 MxB
15: 498.87000 MxB
18: 107.11000 MxB
ALMs: 0{HHHH}3

1: 38.00000 xC
4: 97.30000 xC
7: 153.80000 xC
10: -0.91000 MxB
13: 15.56000 MxB
16: 0.95000 MxB
19: 18.01000 MxB
DI/O: 0{HHHHHHHH}7

2: 64.70000 xC
5: 89.60000 xC
8: 260.70001 xC
11: 3.05000 MxB
14: 1.64000 MxB
17: 170.22000 MxB
20: 7.33000 MxB
Total: 0

07/23/93 14:39:19

Inst. Number = 1

0: 178.99001 MxB
3: 117.20000 xC
6: 307.70001 xC
9: 136.59000 MxB
12: 13.14000 MxB
15: 500.85001 MxB
18: 100.09000 MxB
ALMs: 0{HHHH}3

1: 39.70000 xC
4: 97.80000 xC
7: 155.00000 xC
10: -0.95000 MxB
13: 15.57000 MxB
16: 0.96000 MxB
19: 18.00000 MxB
DI/O: 0{HHHHHHHH}7

2: 64.20000 xC
5: 89.50000 xC
8: 261.50000 xC
11: 3.07000 MxB
14: 1.63000 MxB
17: 175.35001 MxB
20: 7.57000 MxB
Total: 0

07/23/93 14:42:19

Inst. Number = 1

0: 184.57001 MxB
3: 118.20000 xC
6: 307.50000 xC
9: 133.05000 MxB
12: 13.16000 MxB
15: 581.23999 MxB
18: 96.18000 MxB
ALMs: 0{HHHH}3

1: 39.40000 xC
4: 97.90000 xC
7: 156.10001 xC
10: -1.05000 MxB
13: 15.53000 MxB
16: 0.98000 MxB
19: 15.98000 MxB
DI/O: 0{HHHHHHHH}7

2: 64.10000 xC
5: 89.40000 xC
8: 262.29999 xC
11: 2.92000 MxB
14: 1.65000 MxB
17: 167.72000 MxB
20: 7.56000 MxB
Total: 0

07/23/93 14:45:19

Inst. Number = 1

0: 187.08000 MxB
3: 118.30000 xC
6: 307.39999 xC
9: 133.25000 MxB
12: 13.19000 MxB
15: 506.09000 MxB
18: 98.54000 MxB
ALMs: 0{HHHH}3

1: 39.30000 xC
4: 98.70000 xC
7: 157.30000 xC
10: -1.03000 MxB
13: 15.51000 MxB
16: 0.98000 MxB
19: 16.49000 MxB
DI/O: 0{HHHHHHHH}7

2: 64.20000 xC
5: 89.60000 xC
8: 263.29999 xC
11: 2.94000 MxB
14: 1.64000 MxB
17: 170.25999 MxB
20: 7.80000 MxB
Total: 0

07/23/93 14:48:19

Inst. Number = 1

0: 169.64999 MxB	1: 37.30000 xC	2: 63.90000 xC
3: 98.20000 xC	4: 95.70000 xC	5: 89.40000 xC
6: 307.89999 xC	7: 158.50000 xC	8: 263.20001 xC
143.23000 MxB	10: 0.10000 MxB	11: 1.61000 MxB
12.20000 MxB	13: 14.74000 MxB	14: 1.73000 MxB
15: 444.31000 MxB	16: 1.00000 MxB	17: 170.22000 MxB
18: 98.52000 MxB	19: 17.00000 MxB	20: 7.80000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 14:51:19

Inst. Number = 1

0: 192.64999 MxB	1: 34.80000 xC	2: 63.00000 xC
3: 105.30000 xC	4: 94.70000 xC	5: 88.80000 xC
6: 308.10001 xC	7: 159.80000 xC	8: 263.79999 xC
9: 135.11000 MxB	10: -0.96000 MxB	11: 2.90000 MxB
12: 12.91000 MxB	13: 15.36000 MxB	14: 1.66000 MxB
15: 565.46002 MxB	16: 0.98000 MxB	17: 162.59000 MxB
18: 116.44000 MxB	19: 19.02000 MxB	20: 7.80000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 14:54:19

Inst. Number = 1

0: 168.53000 MxB	1: 34.50000 xC	2: 63.20000 xC
3: 105.20000 xC	4: 94.80000 xC	5: 88.30000 xC
6: 308.20001 xC	7: 161.10001 xC	8: 264.00000 xC
9: 133.70000 MxB	10: -1.02000 MxB	11: 2.94000 MxB
12: 12.95000 MxB	13: 15.39000 MxB	14: 1.66000 MxB
527.95001 MxB	16: 1.00000 MxB	17: 172.75999 MxB
101.66000 MxB	19: 15.62000 MxB	20: 8.03000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 14:57:19

Inst. Number = 1

0: 193.42999 MxB	1: 34.40000 xC	2: 69.10000 xC
3: 109.50000 xC	4: 95.40000 xC	5: 88.10000 xC
6: 308.29999 xC	7: 162.30000 xC	8: 264.60001 xC
9: 132.50999 MxB	10: -0.96000 MxB	11: 2.91000 MxB
12: 13.07000 MxB	13: 15.45000 MxB	14: 1.64000 MxB
15: 546.64001 MxB	16: 0.99000 MxB	17: 169.28000 MxB
18: 103.21000 MxB	19: 17.50000 MxB	20: 8.03000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 15:00:19

Inst. Number = 1

0: 181.17000 MxB	1: 35.90000 xC	2: 71.90000 xC
3: 112.30000 xC	4: 95.70000 xC	5: 87.90000 xC
6: 308.70001 xC	7: 163.70000 xC	8: 264.89999 xC
9: 130.61000 MxB	10: -1.05000 MxB	11: 3.00000 MxB
12: 12.49000 MxB	13: 15.21000 MxB	14: 1.67000 MxB
15: 521.94000 MxB	16: 1.00000 MxB	17: 167.67999 MxB
102.43000 MxB	19: 18.51000 MxB	20: 8.03000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 15:03:19

Inst. Number = 1

0: 184.06000 MxB	1: 36.80000 xC	2: 72.90000 xC
3: 108.40000 xC	4: 95.30000 xC	5: 87.70000 xC

9: 133.69000 MxB
12: 11.46000 MxB
15: 501.70001 MxB
18: 105.10000 MxB
ALMs: 0{HHHH}3

10: -0.58000 MxB
13: 13.59000 MxB
16: 0.89000 MxB
19: 17.50000 MxB
DI/O: 0{HHHHHHHH}7

11: 2.24000 MxB
14: 1.48000 MxB
17: 167.67999 MxB
20: 8.27000 MxB
Total: 0

3/93 15:06:19

Inst. Number = 1

0: 188.61000 MxB
3: 105.70000 xC
6: 310.20001 xC
9: 137.63000 MxB
12: 11.39000 MxB
15: 514.65002 MxB
18: 111.77000 MxB
ALMs: 0{HHHH}3

1: 35.10000 xC
4: 94.90000 xC
7: 166.20000 xC
10: -0.59000 MxB
13: 13.55000 MxB
16: 0.87000 MxB
19: 19.02000 MxB
DI/O: 0{HHHHHHHH}7

2: 73.70000 xC
5: 87.40000 xC
8: 266.00000 xC
11: 2.26000 MxB
14: 1.49000 MxB
17: 170.25999 MxB
20: 8.27000 MxB
Total: 0

07/23/93 15:09:19

Inst. Number = 1

0: 180.25000 MxB
3: 107.80000 xC
6: 311.20001 xC
9: 133.78999 MxB
12: 11.49000 MxB
15: 520.73999 MxB
18: 113.34000 MxB
ALMs: 0{HHHH}3

1: 37.00000 xC
4: 94.90000 xC
7: 167.50000 xC
10: -0.61000 MxB
13: 13.63000 MxB
16: 0.88000 MxB
19: 19.02000 MxB
DI/O: 0{HHHHHHHH}7

2: 74.20000 xC
5: 87.20000 xC
8: 266.39999 xC
11: 2.35000 MxB
14: 1.49000 MxB
17: 167.67999 MxB
20: 8.50000 MxB
Total: 0

07/23/93 15:12:19

Inst. Number = 1

0: 175.14999 MxB
3: 112.50000 xC
6: 312.00000 xC
9: 130.14999 MxB
12: 11.28000 MxB
15: 513.87000 MxB
18: 103.99000 MxB
ALMs: 0{HHHH}3

1: 37.20000 xC
4: 95.90000 xC
7: 168.89999 xC
10: -0.50000 MxB
13: 13.50000 MxB
16: 0.87000 MxB
19: 17.50000 MxB
DI/O: 0{HHHHHHHH}7

2: 74.90000 xC
5: 87.20000 xC
8: 267.50000 xC
11: 2.22000 MxB
14: 1.51000 MxB
17: 175.35001 MxB
20: 8.50000 MxB
Total: 0

07/23/93 15:15:19

Inst. Number = 1

0: 197.10001 MxB
3: 113.80000 xC
6: 312.70001 xC
9: 131.97000 MxB
12: 11.40000 MxB
15: 505.73001 MxB
18: 100.10000 MxB
ALMs: 0{HHHH}3

1: 36.70000 xC
4: 96.10000 xC
7: 170.20000 xC
10: -0.52000 MxB
13: 13.57000 MxB
16: 0.86000 MxB
19: 17.50000 MxB
DI/O: 0{HHHHHHHH}7

2: 75.10000 xC
5: 87.10000 xC
8: 268.29999 xC
11: 2.33000 MxB
14: 1.50000 MxB
17: 172.85001 MxB
20: 8.50000 MxB
Total: 0

07/23/93 15:18:19

Inst. Number = 1

0: 189.12000 MxB
3: 111.10000 xC
6: 313.39999 xC
9: 132.11000 MxB
12: 11.48000 MxB
15: 566.95001 MxB
18: 110.22000 MxB
ALMs: 0{HHHH}3

1: 41.40000 xC
4: 96.00000 xC
7: 171.50000 xC
10: -0.79000 MxB
13: 13.66000 MxB
16: 0.85000 MxB
19: 18.51000 MxB
DI/O: 0{HHHHHHHH}7

2: 74.70000 xC
5: 87.00000 xC
8: 268.89999 xC
11: 2.54000 MxB
14: 1.50000 MxB
17: 167.72000 MxB
20: 8.73000 MxB
Total: 0

07/23/93 15:21:19

Inst. Number = 1

0: 189.22000 MxB	1: 38.10000 xC	2: 74.20000 xC
3: 109.50000 xC	4: 95.70000 xC	5: 87.00000 xC
6: 314.10001 xC	7: 173.00000 xC	8: 269.50000 xC
129.22000 MxB	10: -0.81000 MxB	11: 2.55000 MxB
10.74000 MxB	13: 13.22000 MxB	14: 1.53000 MxB
15: 505.45001 MxB	16: 0.88000 MxB	17: 170.25999 MxB
18: 107.88000 MxB	19: 18.51000 MxB	20: 8.73000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 15:24:19

Inst. Number = 1

0: 182.39000 MxB	1: 36.30000 xC	2: 74.10000 xC
3: 107.50000 xC	4: 95.50000 xC	5: 86.80000 xC
6: 314.70001 xC	7: 174.39999 xC	8: 270.00000 xC
9: 133.50000 MxB	10: -0.69000 MxB	11: 2.30000 MxB
12: 11.36000 MxB	13: 13.57000 MxB	14: 1.50000 MxB
15: 520.88000 MxB	16: 0.89000 MxB	17: 167.05000 MxB
18: 118.00000 MxB	19: 20.03000 MxB	20: 8.73000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 15:27:19

Inst. Number = 1

0: 185.25000 MxB	1: 40.70000 xC	2: 73.10000 xC
3: 113.20000 xC	4: 95.90000 xC	5: 86.60000 xC
6: 315.29999 xC	7: 175.89999 xC	8: 270.39999 xC
9: 128.66000 MxB	10: -0.79000 MxB	11: 2.44000 MxB
12: 11.16000 MxB	13: 13.26000 MxB	14: 1.45000 MxB
15: 559.65997 MxB	16: 0.85000 MxB	17: 170.25999 MxB
18: 114.10000 MxB	19: 19.52000 MxB	20: 8.96000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 15:30:19

Inst. Number = 1

0: 1.02000 MxB	1: 37.30000 xC	2: 72.10000 xC
3: 99.80000 xC	4: 93.80000 xC	5: 86.10000 xC
6: 316.60001 xC	7: 177.20000 xC	8: 271.00000 xC
9: 126.10000 MxB	10: -0.69000 MxB	11: 2.12000 MxB
12: 10.58000 MxB	13: 12.63000 MxB	14: 1.43000 MxB
15: 536.45001 MxB	16: 0.81000 MxB	17: 175.35001 MxB
18: 85.34000 MxB	19: 15.49000 MxB	20: 8.96000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 15:33:19

Inst. Number = 1

0: 177.30000 MxB	1: 34.70000 xC	2: 70.50000 xC
3: 100.60000 xC	4: 93.10000 xC	5: 85.90000 xC
6: 318.00000 xC	7: 178.70000 xC	8: 271.79999 xC
9: 131.80000 MxB	10: -0.31000 MxB	11: 1.75000 MxB
12: 10.38000 MxB	13: 12.45000 MxB	14: 1.45000 MxB
15: 533.26001 MxB	16: 0.85000 MxB	17: 172.81000 MxB
18: 102.44000 MxB	19: 17.00000 MxB	20: 9.19000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 15:36:19

Inst. Number = 1

0: 186.53999 MxB	1: 36.10000 xC	2: 70.70000 xC
3: 105.40000 xC	4: 93.70000 xC	5: 85.80000 xC

9: 129.70000 MxB
12: 10.44000 MxB
15: 499.64999 MxB
18: 97.72000 MxB
ALMs: 0{HHHH}3

10: -0.45000 MxB
13: 12.50000 MxB
16: 0.86000 MxB
19: 15.99000 MxB
DI/O: 0{HHHHHHHH}7

11: 1.95000 MxB
14: 1.44000 MxB
17: 170.25999 MxB
20: 9.20000 MxB
Total: 0

3/93 15:39:19

Inst. Number = 1

0: 185.72000 MxB
3: 102.70000 xC
6: 321.50000 xC
9: 130.10001 MxB
12: 10.54000 MxB
15: 526.89001 MxB
18: 97.72000 MxB
ALMs: 0{HHHH}3

1: 34.90000 xC
4: 93.60000 xC
7: 181.50000 xC
10: -0.51000 MxB
13: 12.62000 MxB
16: 0.83000 MxB
19: 16.99000 MxB
DI/O: 0{HHHHHHHH}7

2: 70.90000 xC
5: 85.60000 xC
8: 272.79999 xC
11: 1.97000 MxB
14: 1.43000 MxB
17: 180.48000 MxB
20: 9.20000 MxB
Total: 0

07/23/93 15:42:19

Inst. Number = 1

0: 192.72000 MxB
3: 93.00000 xC
6: 323.20001 xC
9: 128.32001 MxB
12: 10.45000 MxB
15: 523.78003 MxB
18: 124.19000 MxB
ALMs: 0{HHHH}3

1: 36.20000 xC
4: 92.40000 xC
7: 182.80000 xC
10: -0.51000 MxB
13: 12.58000 MxB
16: 0.85000 MxB
19: 22.55000 MxB
DI/O: 0{HHHHHHHH}7

2: 69.20000 xC
5: 85.40000 xC
8: 273.10001 xC
11: 1.88000 MxB
14: 1.41000 MxB
17: 185.64999 MxB
20: 9.43000 MxB
Total: 0

07/23/93 15:45:19

Inst. Number = 1

0: 183.34000 MxB
3: 92.10000 xC
6: 325.00000 xC
9: 125.66000 MxB
12: 10.48000 MxB
15: 544.15997 MxB
18: 104.78000 MxB
ALMs: 0{HHHH}3

1: 35.70000 xC
4: 91.10000 xC
7: 184.30000 xC
10: -0.65000 MxB
13: 12.57000 MxB
16: 0.84000 MxB
19: 19.02000 MxB
DI/O: 0{HHHHHHHH}7

2: 68.60000 xC
5: 85.00000 xC
8: 273.70001 xC
11: 2.06000 MxB
14: 1.44000 MxB
17: 195.82001 MxB
20: 9.43000 MxB
Total: 0

07/23/93 15:48:19

Inst. Number = 1

0: 317.45001 MxB
3: 94.30000 xC
6: 327.60001 xC
9: 127.89000 MxB
12: 10.61000 MxB
15: 561.07001 MxB
18: 107.11000 MxB
ALMs: 0{HHHH}3

1: 37.30000 xC
4: 90.80000 xC
7: 185.50000 xC
10: -0.70000 MxB
13: 12.67000 MxB
16: 0.80000 MxB
19: 18.06000 MxB
DI/O: 0{HHHHHHHH}7

2: 68.50000 xC
5: 84.70000 xC
8: 273.79999 xC
11: 2.23000 MxB
14: 1.43000 MxB
17: 193.32001 MxB
20: 9.43000 MxB
Total: 0

07/23/93 15:51:19

Inst. Number = 1

0: 317.22000 MxB
3: 99.90000 xC
6: 331.79999 xC
9: 131.34000 MxB
12: 3.54000 MxB
15: 296.89999 MxB
18: 111.76000 MxB
ALMs: 0{HHHH}3

1: 36.20000 xC
4: 92.10000 xC
7: 186.89999 xC
10: 0.41000 MxB
13: 4.23000 MxB
16: 0.11000 MxB
19: 21.04000 MxB
DI/O: 0{HHHHHHHH}7

2: 70.40000 xC
5: 84.80000 xC
8: 274.50000 xC
11: 0.02000 MxB
14: 0.53000 MxB
17: 197.42999 MxB
20: 9.66000 MxB
Total: 0

07/23/93 15:54:19

Inst. Number = 1

0: 321.50000 MxB	1: 35.90000 xC	2: 72.70000 xC
3: 88.70000 xC	4: 90.10000 xC	5: 84.20000 xC
6: 338.29999 xC	7: 188.10001 xC	8: 274.79999 xC
9: 121.81000 MxB	10: -0.36000 MxB	11: 1.40000 MxB
12: 8.71000 MxB	13: 10.62000 MxB	14: 1.30000 MxB
15: 531.48999 MxB	16: 0.75000 MxB	17: 167.72000 MxB
18: 109.44000 MxB	19: 17.50000 MxB	20: 9.66000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 15:57:19

Inst. Number = 1

0: 2.92000 MxB	1: 39.60000 xC	2: 72.40000 xC
3: 88.80000 xC	4: 89.70000 xC	5: 83.90000 xC
6: 346.50000 xC	7: 189.50000 xC	8: 275.39999 xC
9: 119.22000 MxB	10: -0.44000 MxB	11: 1.67000 MxB
12: 8.96000 MxB	13: 10.87000 MxB	14: 1.27000 MxB
15: 545.50000 MxB	16: 0.71000 MxB	17: 165.09000 MxB
18: 130.39000 MxB	19: 21.04000 MxB	20: 9.66000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 16:00:19

Inst. Number = 1

0: -2.55000 MxB	1: 36.90000 xC	2: 70.90000 xC
3: 86.60000 xC	4: 88.80000 xC	5: 83.30000 xC
6: 355.60001 xC	7: 190.89999 xC	8: 275.89999 xC
9: 121.89000 MxB	10: -0.38000 MxB	11: 1.60000 MxB
12: 8.64000 MxB	13: 10.47000 MxB	14: 1.24000 MxB
15: 542.25000 MxB	16: 0.70000 MxB	17: 147.25000 MxB
18: 130.39000 MxB	19: 19.02000 MxB	20: 9.90000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 16:03:19

Inst. Number = 1

0: 3.09000 MxB	1: 37.50000 xC	2: 70.20000 xC
3: 86.00000 xC	4: 88.10000 xC	5: 82.90000 xC
6: 365.10001 xC	7: 192.10001 xC	8: 276.60001 xC
9: 116.56000 MxB	10: -0.37000 MxB	11: 1.59000 MxB
12: 8.55000 MxB	13: 10.42000 MxB	14: 1.26000 MxB
15: 538.64001 MxB	16: 0.59000 MxB	17: 144.71001 MxB
18: 135.84000 MxB	19: 19.52000 MxB	20: 9.89000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 16:06:19

Inst. Number = 1

0: -3.19000 MxB	1: 35.90000 xC	2: 70.40000 xC
3: 89.70000 xC	4: 88.20000 xC	5: 82.30000 xC
6: 374.89999 xC	7: 193.50000 xC	8: 276.89999 xC
9: 113.97000 MxB	10: -0.32000 MxB	11: 1.64000 MxB
12: 8.72000 MxB	13: 10.58000 MxB	14: 1.23000 MxB
15: 506.44000 MxB	16: 0.68000 MxB	17: 175.39000 MxB
18: 103.98000 MxB	19: 17.57000 MxB	20: 9.89000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 16:09:19

Inst. Number = 1

0: 2.99000 MxB	1: 38.30000 xC	2: 71.90000 xC
3: 88.80000 xC	4: 89.70000 xC	5: 83.90000 xC

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9: 107.99000 MxB
12: 8.72000 MxB
15: 527.59998 MxB
18: 126.50000 MxB
ALMs: 0{HHHH}3

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10: -0.35000 MxB
13: 10.56000 MxB
16: 0.70000 MxB
19: 21.04000 MxB
DI/O: 0{HHHHHHHH}7

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11: 1.56000 MxB
14: 1.24000 MxB
17: 172.75999 MxB
20: 10.12000 MxB
Total: 0

```

03/93 16:12:19

Inst. Number = 1

```

0: 2.72000 MxB
3: 89.50000 xC
6: 405.79999 xC
9: 108.53000 MxB
12: 8.59000 MxB
15: 524.48999 MxB
18: 128.07001 MxB
ALMs: 0{HHHH}3

```

```

1: 35.90000 xC
4: 87.80000 xC
7: 196.20000 xC
10: -0.33000 MxB
13: 10.51000 MxB
16: 0.68000 MxB
19: 21.04000 MxB
DI/O: 0{HHHHHHHH}7

```

```

2: 74.00000 xC
5: 81.50000 xC
8: 277.39999 xC
11: 1.61000 MxB
14: 1.24000 MxB
17: 172.81000 MxB
20: 10.13000 MxB
Total: 0

```

07/23/93 16:15:19

Inst. Number = 1

```

0: 2.31000 MxB
3: 94.20000 xC
6: 426.79999 xC
9: 277.09000 MxB
12: 8.26000 MxB
15: 534.67999 MxB
18: 122.65000 MxB
ALMs: 0{HHHH}3

```

```

1: 34.10000 xC
4: 88.60000 xC
7: +0L
10: -0.34000 MxB
13: 10.30000 MxB
16: 0.73000 MxB
19: 20.03000 MxB
DI/O: 0{HHHHHHHH}7

```

```

2: 76.20000 xC
5: 81.20000 xC
8: 277.39999 xC
11: 1.42000 MxB
14: 1.27000 MxB
17: 172.81000 MxB
20: 10.12000 MxB
Total: 0

```

07/23/93 16:18:19

Inst. Number = 1

```

0: -0.54000 MxB
3: 95.80000 xC
6: 450.20001 xC
9: 220.00000 MxB
12: 8.60000 MxB
15: -2.30000 MxB
18: 117.99000 MxB
ALMs: 0{HHHH}3

```

```

1: 32.80000 xC
4: 89.00000 xC
7: +0L
10: -0.24000 MxB
13: 10.49000 MxB
16: 0.70000 MxB
19: 20.03000 MxB
DI/O: 0{HHHHHHHH}7

```

```

2: 79.80000 xC
5: 81.10000 xC
8: 283.29999 xC
11: 1.52000 MxB
14: 1.25000 MxB
17: 177.94000 MxB
20: 10.35000 MxB
Total: 0

```

07/23/93 16:21:19

Inst. Number = 1

```

0: -3.09000 MxB
3: 96.80000 xC
6: 475.39999 xC
9: 193.99001 MxB
12: 8.69000 MxB
15: -2.23000 MxB
18: 96.17000 MxB
ALMs: 0{HHHH}3

```

```

1: 34.40000 xC
4: 89.20000 xC
7: +0L
10: -0.30000 MxB
13: 10.59000 MxB
16: 0.69000 MxB
19: 15.48000 MxB
DI/O: 0{HHHHHHHH}7

```

```

2: 81.70000 xC
5: 80.80000 xC
8: 296.00000 xC
11: 1.48000 MxB
14: 1.24000 MxB
17: 170.25999 MxB
20: 10.36000 MxB
Total: 0

```

07/23/93 16:24:19

Inst. Number = 1

```

0: -2.85000 MxB
3: 78.00000 xC
6: 490.20001 xC
9: 116.50000 MxB
12: 7.52000 MxB
15: -2.23000 MxB
18: -0.95000 MxB
ALMs: 0{HHHH}3

```

```

1: 42.60000 xC
4: 86.30000 xC
7: +0L
10: -0.22000 MxB
13: 9.23000 MxB
16: 0.61000 MxB
19: -0.14000 MxB
DI/O: 0{HHHHHHHH}7

```

```

2: 80.10000 xC
5: 80.50000 xC
8: 306.50000 xC
11: 1.27000 MxB
14: 1.14000 MxB
17: 208.66000 MxB
20: 10.35000 MxB
Total: 0

```

07/23/93 16:27:19

Inst. Number = 1

0: -0.85000 MxB	1: 54.00000 xC	2: 73.70000 xC
3: 80.50000 xC	4: 85.90000 xC	5: 80.10000 xC
6: 495.70001 xC	7: +0L	8: 315.29999 xC
130.52000 MxB	10: -0.11000 MxB	11: 1.07000 MxB
7.18000 MxB	13: 8.81000 MxB	14: 1.11000 MxB
15: -2.30000 MxB	16: 0.60000 MxB	17: -1.09000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: 10.36000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

07/23/93 16:30:19

Inst. Number = 1

0: 0.82000 MxB	1: 53.90000 xC	2: 72.20000 xC
3: 78.50000 xC	4: 85.20000 xC	5: 79.60000 xC
6: 496.50000 xC	7: +0L	8: 323.29999 xC
9: 56.22000 MxB	10: -0.18000 MxB	11: 1.22000 MxB
12: 7.21000 MxB	13: 8.80000 MxB	14: 1.11000 MxB
15: -2.30000 MxB	16: 0.60000 MxB	17: -1.09000 MxB
18: -0.94000 MxB	19: -0.14000 MxB	20: 10.36000 MxB
ALMs: 0{HHHH}3	DI/O: 0{HHHHHHHH}7	Total: 0

Appendix B

Manually Logged Data Sheets

Appendix B-1

Receiving Bin Log

The receiving bin was the first component of the feeder system. The feed material was dumped directly from 55-gal drums using a forklift into the 60 ft³ receiving bin. Twin tapered, counter-rotating, 12-in diameter screws in the base of the bin discharged the feed material to a bucket elevator. Before the feed material was dumped into the receiving bin, it was weighed. The date, time and weight of all feed materials dumped into the receiving bin were recorded on the Receiving Bin Log. The following pages include the Receiving Bin Log pages for the baseline tests.

RECEIVING BIN LOG

A record of materials placed in the receiving bin.

Furnace Test: WCF- 11

Date: 7-18-93

[illegible]

totals	Q20-S-O2	4291
	S-60	9913
	S-60-4	8305
	H-80	1619
	Mod H-80	3793
	H-80-4	5515

Mod N-80-4 5010 / 100 N-80-4: 22.4 CaO:
20.7 mill scale

M-60 3265

e) Mod N-80-4 3006 / 100 N-80-4: 22.4 CaO:
20.7 mill scale

47.717
400 CaO
48.117

RECEIVING BIN LOG

A record of materials placed in the receiving bin.

Furnace Test: WCF- 11

Date: 7/19/93

S-60

WEIGHT

[illegible]

RECEIVING BIN LOG

A record of materials placed in the receiving bin.

Furnace Test: WCF- 11

Date: 7/20/93

[illegible]

RECEIVING BIN LOG

A record of materials placed in the receiving bin.

Furnace Test: WCF- 11

Date: 7-21-93

N-80

WEIGHT

Date	Time	Material	Total	Tare	Net
7/21	0650	N-80	699	40	659
"	0708	"	699	40	659
"	0728	"	699	40	659
"	0905	"	699	39	660
"	1008	"	699	35	664
"	1048	"	699	40	659
"		"	699	40	659
				TOTAL	4619
		<u>MODIFIED N-80</u>			
"	1227	"	600	PRE-TARED 40	
"		LIMESTONE	222		944
"		MILL SCALE	124		
"	1346	N-80	600		
"		LIMESTONE	225		949
"		MILL SCALE	124		
"	1415	N-80	600		
"		LIMESTONE	225		949
"		MILL SCALE	124		
"		N-80	600		
"	1447	LIMESTONE	225		949
"		MILL SCALE	124		
				TOTAL	3793

RECEIVING BIN LOG

A record of materials placed in the receiving bin.

Furnace Test: WCF- 11

Date: 7/22/93

N-80-4

WEIGHT

Date	Time	Material	Total	Tare	Net
7/22	0617	N-80-TV	733	40	693
"	0626	"	733	40	693
"	0728	"	733	40	693
"	0925	"	733	40	693
"	1005	"	734	40	694
"	1054	"	733	40	693
"	1143	"	733	40	693
"	1245	"	733	40	693
		MODIFIED MATERIAL	Sub	TOTAL	5545
"	1315	N-80-TV	700	TARED OUT	
"		CaO	157		1002
"		Mill scale	145		
"	1442	N-80-TV	700		
"		CaO	157		1002
"		Mill scale	145		
"	1520	N-80-TV	700		
"		CaO	157		1002
"		Mill scale	145		
"	1600	N-80-TV	700		
		CaO	157		1002
		Mill scale	145		

RECEIVING BIN LOG

A record of materials placed in the receiving bin.

Furnace Test: WCF- 11

Date: 7/22/93

[illegible]

RECEIVING BIN LOG

A record of materials placed in the receiving bin.

Furnace Test: WCF-11

Date: 7/23/93

WEIGHT					
Date	Time	Material	Total	Tare	Net
7/23	0710	M-60	854	40	814
"	0808	"	855	40	815
"	0929	"	855	40	815
"	1011	"	861	40	821
"		"	864	40	824
"		"	854	40	814
		MODIFIED			
"	1210	N-80-IV	700	TARED OUT	
"		CaO	157		1002
"		Mill scale	145		
"	1320	N-80-IV	700		
"		CaO	157		1002
"		Mill scale	145		
"	1400	N-80-IV	700		
"		CaO	157		1002
"		Mill scale	145		
				Subtotal	3006
				Total	6271

100 N-80-4
22.4 CaO
20.7 Mill scale

Appendix B-2

Feeder Log

The feed material was delivered by the bucket elevator to the metering bin, located near the top of the melter. Feed material was delivered from the metering bin by calibrated twin counter-rotating 6-in diameter metering screws. Based on the calibration of the metering screws, the measured density of the feed material and variable speed setting, the material feedrate was determined. The feedrate, the time, and the cumulative feed weight were recorded on the Feeder Log. This log was also used to record other parameters including the quench air damper settings, the furnace pressure, the hearth and cold top depth, and the slag temperature. The following pages include the Feeder Log pages for the baseline tests.

FEEDER LOG

WCF- 11

DATE: 7/18/93

FEED MATERIAL: $CaO \cdot SiO_2$ Density (lb/cu ft) 1.045 g/cm³

Time	Feeder %	Feeder lb/hr	Total feed	Duct fans % MAD	Trans % ECD	Trans Tap/RH	P _i	Hearth Depth	Slag Temp	Remarks
0735	70	1234		36% 448	41% 0.64 650	off	-0.03	46 1/2	-	feeding to empty furnace
0755	0	0	411					12		
931	30	529	543	36	45					
946	20	353		36	45		-0.16 -0.2	12		
950	20							11		
957	20			36	44		0 to -0.1	12 1/2		
1005	20		112 655	36	44	4/0		11 1/2		
1016				36	43	C/30	-0.1 to +1	13		
1021	0		35 690	36	to 44	C/30	0 to -0.1	13 1/2		
1029	0			to 43		C/30	-0.1	16 1/2	1650	Tapping
1037	30	529								46" to hearth
1052	30		70 760			C/50		6		
1052			1029	reused feed	note					
1102	30	715						3		47" to hearth
1108	30			to 44			-0.1			
1117	30	715	298 1327	to 43				4		
1120	10	238								
1127	0	0	40 1367					-2 1/2		
1138	0	0		to 43.7						
1250	30	715		36	43.72	D/50	0 to -0.1	-2		48 1/2 to hearth
1307	30	715						-2		
1317	30		322 1689	to 53.72						reset

Hearth depth initial: 55"

p 2

FEEDER LOG

WCF- 11

DATE: 7/18/93

FEED MATERIAL: _____ Density (lb/cu ft) 1.414 (measure)

Time	Feeder %	Feeder lb/hr	Total feed	Duct fans % MAD	ECD	Trans Tap/RH	P _i	Hearth Depth	Slag Temp	Remarks
			1689							
1324	30	715		36%	44.72	C/50		7		
1330	20	477	155 1844							
1338	20	477						5		
1347	20	477						4 1/2		
1402	20	477						6 1/2		
1407	20							7 1/2		
1412	0		334 2178					7		
1418	0							4		
1422	20	477						5		52" to hearth
1428	20				to 45.72			8		
1440	20	477			to 44.72			7		insufficient draft
1443	20				to 45.22			7		
1449	20	477			to 45.43			7		
1458	20				to 45.68			6		
1517	20	477	437 2615			C/60		6		1530 by immersion T.C.
1530	30	715						-2		
1544	30	715						6		1600 by pyrometer
1552	30	715						6		
1557	30	715						-3		52" to hearth
1604	30	715						7		
1614	30							5		
1624			798 3913					7		

FEEDER LOG

DATE: 7/18/93

Time	Feeder %	Feeder lb/hr	Total feed	Duct fans % MAD	% ECD	Trans Tap/RH	P ₁	Hearth Depth	Slag Temp	Remarks
------	-------------	-----------------	---------------	--------------------	----------	-----------------	----------------	-----------------	--------------	---------

B-2.5

FEEDER LOG

WCF- 11

DATE: 7/19/93

FEED MATERIAL: S-60 Density (lb/cu ft) 1.33

Time	Feeder %	Feeder lb/hr	Total feed	Duct fans % MAD	ECD	Trans Tap/RH	P ₁	Hearth Depth	Slag Temp	Remarks
0637	70	1504								
0652	0		391	36	48					
0819			Power on							
0822	20	447						3 1/2		
0835	40	894		36	46			-3		
0843	40	894						-3		
0900	40	894	⁵⁰⁶ 957					+3		
0905	30	670	⁵⁶ 1013		to 46.50			mostly +	4	
0912	20	447	⁵² 1065		to 47.00			7		
0928	30	670	¹⁷⁹ 1244					-3		
0950	25	557		47			~0	5		
1005	25	557	³⁴³ 1587		47			-3		
1007	70	1564		to 49				-3		
1010	70	1564	¹³⁰ 1717					-3		
1015	80	1787						-3		
1019	80	1787						-3		decreasing poss to 7006
1022	80							5		
1025	80	1787						-3		
1030	80							5		crust forming
1033	80							6		
1036	80							6		
1038	80							7		
1043	50	1117	⁸³⁴ 1551					7		1540°C 1274 kWh

10/10

P2

FEEDER LOG

WCF- 11

DATE: 7/19

FEED MATERIAL: S-60 Density (lb/cu ft) 1.32

Time	Feeder %	Feeder lb/hr	Total feed	Duct fans % MAD	ECD	Trans Tap/RH	P ₁	Hearth Depth	Slag Temp	Remarks
1043			2551							
1050	50	1117						6		flin dry-molten below
1055	50	1117						7		
1102	50	1117			to 48.50			7		
1113	55	1225	⁵⁵⁹ 3110		to 48.00			5		
1125	60	1340			to 47.5		0.2	4		
1130	60	1340			to 46.50		-0.2	3		
1134	60							4		
1141	60	1340						5		
1150	60							7		
1200	55	1225	¹⁰⁵⁰ 4159		to 47.00			7		
1222	55	1225						4		
1233	55	1225			to 46.50			4		
1246	55							5		
1310	55								1530	L ≠ N
1317	55	1225			to 46.00				1480	by Pyrometer
1331	55	1225			to 45.50			5		
1343	50	1117	²¹⁰³ 6262					8		
1416	50	1117						6		
1427	50	1117						3		
1444	50	1117						3		
1458	52	1158	⁷⁶³ 7025		to 46.00			3		
1505	50									

FEEDER LOG

WCF- 11

DATE: 7/19/93

FEED MATERIAL: S-60 Density (lb/cu ft) 1.32

Time	%	Feeder lb/hr	Total feed	Duct fans % MAD	Trans ECD	Tap/RH	P ₁	Hearth Depth	Slag Temp	Remarks
1540	0	1	N Feeder	plugged	(flapper valve)					
1555	52	1158								Feeder open
			1400							
1556	0			star valve	plugged					
1624	0			N feeder	plugged					
				36	44					
1646	52	1158								
1717	60	1340								
1720				Feeder	off	Tapping	1550			Pyrometer (slag)

P1

FEEDER LOG

WCF- 11

DATE: 7/20/93

FEED MATERIAL: S-60-4 Density (lb/cu ft) 1.39

Time	Feeder %	Feeder lb/hr	Total feed	Duct fans %	MAD	ECD	Trans Tap/RH	P ₁	Hearth Depth	Slag Temp	Remarks
------	----------	--------------	------------	-------------	-----	-----	--------------	----------------	--------------	-----------	---------

0801	60										Feeding to empty furnace
0821	0	469	469	36		48.00					
0907											Power on
0914	30	704				49.00			5		
0918	20	469							4		
0925	20	469							5		
0927	30	704	70					-0.1			
0935	30	704	539						2 1/2		
0936	40	939	106								
940	40	939	645			to 49.5			4		
947	40	939				to 50.00			3		
954	40								3		
1005	0		4st						5 1/2		Assumed empty
1017	0		1044						1		
1021	0										material is empty
1033	40								0		Assumed feeding
1036	40								2		
1042	40								2		
1053	40	939				to 49.5			2		
1058	50	1173	391						2		
1102			1490								

WCF
furn

FEEDER LOG

WCF--

DATE:

FEED MATERIAL: Density (lb/cu ft)

Time	Feeder %	Feeder lb/hr	Total feed	Duct MAD	fans % ECD	Trans Tap/RH	P ₁	Hearth Depth	Slag Temp	Remarks
------	----------	--------------	------------	----------	------------	--------------	----------------	--------------	-----------	---------

1108	50	1173					>0	4 1/2		feed off 5 min
1119					to 50.00			0		(N feeder over)

1123	50	1173						2		
------	----	------	--	--	--	--	--	---	--	--

Filling meter bin full

1128	50	1173					0	→	feed off 5 min	
------	----	------	--	--	--	--	---	---	----------------	--

1140	50	1173	547	2585			0	→		
------	----	------	-----	------	--	--	---	---	--	--

1147	60	1408					0	→		
------	----	------	--	--	--	--	---	---	--	--

1153	60	1408					7	→		
------	----	------	--	--	--	--	---	---	--	--

Start

1158	60						8	→		18" slag 55 to hear
------	----	--	--	--	--	--	---	---	--	---------------------

1203	60						8 1/2	→		first tap
------	----	--	--	--	--	--	-------	---	--	-----------

Full

1205	60						8 1/2	→		
------	----	--	--	--	--	--	-------	---	--	--

1218	60	1408	727	3312				5		Boiling pot (k)
------	----	------	-----	------	--	--	--	---	--	-----------------

1224	70	1643						5		
------	----	------	--	--	--	--	--	---	--	--

Start

1232	70							7		
------	----	--	--	--	--	--	--	---	--	--

15 min

1240	65	1525	602	3915		to 52.00		8		
------	----	------	-----	------	--	----------	--	---	--	--

full

1248	65							7		
------	----	--	--	--	--	--	--	---	--	--

start

1300	65									
------	----	--	--	--	--	--	--	--	--	--

full

1308	65							6		
------	----	--	--	--	--	--	--	---	--	--

start

1322	65	1525			to 51.50	A/60 - 0.3%		8		600 kW - 2 sec lost tap
------	----	------	--	--	----------	-------------	--	---	--	-------------------------

1326	65							11		
------	----	--	--	--	--	--	--	----	--	--

full

1328	65							11 1/2		
------	----	--	--	--	--	--	--	--------	--	--

1335	65							10		
------	----	--	--	--	--	--	--	----	--	--

1343	65							11 1/2		tapping
------	----	--	--	--	--	--	--	--------	--	---------

FEEDER LOG

WCF- 11

DATE: 7/20/93

FEED MATERIAL: S-60-4 Density (lb/cu ft) 1.39

Time	Feeder %	Feeder lb/hr	Total feed	Duct fans %	MAD	ECD	Trans Tap/RH	P _i	Hearth Depth	Slag Temp	Remarks
------	----------	--------------	------------	-------------	-----	-----	--------------	----------------	--------------	-----------	---------

start

1346	65	1525	1677 5592	30	51.50		-3.5 0		14		
1348	0								14		
1354	0								8		
1356	0								6		
1400	0								5 1/2		Tapping
1410	0								5		
1413	0								4		
1416	0								2		tap hole plugged
1420	15	352	29 5622								Holding
1425	0										Cleaned feed tubes
1430											Power on
1437	35	82				1098.00			5		Plum's bob has slag on end
1440	35										Attempting 400 kW opening 3% point + will match feed to power
1445	35							-1.3	5		
1455	35							-1.3	5		Tapping (too hot)
1458	40	939	297 5909						4	1630	by Pyrometer
1505	40								4		
1507	50	1173	141 6050						4		
1511	50								4		
1514	50								5		
1524	45	1056	332 6382						7		
1530	45								7		

start →

full →

FEEDER LOG

WCF- 11

DATE: 7/20/94

FEED MATERIAL: S-60-4 Density (lb/cu ft) 1.39 g/cc

Time	Feeder %	lb/hr	Total feed	Duct fans % MAD	ECD	Trans Tap/RH	P ₁	Hearth Depth	Slag Temp	Remarks
------	----------	-------	------------	--------------------	-----	-----------------	----------------	-----------------	--------------	---------

1549	45	1056	⁴⁴⁰ 1490	36	48.00	4/60	-0.2	5	1570	holding equi libri
1558					^{to} 47.00		-0.2	7		
1604	45				^{to} 48.00		-1.0	8		
1608	40	939	³³⁴ 1638	36						Equilibrium is changing.
1615	0		¹⁰⁹ 1649					13		plugging top hole
1630	40	939						6		
1635	40				^{to} 48.50			6		
1645	40							5		
1652	40	939		36	^{to} 46.50		-0.2	5		
1654	45	1056	³⁷⁵ 1666					5		
1702	45							5		
1710	40	939	²⁸² 1715					6		
1721	40							6		
1726	40							6 1/2		
1729	40							7		
1733								7		
1752	35	821	⁶⁵⁷ 1780		^{to} 45.50			9		
1758	35	821						8		
1803	40	939	¹⁵¹ 1799					7 1/2		
1804	35	821						7 1/2		
1806	35							8		
1818	35		²⁰⁵ 1803					7		feed done

FEEDER LOG

WCF-

DATE: 7/20/93

FEED MATERIAL: S-60-7 Density (lb/cu ft) 1.39

[illegible]

P1

FEEDER LOG

WCF- 11

DATE: 7/21/93

FEED MATERIAL: N-80 Density (lb/cu ft) 1.23

Time	Feeder %	Feeder lb/hr	Total feed	Duct fans % MAD	ECD	Trans Tap/RH	P ₁	Hearth Depth	Slag Temp	Remarks
------	----------	--------------	------------	-----------------	-----	--------------	----------------	--------------	-----------	---------

0650										filling meter line
------	--	--	--	--	--	--	--	--	--	--------------------

0737	90	1864	1							filling to start
------	----	------	---	--	--	--	--	--	--	------------------

0752	0		466							
------	---	--	-----	--	--	--	--	--	--	--

0842	20	414		36	49					Starting power supply
------	----	-----	--	----	----	--	--	--	--	-----------------------

0900	20	414						7 1/2		
------	----	-----	--	--	--	--	--	-------	--	--

0910	20	414						6 1/2		300 kW
------	----	-----	--	--	--	--	--	-------	--	--------

0920	20	414		36	51		-3	7		
------	----	-----	--	----	----	--	----	---	--	--

0928	30	621	321				-3 to -1.2	7		49" to bottom 8" slag
------	----	-----	-----	--	--	--	------------	---	--	-----------------------

0930	30	621								Increasing power to 600 kW
------	----	-----	--	--	--	--	--	--	--	----------------------------

0935	30	621	72				-3 to +	7		to 5300
------	----	-----	----	--	--	--	---------	---	--	---------

0943	40	829	110					6		to 5700
------	----	-----	-----	--	--	--	--	---	--	---------

0949	45	933						5 1/2		
------	----	-----	--	--	--	--	--	-------	--	--

filling meter bin 0954	45	933						5 1/2		
------------------------	----	-----	--	--	--	--	--	-------	--	--

1002	45	933						5		
------	----	-----	--	--	--	--	--	---	--	--

1008	50	1036	295					5		to 5700
------	----	------	-----	--	--	--	--	---	--	---------

1015	60	1243	121					3		14 slag
------	----	------	-----	--	--	--	--	---	--	---------

filling 1021	50	1036	102					7		50 1/2 to heat
--------------	----	------	-----	--	--	--	--	---	--	----------------

1028	55	1140	1548					3		to 54
------	----	------	------	--	--	--	--	---	--	-------

1033	55							3		
------	----	--	--	--	--	--	--	---	--	--

1036	55							3		Topping slag
------	----	--	--	--	--	--	--	---	--	--------------

filling 1043	55							3		
--------------	----	--	--	--	--	--	--	---	--	--

1049	55							4		
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P2

FEEDER LOG

WCF- 11

DATE: 7/21/93

FEED MATERIAL: N-80 Density (lb/cu ft) 1123

Time	Feeder %	lb/hr	Total feed	Duct fans %	MAD	ECD	Trans Tap/RH	P _i	Hearth Depth	Slag Temp	Remarks
1050	60	1243	1966 ⁴¹⁸	36	54		T.2	3	1830		very viscous
1053	70	1450	2028 ⁶²								
1100	60	1243		36	54		T.2	7 1/2			
filling 1105	60							8			
1110	60							6			
1114	65	1346	2318 ²⁹⁰		53		-0.3 1/2	5			
1119	65							8			
1120	60	1243	2453 ¹³⁵					8 1/2			still original tap
Very little fume coming from slag pot. S-60 & S-60 + were much worse for gas evolution.											
1123	60							8 1/2			
1130	60	1243					-0.2	8 1/2			
1132	60				52.50						53 to hearth 14 ins lag
filling 1135	50	1036	2764 ³¹⁰					11			
full 1145	50	1036						9			
1150	65	1346	3126 ³⁶³					4			
1158	60	1243						8			
1202	60	1243			52			8			
filling 1207	58	1203	3313 ¹⁸⁶					8 1/2			
1212	50	1036	3413 ¹⁰⁰					11			
1217	50							10			
1223	50				51.50			10			
1230	50							9			
1235	50				51			9			
1240	0		3896 ⁴⁰³	Master bin empty -							

FEEDER LOG

WCF- 11

DATE: 7/21/93

FEED MATERIAL: N-80-Modified Density (lb/cu ft) 1.35

Time	Feeder %	Feeder lb/hr	Total feed	Duct fans % MAD	Trans ECD	Trans Tap/RH	P ₁	Hearth Depth	Slag Temp	Remarks
1242	0	0		36	51		1.3	7		
1248	0							0		
1314	0		Power on 600 kW							
1316	0			36	47			0		
Feeding N-80-Modified: 100 lb N-80: 37.5 limestone: 20.7 mill scale										
1320	50	114			49.5		1.5	6 1/2		
1326	50	114						2		
1328	60	1369	152		52.50			2		
1331	55	1255	221		53.0			3		
1334	55							6		Pressure fluctuates dec. power to 400
1336	40	912	325		52		1.3	8		Better
1340	40				51		1.3	7		
1347	40	912						6		
1354	40	912						4		
1357	50	114	319		644			2		
1402	60	1369								
1406	60	1369			50			4		
1411	50	1106	205		850			7		Density check 1.3
824 corrected for 1.3 density										
1420	50	1106						8		
1424	50	Power 51.50 500 kW						8 1/2		tapping OK
1428	50			52				9		
1432	50							8 1/2		
1435	50							9		

P4

FEEDER LOG

WCF- 11

DATE: 7(21/93

FEED MATERIAL: N-80-Modified Density (lb/cu ft) 1.31

Time	Feeder %	Feeder lb/hr	Total feed	Duct fans % MAD	ECD	Trans Tap/RH	P ₁	Hearth Depth	Slag Temp	Remarks
1449	40	885	⁵⁷¹ 1677					12		
1451	30	664	⁴⁴ 1722					13		
1455	20	442			51.50			13		55 to hearth 8 slag
1457	20	442						11		
1504	20	442						12		
1506	20							10 1/2		
1513	20				to 52.00			10		to 500 kW
1518	20							9		
1523	20							8		
1528	20							7 1/2		
1532	20							6		fine duct 905° F
1537	20							6		
1541	40	885	³³⁹ 12061		to 52.5	-1.2		0		to 600 kW
1545	40				to 53.00			3		fine duct 990° F
1549	40							4 1/2		
1554	40							3		
1557	40							4		
1600	45	996	²⁸⁰ 12341					1		
1607	45							3		
1611	40	885	¹⁸³ 12523					5	1460	L#N
1618	40	885						4		
1626	40							3		
1634	40							3		

FEEDER LOG

DATE: 7/21/93

FEED MATERIAL: N-80-Mod Density (lb/cu ft) 1.319/cc

B-2.18

P1

FEEDER LOG

WCF- 11

DATE: 7/22/93

FEED MATERIAL: N-80-4 Density (lb/cu ft) 1.31

Time	Feeder %	Feeder lb/hr	Total feed	Duct fans % MAD	Trans ECD	Tap/RH	P _i	Hearth Depth	Slag Temp	Remarks
------	----------	--------------	------------	-----------------	-----------	--------	----------------	--------------	-----------	---------

Initial cooling water temp 16°C

0705	70	1549								
------	----	------	--	--	--	--	--	--	--	--

0725			516	36	49		-0.3			
------	--	--	-----	----	----	--	------	--	--	--

0827	20	442			to 51					Power On
------	----	-----	--	--	-------	--	--	--	--	----------

0848	20	442						5		300kW
------	----	-----	--	--	--	--	--	---	--	-------

0854	20	442			to 49			5		
------	----	-----	--	--	-------	--	--	---	--	--

0856	20	442			49			5		to 400kW
------	----	-----	--	--	----	--	--	---	--	----------

filling 0909	30	664			49		-0.3	3 1/2		
--------------	----	-----	--	--	----	--	------	-------	--	--

0914	40	885	346 862					0		
------	----	-----	------------	--	--	--	--	---	--	--

0922	50	1106			to 50.5			1		
------	----	------	--	--	---------	--	--	---	--	--

0928	50	1106						1		
------	----	------	--	--	--	--	--	---	--	--

0930	50							1 1/2		
------	----	--	--	--	--	--	--	-------	--	--

0934	50							2		
------	----	--	--	--	--	--	--	---	--	--

0936	60	1327	258 1120							to 600kW
------	----	------	-------------	--	--	--	--	--	--	----------

0940	60							2 1/2		
------	----	--	--	--	--	--	--	-------	--	--

filling 0946	50	1106	221 1341		to 52.0		+0.2	4 1/2		
--------------	----	------	-------------	--	---------	--	------	-------	--	--

0952	40	885						4 1/2		
------	----	-----	--	--	--	--	--	-------	--	--

0957	40						-0.3	3 1/2		
------	----	--	--	--	--	--	------	-------	--	--

fall 1001	40							3		
-----------	----	--	--	--	--	--	--	---	--	--

1006	40		207 1548				-0.3	3		
------	----	--	-------------	--	--	--	------	---	--	--

1010	40							3		
------	----	--	--	--	--	--	--	---	--	--

1012	40							3 1/2		
------	----	--	--	--	--	--	--	-------	--	--

1018	40							3 1/2		
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P2

FEEDER LOG

WCF- 11

DATE: 7/22/93

FEED MATERIAL: N-80-4 Density (lb/cu ft) 1.31 g/cc

Time	Feeder %	lb/hr	Total feed	Duct fans % MAD	ECD	Trans Tap/RH	P ₁	Hearth Depth	Slag Temp	Remarks
			206.5		1.6					
1020	40	885	1754	36	52.5	-0.2		3		
15 1030	45	1000	147 1902					2		
1035	50	1106						1		slag level < top ho
filling 1038	50	1106						2		
1042	45	1000	129 2031					3		
1047	45	1000						3		18 slag 55 1/2 to hear
full 1051	45							2 1/2		
1057	45							2 1/2		
1100	45	1000	300 233			-0.3		3		
1107	45	1000			52.00			3 1/2		tapping
1114	45	1000						4		
filling 1122	43	950	367 2698	36	52.00	-0.15		4 1/2		
1139	43	950				A/80		6		to 700 kW
1146	43	950						6		22 slag 56 1/2
1150	43	950						6		Tapping
1200	43	950						5 1/2		
43 1203	45	1000	649 3347					3		
filling 1205								3		1650 kW N
1207	50	1106	67 13413		51.00	-0.4		0		
1213	60	1327								
1218	60	1327			52.0	-0.1		0		
1221	60							2		1670 kW N

P3

FEEDER LOG

WCF- 11

DATE: 7/22/93

FEED MATERIAL: N-80-4 Density (lb/cu ft) 1.31

Time	Feeder %	Feeder lb/hr	Total feed	Duct fans %	Trans MAD	Trans ECD	Trans Tap/RH	P ₁	Hearth Depth	Slag Temp	Remarks
1228	60	1327		36	52		-0.3	2			to 600 kW
1232	60							2			
filling 1235	60						-3	3	1760		L&N
1240	60							3			
1245	60							3			
1251	55	1216	⁹⁷³ 4387				-1.3	3 1/2			
1259	55							3 1/2			
1307	50	1106	³²⁴ 4711					4	1690		L&N
1312	50	1106		36	52		-0.3	4			
1321	50				51.50		-0.4	4			
1327	50							4			
1330	50			36	51.5		-0.3	4			
1332	50				50.50		-1.5				17 slag 5 1/2 to hearth
1338	50	1106					-1.5	4			
Modified 1340	0			Feed empty - preparing for Modified - Power off							
1354	40	885	0	36	49.50			0			Modified with 200# mill scale Power on 600 kW
1416	40							1			
1420	55	1216	147		50.00			0			
1422								1 1/2			
1424	50	1106	⁸¹ 229		^{to} 50.50			3			
1430	50	1106			50.50			3			
1434	50	1106			51.00			3			
filling 1440	50	1106			51.60			3 1/2	1750		L&N

P4

FEEDER LOG

WCF- 11

DATE: 7/22/93

FEED MATERIAL: N-80-4 Modified Density (lb/cu ft) 1.31 correct 1.3

Time	Feeder %	lb/hr	Total feed	Duct fans %	MAD	ECD	Trans Tap/RH	P ₁	Hearth Depth	Slag Temp	Remarks
1450	50	1106	708 ⁴⁷⁹	36	37.00		~0.4		3		
1453	50				51.00				3 1/2		18" slag depth 55 1/2" to hear
5 1508	50	1106		36	57.00				3 1/2	1545	L#N
filling 1512	60	1327	405 1114	Increasing hot top to investigate melt rate and slag temp							
1514									4		
1517				36	51				4 1/2		
Full 1520									4 1/2		
1526	60								5		
1530	60								5		
1538	60								5		
Full 1546	60								5	1565	L#N
1600	60	1327			51.20				5		1150°F outlet to
10 1606	60	1408							5	1560	L#N; 1440 conti
1611	60	1408							5		18" slag 57" to hearth
filling 1616									5 1/2		
Full 1620		1504 12618	12778								Correct for 139=
1626	55	1290							6		
10 1632	55	1290							6		
filling 1645										1560	
1648	60	1408	602 3380						0		
Full 1650									2		
Full 1700									2		
Full 1705									2		

7/25/93

NBS 123
NBS 1.31 1.0650
1.32 A: 1.31
1.31 1.39

FEEDER LOG

11

DATE: 7/22/93

FEED MATERIAL: N-80-4 Mod

Density (lb/cu ft) 1.39 g/cc

B-2.23

FEEDER LOG

91

WCF- 11
 FEED MATERIAL: M-60
 Density (lb/cu ft) 1.86
 DATE: 7/23/93

Time	%	Feeder	Total	Duct	Fans	%	Trans	Heat	Slag	Temp	Remarks
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0739	50	1572	655	36	50.00						
------	----	------	-----	----	-------	--	--	--	--	--	--

0822											Boiler on
------	--	--	--	--	--	--	--	--	--	--	-----------

0824	20	629	5200								
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0826	30	943	676								
------	----	-----	-----	--	--	--	--	--	--	--	--

829	20	629	723	54							
-----	----	-----	-----	----	--	--	--	--	--	--	--

833	15	471	765	53							
-----	----	-----	-----	----	--	--	--	--	--	--	--

836	10	314	788								
-----	----	-----	-----	--	--	--	--	--	--	--	--

837	0		793	52							
-----	---	--	-----	----	--	--	--	--	--	--	--

841	0			50							
-----	---	--	--	----	--	--	--	--	--	--	--

855	30	943									
-----	----	-----	--	--	--	--	--	--	--	--	--

0900	90	1257	871	36	52	-3	0				
------	----	------	-----	----	----	----	---	--	--	--	--

0904	50	1572	954		52		0				
------	----	------	-----	--	----	--	---	--	--	--	--

0911	50						1				
------	----	--	--	--	--	--	---	--	--	--	--

914							1 1/2				
-----	--	--	--	--	--	--	-------	--	--	--	--

915							2				
-----	--	--	--	--	--	--	---	--	--	--	--

917							2				
-----	--	--	--	--	--	--	---	--	--	--	--

922	50						3 1/2				
-----	----	--	--	--	--	--	-------	--	--	--	--

925	40	1257	550				3				
-----	----	------	-----	--	--	--	---	--	--	--	--

928							3 1/2				
-----	--	--	--	--	--	--	-------	--	--	--	--

932	45	1414	147				3				
-----	----	------	-----	--	--	--	---	--	--	--	--

936							3				
-----	--	--	--	--	--	--	---	--	--	--	--

943	55	1729	1910	36	53		2 1/2				
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946	60	1836	1996				2				
-----	----	------	------	--	--	--	---	--	--	--	--

14.209
 55 to
 1000

Full

Sliding

10

30

35

2

FEEDER LOG

WCF- 11

DATE: 7/23/93

FEED MATERIAL: M-60

Density (lb/cu ft) 1.86

Time	Feeder %	Feeder lb/hr	Total feed	Duct fans % MAD	ECD	Trans Tap/RH	P _i	Hearth Depth	Slag Temp	Remarks
0948	60	1886						3 1/2		
0951	60				54			4 1/2		
0957	10		³⁴⁶ 2342					3		i.
1003	40							3		
1007	40	1257						3 1/2		
1013	40							4		~450 kW
1017	40			36	54	- .3		3 1/2		
1021	40	1257		36	55			4		¹³ 56
1024	50	1572	⁴⁴⁰ 2782							480°F fine dust
1027								5		
1032	30	943	³¹⁰ 2992					8		
1035	30							7 1/2		14 55 1/2
1043	20	629	¹⁷³ 3164		56			8		
1047	30	943			-			6		
filling 1050	30				57					
1055	30				58			8		
1100	0		²⁰⁴ 3368	Power condenser off				5 1/2		¹⁹ 55 1/2
1105	30	943						6		
1109	30							7		
1113								7		
1123	35	1100	³¹⁴ 3682					5		
1128	0		stopping to repair ID fan					6 1/2		No tap yet
1130			Both fans off							

Very greasy melt

3

FEEDER LOG

WCF- 11

DATE: 7/23/93

FEED MATERIAL: M-60 Density (lb/cu ft)

Time	Feeder %	lb/hr	Total feed	Duct fans % MAD	Trans % ECD	Tap/RH	P ₁	Hearth Depth	Slag Temp	Remarks
1209								5		Fume fan repaired Power on
				36	51					
		2300	16	M-60	left					in meter bin and dregs in rec bin
1208	0							6		Filling meter bin with N-80-4 Mod
1210								6		
Full 1214	20	629			52			4 1/2		Assume 20 min in meter.
1218	0	0	42					6		left in meter. (300 lb)
1227	0	0						4		feels moist and vescoo
										16 slag
										53
1231										Feeding 100 lb CaO thru Air lock
1234								8		finished
1237	0							5 1/2		
1247	30	943	62 104		56		.4	3		feels liquid
1251	40	1414						4 1/2		tapping slag
* 1256	40	939	118 223							Assume feeding N-80-4 p=
1257	60	1408						2		
1301	60							2		
15 1304	60				59			2		175 slag 53 1/2 600k
1309	60							5		
1311	40	939	328					6 1/2		
1314	50	1173	47 375		61			3		
1317	50							8		
1321	45	1056	137 512					8 1/2		

4

FEEDER LOG

WCF- 11

DATE: 7/23/93

FEED MATERIAL: N-80-4 Mod Density (lb/cu ft) 1.39

Time	Feeder %	lb/hr	Total feed	Duct MAD	fans % ECD	Trans Tap/RH	P ₁	Hearth Depth	Slag Temp	Remarks
1327	35	82	¹⁰⁵ 618	30	60		-2	10		Slag very viscous
1332	40	939	¹⁶⁸ 686	Adding	100	CaO thru		Star	valve	
1336			Adding	CaO				4		
1339			finished					12		
1347	0							6		20 54
1349	0							6		
1352	0		¹⁶⁸ 686					6		very viscous top
1354	40	939		36	60			7	¹⁶⁷⁰ 1560	L#11 Pyrometer } Tapping
1356	40							6 1/2		
1358	50	1173	¹²⁵ 812					5 1/2		
1406	55	1290	²³⁵ 1046	36	56			5		
1413	55							5 1/2		
1414	55							5 1/2		
1415	Begin Feed	100	lb CaO thru	Air lock						slag is becoming too viscous
1418	finished							18 1/2		
1424				36	60			6		
1427								5 1/2		
1430										Ce ingots into furnace - first slag sample
1432	55							6		
1439	55	1290						5 1/2		
1448	55		⁹⁰³ 1949					5 1/2		
1458	55			36	60			5		
1505	55			36	^{to} 56		+0.3	5		

FEEDER LOG

WCF--

17

DATE:

7123193

FEED MATERIAL:

N-86-4 Mod

Density (lb/cu ft)

1.39

[illegible]

Appendix B-3

Furnace Run Data Sheet

The Furnace Run Data Sheet was used to monitor and record pertinent power supply and furnace information. While some of these parameters were automatically data logged using the data acquisition system, this data sheet was used to monitor and evaluate a few specific important parameters in real time during the test program. The following pages include the Furnace Run Data Sheet pages for the baseline tests.

Furnace Run Data Sheet

Page 1/2

Furnace Test: WCF-11

Date: 7/18/93

Real Time		Tap	Voltage, phase-to- phase V _{LL}	Current, kAmp	Power, kW	Power consum., kW-hr	Feed Addn's		Remarks
On	Off						lb	kg	
0900		D	135	0	-	-			(on start-up turnings) No power initially
0903		C	142	0	-	2			" " "
	0908	C							Adding C for start-up
0930		D	130	1.4	1500	47	0		pegged Amps
0935		D	130	1.3	450	77	0		settled down
0940		D	142	0.5	300	113	0		Auto elect. rods
0950		D	142	0.5	250	153	0		okay - steady
1000		D	142	0.5	275	184	0		steady
1002		C	146	0.6	200	195	0		changed taps - less stable
1010		C	144	0.7	300	231	30		Rhco. to 30
1020		C	150	0.7	300	281	30		steady
1040		C	142	0.7	300	372	30		" " " slag temp. 1600°C
1051		C	140	0.8	350	448	50		(Rhco. to 50)
1101	1100-1101	C	145	0.8	325	507	50		sounded "heath" - 47"
1104		C	150	0.8	325	522	50		stop tapping
1113		C	150	0.9	325	579	50		OPEN TAP T=1750 °C Ch T=107°C CUB C=17.94
1124		C	135	0.9	300	652	50		continuing to Tap T=1561°C
1130		C	140	1.0	350	672	50		Tap stopped
1135		C					50		lost A voltage
	1137								shut down for repair: N. Elect.
1215		D	150	1.0	500	786	50		N. elect. no power
1225		D	135	0.8	300	819	20		Change Rh. to 20
1230		D		0.9	350	843	20		Bath Temp. 1560°C
1253		C	165	1.0	350	972	50		slag tap 1625°C
1308		C	150	0.9	350	1048	50		" " 1470°C
1310		C	150	0.8	325	1061	40		Rh back to 40
1323		C	155	0.8	325	1129	40		
1328		C	145	0.8	300	1162	40		slag temp. 1704°C
1335		C	155	0.9	400	1194	50		Rh to 50
1400		D	180	0.7	400	1369	0		Changed tap to B, Rh to 0
1405		C	155	1.0	450	1378	60		Changed tap to C, Rh to 60
1414		C	155	0.8	400	1460	60		Slag tap 1300°C

Date: 7/18/93

c/e Ray

Furnace Run Data Sheet

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Furnace Test: WCF-11

Date: 19 July 93

Real Time		Tap	Voltage, phase-to-phase ground	Current, kAmp	Power, kW	Power consum, kW-hr	Feed Addn's		Remarks
On	Off						lb	Time	
0818									N M S
0823		D	130	0.5	250	71			Set Rheo 20
0825		D	130	0.7	250	75			Set on auto
0826		D	130	0.9	325	79			Set Rheo 40
0831		D	130	1.1	450	114			Set Rheo 60
0847		D	130	1.0	425	236			Set middle on 55
0900		D	135	1.1	450	328			60 60 60
0920		D	140	1.1	450	470			60 58 60
0931		D	140	1.1	450	550			60 58 60
0940		D	140	1.0	425	640			60 58 60 ^{2nd} electrodes burning
0959		C	150	0.9					60 58 60 to top C
1000		B	180		500	703			60 58 60 to top B
1001		A	200	1.0	600				70 70 70 to top A
1002		A	200	1.1	700	769			80 80 80
1005		A	200	1.5	850				100 100 100
1016		A	200	1.3	700	956			80 80 80
1027		A	200	1.3	700	1078			80 80 80
1029		A	200	1.0	625	1092			65 65 65
1051		A	200	1.0	625	1314			65 65 65
1102		A	190	1.0	600	1427			65 65 65
1112		A	195	1.0	650	1523			65 65 65
1125		A	195	1.1	625	1652			65 65 65
1136		A	195	1.0	600	1771			65 65 65 T _s = 1431
1200		A	200	1.0	600	1980			65 65 65 T _s = 1439
1208	Power off	Checking slag / melt depth							
1210		A	200	1.1	600	2075			Power back on 65, 65, 65 T _s 1430
1222		A	200	1.1	600	2230			65 65 65 Rheo
1235		A	200	1.1	600	2361			65 65 65
1251		A	200	1.1	600	2525			65 65 65
1305		A	190-200	1.1	600	2645			65 65 65 T _s = 1400
1315		A	200	1.1	600	2759			65 65 65
1330		A	210	1.0	600	2899			65 65 65

Furnace Run Data Sheet

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Furnace Test: WCF-11

Date: July 19, 1993

Real Time		Tap	Voltage, phase-to-ground	Current, kAmp	Power, kW	Power consum, kW-hr	Feed Addn's		Remarks
On	Off						Lb	Time	
									N M S
1:47			200	1.0	600				Low BLUEED up tap (slag)
1:54			200	1.0	700	3148			Tap hole opened - flow out
2:05			200	1.0	650	3242			
14:30		A	197	1.05	625	3460			65 65 65
14:45		A	200	1.0	700	3613			65 65 65
15:00		A	200	1.0	625	3768			65 65 65
15:15		A	200	1.0	600	3916			65 65 65
15:30		A	200	1.0	600	4056			65 65 65
15:42		A				4192			Plugged feed tube
15:55		A	200	1.0	600	4197			Power on, Boring around
15:56		A	205	1.2	750	4254			80 80 80
16:00		A	200	1.571	750	4303			80 80 80 → to 65
16:02		A	200						50 50 50 → 1000 - it OFF and on
16:05									Power off then Power on - MAN
16:06		B	160	1.5	750	4349			Adjusting electrodes
16:07		B	170	1.1	600	4354			50 50 50 100 OK - slow
16:10		B							Vacuum in air to clean the valve
16:15									Crane dead
									adding electrode lengths
16:22		B	180	1	500	4405			power on electrode raise
16:24		B	180	1	500	4415			500 valve working on auto for the electrode
16:25		B	180		600	4425			60 to 60 on rheo
16:26		B							60 to 70 on All rheo.
16:30									Power off Sate feed tube plugged
16:30		B	180	1.1	400				Power on, 70 on rheo
16:35									Power off, with feeder plugged
16:40		B	170	1	600				70 on rheo Power on
16:41		A	200	1.2	600	700			70 on rheo
16:48									man - power off - on
16:52		B	180	.8	600				auto - rheo to 50

very hot tapping begin

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Date: 7/12/93

B-3.7

Furnace Run Data Sheet

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Furnace Test: WCF-11

Date: 7/20/93

Real Time		Tap	Voltage, phase-to- phase V _{LL}	Current, kAmp	Power, kW	Power consum., kW-hr	Feed Addn's		Remarks
On	Off						lb	Time	
									8:51 AIR MONITORING TURNED ON
0906		D	130		G				Power ON
0909									ON auto Rheo to 30
0911		D	130	0.8	~400	36			N M S 50 50 50
0911		D	130	1.0	~400	48			50 50 50
0918		C	150	0.9	~400	71			To C
0926		C	150	0.8	350	113			50 50 50
0928		C	150	0.9	400	122			60 60 60 To 60
0930		C	150	0.9	425	134			70 70 70 To 70
0940		C	150	1.0	450	207			70 70 70
0943		B	175	0.85	450	235			55 55 55 To tap B
0953		B	175	0.8	450	312			55 55 55
0957		A	200	0.8	475	332			45 45 45 To tap A
1004	Power off	A	WORKING ON RECOVER		373				
1006	Power on	A	200	0.8	500	379			40 40 40 @ 10:10 Furnace Pressurized
1023		A	200	0.7	450	523			@ 11:20 " " " "
1035		A	197	0.8	500	608			@ 11:35 " " " "
1100		A	200	0.8	500	791			40 40 40
1115		D	140	0.9	350	913			40 40 40 Splitter Screw tripped out
1117		A	190	0.8	500	928			@ 11:23 Furnace pressurizing
1125		D	140	0.9	350	999			40 40 40 TO D - Card problem
1128		A	190	0.8	475	1016			40 40 40 TO A
1136		A	200	0.8	500	1071			40 40 40 TO A
1145		A	190	0.8	450	1125			@ 11:44 Furnace pressurized
1153		A	190	0.9	600	1211			60 60 60 TO 60
1200	Power off		checking depth of						
1201		A	195	1.0	650	1249			60 60 60 @ 12:03 Slog Tap
1217	off	A	195	1.0	625	1399			60 60 60 OVER RAN SLAG POT OR
1223		A	195	0.9	550	1440			45 45 45 TO 45
1230		A	200	1.0	600	1517			60 60 60
1241		A	195	1.0	600	1642			60 60 60
1251		A	195	1.0	575	1772			60 60 60

Furnace Run Data Sheet

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Furnace Test: WCF-11

Date: 7/20/93

Real Time		Tap	Voltage, phase-to-phase V _{LL}	Current, kAmp	Power, kW	Power consum, kW-hr	Feed Addn's		Remarks
On	Off						lb	Time	
1300		A	195	1.0	600	1795			60, 60, 60
1320		A	190	1.0	600	2018			60, 60, 60
1330		A	200	1.0	600	2062			60, 60, 60 Slag Tap Stopped
1338		A	195	0.9	600	2169			65 65 65 To 65
1343		A	195	0.9	600	2270			60 60 60 To 60 OPEN TAP
1347		A	195	0.9	600	2299			65 65 65 To 65
1355		A	195	1.0	600	2339			65 65 65 Stopped Loading
1400		A	195	0.8	450	2386			35 35 35 To 35
1403		B	170	0.8	425	2399			45 45 45 To B To
	1419	-	-	-	-	2512			Power off to Clean feed tubes
1429		B	170	0.8	400	2513			Power on
1443		B	165	0.8	450	2596			50 50 50
1450		C	140	1.0	400	2655			60 60 60
1510		C	145	0.9	350	2797			60 60 60
1522		C	145	0.8	400	2874			60 60 60
1536		C	145	0.9	425	2969			60 60 60
1545		C	150	0.9	400	3002			60 60 60 Pulling Slag Pot
1605		C	145	0.9	400	3144			60 60 60
1617	Power off	C	145	0.9	450	3226			60 60 60 Howard Davis Cleaning T.C. pot
1630		C	150	0.9	400	3296			60 60 60 Sulfuric Acid Clouds out back
1645		C	145	0.9	400	3398			60 60 60
1700		C	145	0.9	410	3499			60 60 60 865 lb/hr feed 1511°C
1730		C	140	0.9	400	3708			60 60 60 980 lb/hr 1539°C
1745		C	140	0.9	400	3816	60, 60, 60		873 lb/hr 1428°C 1127 lb/hr 1477°C
1756		C	145	0.9	425	3900	60-60-60		1066 lb/hr 1458°C
1805		C	145	0.9	425	3955	60-60-60		1062 lb/hr 1495°C
1815		C	140	0.9	425	4024	60-60-60		973 lb/hr 1571°C
1821		D	140	0.5	200	4064	0-0-0		Drop to D Phos to 0 Reducing
1844		D	140	0.5	200	4153	0-0-0		(stop slag tap) Still lancing
858		D	140	0.5	200	4208	0-0-0		still lancing
1903		D	140	0.9	400	4227	90-40-10		lancing to top
1913		B	180	0.9	600	4288	70-70-70		lancing up for top

Furnace Run Data Sheet

urnace Test: WCF-11

Date: 20 July

Real Time		Tap	Voltage, phase- to- phase Gramp	Current, kAmp	Power, kW	Power consum, kW-hr	Feed Addn's		Remarks
On	Off						lb	Time	
1923		B	170	1.0	600	4379			70-70-70 still pouring
1926		D	135	1.4	600	4408			80-80-80 starting to run
-		D	130	1.4	600	4498			80-80-80 running slowly
1942		D	130	0.5	200	4545			0-0-0 still trying to top
1955		D	150	0.5	200	4598			0-0-0 " " "
2001		D	140	0.5	200	4617			0-0-0 beginning to flow well
	2003					4624			free off
Panel elapsed time = 640.7 minutes

$T_1 > T_2 \quad P_{Tot} = P_F + P_{head}$ If $P_F < 0$ $P_{Tot 1} = P_F^{\ominus} + P_{head}$ If $P_F > 0$ $P_{Tot 2} = P_F^{\oplus} + P_{head}$ $P_{Tot 2} > P_{Tot 1}$ $\therefore$ pressurize furnace to help flow the slag when its viscous									

Furnace Run Data Sheet

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Furnace Test: WCF-11

Fired
Elapsed
Time, min.

Date: July 21, 1993

Real Time		Tap	Voltage, phase- to- phase and	Current, kAmp	Power, kW	Power consum., kW-hr	Feed Addn's		Remarks			
On	Off						lb	Time	N	m	s	Power on
0838		D				0			0	0	0	
0846		D	135	0.7	300	31			20	20	20	to Rheo 20
0845		D	132	0.7	225	84			20	20	20	
0906		D	132	0.7	300	135			20	20	20	
0921		D	138	0.7	275	207			20	20	20	
0938	✓								Sounding bottom of furnace			
0931		D	145	0.7	300	243			20	20	20	
0932		B	175	1.0	650	264			70	70	70	to B to 70
0942		B	170	1.0	500	334			70	70	70	
1000		B	170	1.0	550	479			70	70	70	
1010		B	170	1.0	550	600			70	70	70	
1020	✓								Sounding bottom of furnace			
1031		B	170	1.0	550	752	✓		70	70	70	(slag tapping)
1050		B	145	1.0	525	921	130.0		70	70	70	
1059		B	165	1.0	550	989	138.1		Electrodes blew back out momentarily			
1130	✓	B	165	1.0	550	1220	165.0		70	70	70	
	1132	B				1266	170.0		checking depth of slag			
1145		B	170	1.0	550	1393	190.0					
1155		B	170	1.0	530	1471	199.8					
1215		B	170	1.0	550	1616	211.2					
1230		B	170	1.0	550	1736	225.3		Blue hopper added to receiving bin.			
1245	✓	B	170	1.0	500	1900	244.2					
1249	1249	B				1924	246.9		Cleaning feed tubes / empty trays / baghouse			
1315		D	130	1.1	450	1941	249.6		< NEW FED COMPOSITION >			
1318		B	175	1.1	575	1969	252.9		70	70	70	
1332		B	170	1.0	550	2072	265.0		70	70	70	
1335									Lots of pressurizing of furnace			
1340		C	140	0.8	350	2131	273.0					
1343		C	145	0.9	425	2157	277.3		60	60	60	
1350		C	150	0.9	400	2194	283.1		Tapping slag again (warns on TC #2 junction)			
1402		C	147	0.9	400	2278	296.0					
1422		B	165	0.9	500	2913	316.9		to B			

Furnace Run Data Sheet

urnace Test: WCF-11

Elapsed
Time, min

Date: 7/21/93

[illegible]

Furnace Run Data Sheet

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TIP from Howard DAVIS
Furnace Test: WCF-11

$$\text{short for a constant } \frac{I^2 \text{ kA}}{P \text{ MW}} = G$$

Conversion factor for optimum furnace performance
Date: 22 July 93

Real Time		Tap	Voltage, phase-to-phase 2- ϕ	Current, kAmp	Power, kW	Power consum, kW-hr	Feed Addn's		Power State N M S	Remarks
On	Off						lb	Time, min		
0825		D	135	0.5	250	0			0 0 0	
0828		D	135	0.7	300	29			25 25 25	To 25
0845		D	140	0.8	350	116		18	25 25 25	
0900		C	150	.8	350-375	210		37	40 40 40	
0918		B	170	1.0	500	320		55	60 60 60	To tap B
0924		C	150	0.8	350	332		57	50 50 50	To tap C (wait for C)
0937		B	180	1.0	550	422		71.2	70 70 70	To tap B, Feed 14
0945		A	200	0.8	550	485		78.4	45 45 45	To tap A, Feed 1431
0950		A				547		85.7	SPIKES > 4 kAmps ^{trying to raise}	
0950		B	175	0.9	500	556		82.0	55, 55, 53	to punch dead shorts
1006		B	175	0.9	475	650		99.7	55, 55, 55	
1010		B	175	1.0	550	681		103.9	70 70 70	Feed 802 lb/hr
1015		B	175	1.1	600	716		107.8	75, 75, 75	Feed 862 lb/hr
1030		B	175	1.0	575	867		124.5	75, 75, 75	Feed 917 lb/hr
1038	✓	B	180	1.1	600	927		131.1	78, 78, 78	Feed 1067 lb/hr
1047	1047								Checking slag, 55 1/2" depth, 18"	
1050		B	182	1.2	625	1048		143.9	78, 78, 78	
1100		B	170	1.1	600	1128		152.2	78, 78, 78	Feed 977 lb/hr
1110		B	170	1.15	625	1229		162.7	80, 80, 80	Call 11:07 tapping slag tap hole,
1130		B	175	1.1	600	1411		181.6	80, 80, 80	Feed 990 lb/hr, Slag temp
1139	✓	A	195	1.2	700	1518		192.6	80, 80, 80	Call 11:34 closed slag tap hole
1148	1148								Checking slag depth, 56 1/2" depth, 22" slag	
1150		A	185	1.3	725	1656		204.4	Cap dropped	
1200		A	200	1.3	750	1759		213.1	80, 80, 80	Feed 935 lb/hr, Slag 1575°C
1215		A	195	1.3	750	1930		227.3	80, 80, 80	Feed 1297 lb/hr, Slag 1547°C
1225		B	170	1.2	600	2103		237.0	Call 12:20 pulling 1st slag pot	
Had to go down a tap - too hot - got a hot spot on furnace by the tap hole										
tap temp ~ 1650-1700 °C										
1245		B	175	1.0	550	2249		257.7	70, 70, 70	Feed 1358 lb/hr, Slag 1518°C
1255		A	200	1.2	700	2444		279.3	70, 70, 70	Feed 1242 lb/hr, Slag 1643°C
1310		B	170	1.0	600	2479		282.8	80, 80, 80	Feed 1026 lb/hr, Slag 1550°C
1320		B	175	1.0	650	2532		288.1	82, 82, 82	Feed 1074 lb/hr, Slag 1622°C

Furnace Run Data Sheet

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Furnace Test: WCF-11

Date: 7/22/93

Real Time		Tap	Voltage, phase-to-phase	Current, kAmp	Power, kW	Power consum, kW-hr	Feed Addn's		Remarks
On	Off						lb	Time	
13:20		B	170	1.2	650	2571		292.3	85, 85, 85 Feed 1090.8 lb/hr slag, 1607°C
13:25		B	175	1.2	600	2632		298.2	82, 82, 82 Feed 1059 lb/hr slag, 1575°C
13:32	13:32					55 1/2"	17" slag		checking slag depth adding blue hopper to rec. bin
13:33	✓	B	170	1.2	700	2703		305.5	82, 82, 82 Feed 1071 lb/hr slag 1581°C
13:42	13:42					2783		313.2	Cleaning Traps, changing feed, slag tap 313.2
14:10		B	165	1.1	600	2797		314.6	82, 82, 82 Feed 849 lb/hr
14:30		B	160	1.3	700	2979		332.5	82, 82, 82 Feed 1091 lb/hr
14:37	✓	B	175	1.2	650	3075		341.9	82, 82, 82 OPEN Slag tap hole, 1678°C, Feed
	14:52					55 1/2"	18" slag depth		Checking slag depth
15:00		B	180	1.2	650	3295		363.7	82, 82, 82 Feed 1116 lb/hr slag 1458°C
15:15		B	175	1.2	700	3455		379.1	82, 82, 82 Feed 1275 lb/hr slag 1462°C
15:30		B	175	1.2	700	3632		396.3	82, 82, 82 Feed 1414 lb/hr 1465°C
15:45		B	175-180	1.2	700	3771		412.0	82, 82, 82 Feed 1454 lb/hr slag 1476°C
16:00	✓	B	175-180	1.2	600-700	3955		426.7	82, 82, 82 Feed 1379 lb/hr 1481°C
	16:10	B				4016		433.1	checking slag depth for video
	✓	B	57"	18" slag		4030		434.4	" " " " for real
16:15		B	175	1.2	650-700	4095		440.7	82, 82, 82 Feed 1354 lb/hr 1482°C
16:22		B	175	1.2	650-700	4280		458.6	82, 82, 82 Feed 1296 lb/hr 1483°C
17:00		B	180	1.2	700	4519		481.6	82, 82, 82 Feed 1440 lb/hr 1416°C
	17:27	B				4818		510.3	checking slag depth
	17:29	B	57"	18" slag		4826		511.3	" " " " 1411°C
17:30		B	180	1.2	550-750	4837		512.3	82, 82, 82 Feed 1377 lb/hr 1412°C
17:51		D	145	0.9	350	5076		535.7	30, 30, 30 Feed 227 lb/hr 1215°C
18:05		D	140	1.0	300	5120		513.9	30, 30, 30 still feeding all in the furnace
18:05						5134		546.5	adding top metal 516
18:13		D				5121		554.2	30, 30, 30 still feeding
18:15		D	150	1.0		5192		556.8	0, 0, 0 still feeding
18:17	✓								Power off
18:28		D							power on
8:22	✓	D				5214		562.5	power off, slow tap stream
									1333°C
									2 slag pots

Furnace Run Data Sheet

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Furnace Test: WCF-11

Date: 7/23/93

Real Time		Tap	Voltage, phase-to- phase, volts	Current, kAmp	Power, kW	Power consum, kW-hr	Feed Add's		Remarks
On	Off						lb	Time, minutes	
820		D	130	.4	1800	002			START w/ electrodes down
821		D	130	1.2	600	008			raising electrodes now Rho all
822		D	130	1.1	400	27			Adjusting up & down
825		D	137	.9	400	47			still adjusting or minimal ↓
826		D	135	1.0	400	54			ON AUTO Rho's to 30 → 35 → 40
830		D	135	1.2	0 → 600	76	8:34 →	14.7	45 45 45 Feed 800 lb/hr
836		C	150	1.0	400	123		17.9	lowering Arcl 0 → 600 kW feed
840		C	150	1.0	420	153		22.4	Go up a tap All Rho's HSS
845		B	180	1.0	500	188		27.3	60 60 60 Feed Ø
847		C	150	1.0	400	206		29.	GO TO TAP B All Rho's 60
900		C	150	1.0	425	271		40	Positive pressure back to 1 lost atom & minute
902		C	150	1.0	400	297		44	60 60 60 Feed 1243 lb/hr
915		C	150	1.0	450	377		55	60 60 60 Feed 1750 lb/hr
925	✓	C	150	1.0	450	460		67	60 60 60 Feed 1580 lb/hr
930		C	150	1.0	450	480		71	14" depth 55" Feed 1260 lb/hr
0943	✓	B	180	0.8	450	547		80.1	60 60 60
0957	0957								50 50 50 Feed 1297 lb/hr
0959		B							Plunger in dipper left in down position for 1 minute
	1000								Furnace over pressurized
1001		C	150	0.8	350	689			Open accidently hit feeder emergency shut off
1006		C	150	0.8	350	689		100.0	Replacing feeder caps
1014	✓	B	175	0.8	450	743		102.7	50, 50, 50 Feed 1204 lb/hr
1021	1021	B	170	0.9	475	800		116.6	50 50 50 Feed 1306 lb/hr
1024		A	195	0.7	450	828		120.2	50, 50, 50 Feed 1115 lb/hr
1030		A	200	0.9	550	865		124.8	38, 37, 38 Feed 1710 lb/hr
	1036								46, 43, 47 Feed 1605 lb/hr
1037		B	175	0.8	450	927		132.5	checking slag depth
1039		B	180	.8	475	959		137.2	46, 43, 47 Feed 860 lb/hr
1048		B	175	1.0	550	1010		143.3	40 60 60 Feed 882
100	✓	B	175	1.0	550	1096		153.2	68 66 68 Feed 938 lb/hr
1102	1101								68 66 68 Feed 897 lb/hr
1103									slag depth 55" → 18" depth
									getting unstable > 4KA → momentary power loss

Furnace Run Data Sheet

Page 2/3

Furnace Test: WCF-11

Elapsed

Date: 7/27/93

Real Time		Tap	Voltage, phase- to- phase	Current, kAmp	Power, kW	Power consum, kW-hr	Feed Addn's		Remarks
On	Off						lb	Time, min	
1104	1103	B	165	1.8	450	1133			Temperature 1460 °C
1104		B	175	1.0	6760	1149			Furnace power having moved
1115		B	175	1.0	550	1207		166.8	68, 66, 68 Feed 948 lb/hr, PEGG
1122									Yellow flame out of middle slot - UNSTABLE >4KA
	1128	B				1321		180.3	Power off to fix ID FAN, INEL
									Emptying traps, changing feed mix
12:05		B	175	1.2	650	1366		185.5	Manual mode 68, 66, 68
12:13		C	150	1.1	500	1384		187.2	AUTO 68, 66, 68 Feed 493 lb/hr
	12:28								slag depth & samples for INEL, adding lime
	12:32								Slag tags? NO, not high enough
12:35		C	150	1.1	500	1505		203.7	68, 66, 68 no feed, just lime
12:36		C		3 KA	spikes				(doesn't like lime)
12:40		C		2 KA	spikes				
12:44		B	180	1.0	550	1573		212.7	68, 66, 68 no feed
12:46		C				1596		215.6	spikes, no dry top, feed 914 lb/hr
12:50		C	150	1.0	450	1633		220.7	68, 66, 68 TAP on slag finally Feed
12:54		B	180	1.0	550	1649		222.9	68, 66, 68 Feed 1310 lb/hr
13:02		B	175	1.0	500	1740		233	68 68 68 Feed 2630 lb/hr TS=1360
1305	1301	B	175	1.0	550	1759			FEED (17" 53.5") 2410-660ge TS=
1305		B	180	1.1	600	1780	For		Reo's to 75 → 1:07 (80) → 75
1314		B	180	1.0	550	1814		242	Reo's 72 feed 1150 lb/hr
1315		C	150	1.0	450	1824		243.5	SPIKES ∴ B → C Feed 1644 lb/hr
1325		C	150	1.0	450	1914		255	
1330		C → B	180	1.0	600-550	1964		262	60m up to 85 - no change - 500 kW ∴ C → B 65 m 11000 (lime at
1345		B	180	1.0	550	2056		272.2	Slag depth check Spikes
1354		B	175	0.9	500	2142		282.7	Slag Tap again 65, 64, 67 slag 1682 °C
1400		B	182	0.9	500	2195		288.9	68, 68, 68 Feed 1589 lb/hr
1406		B	180	1.0	550	2242		294.5	70, 70, 70 Feed 1850 lb/hr
1409		B	180	1.05	575	2267		297.4	74, 74, 74 Feed 1803 lb/hr Running
✓	1410								FIXING Plumb bob pulley
1415									ADDING LIME, TAKING 1st slag pot out of pit
next page									

Page 3/3:

Date: 7/23/93

Real Time		Tap	Voltage, phase to-phase Volts	Current, kAmp	Power, kW	Power consum, kW-hr	Feed Addn's		Remarks
On	Off						lb	Time	
1427		B	175	1.1	600	2433		315.3	74, 74, 74
1429						2440			CERium Add'n 3 pieces
1430		B	180	1.0	550	2446		316.8	74, 74, 74 Feed 1936 lb/hr
	1437					Slag depth	55"		15 1/2" slag
1500		B	180	1.0	600	2682		342.2	74, 74, 74 Feed 1780 lb/hr
1515		B	180	1.1	600	2872		362	74, 74, 74 Feed 1962 lb/hr
1530		B	180	1.0	600	3010		377	74, 74, 74 Feed 1914 lb/hr
1532		B							ADD'ing lime to metering bin LOST FANS
1545		A	200	1.2	600-650	3163		394	try get better 65, 65, 65 Feed 15
1547		A	205	1.2	700	3199		397	70 70 70
1555		B	180	1.3	650-700	3254		402	90 80 80 - 15" 54"
1558		C	150	1.3-1.4	650	3291		407	95 95 95 13 50
1605		C-B	150	1.5	630				8
1607		B	180	1.5	700	3360			85 85 95
1608		B	180	1.3	700	3378			90 90 90 still have sec-2 rock
1625		D	145	0.5	250	3509		428	13-51 still pouring
1626			Metal top hole open						
1629		D				3513		430	ON MANUA
1630	1630	D				3520		431.4	<Power off>

Appendix B-4

Test Log

The Test Log was used to document the hearth depth prior to each test, and to record the height of the molten pool during each test. A number of other important process parameters, including many that are automatically recorded using the data acquisition system, are recorded on this data log. This log enabled the evaluation and comparison of the key feed, furnace and offgas parameters during each test to enable real time evaluation of the accuracy and performance of the process instrumentation and prompt control of process variations. The following pages include the Test Log pages for the baseline tests.

TEST LOG

WCF- 11

Date 18 July 93

Hearth Erosion

Depth thermocouple port to bottom (in): Initial 46"
Time 10 38 Intermediate 46"
Time 11 01 Intermediate 47"
Time Intermediate
Time Intermediate
Final
Erosion

Conditions During Test

Chan	2	4	7	8	12	13	14	15	16	19	Tap	Rh
Time	T ₂	T ₄	T ₇	T ₈	P ₃	P ₄	P ₅	V ₁	V ₂	kW		
0708	15.8	27.8	18.7	18.4	7.12	7.9	0.69	370.42	0.5 ~570	-	-	-
0725	15.0	31.2	18.5	18.3	7.95	8.72	8.73	411.47	0.54 ~600	-	-	-
0741	14.7	47.5	18.5	18.2	9.0	9.93	0.83	427.6	0.64 ~645	-	-	-
0807	15.2	55.5	18.5	18.2	9.2	10.13	1.18	447.28	0.65 ~650	-	-	=
0833	15.6	57.1	18.3	18.1	9.0	9.95	0.86	472.32	0.63 ~640	-	-	-
0857	15.9	57.9	18.3	18.1	9.37	10.36	0.89	427.67	0.67 ~660	-	C	POWER ON - DIDN'T COUPLE
0924	16.2	58.3	18.2	17.8	9.27	10.23	0.90	485.67	0.65 ~650	-	D	POWER ON 0927
0932	69.9	116.3	18.0	17.8	10.19	11.08	0.83	447.7	0.62 G30	-287.5	D	~0
0956	42.2	73.0	21.7	17.7	9.09	10.32	0.93	451.31	0.69 ~665	-294.6	C	~0
1009	33.2	68.1	37.8	17.6	9.19	10.47	0.91	486.09	0.66 ~655	-293.14	C	30
1026	32.1	67.0	62.3	17.5	9.35	10.4	0.92	460.57	0.62 ~680	-292.41	C	30
1040	31.4	67.6	70.7	17.5	8.99	9.99	0.89	458.67	0.64 ~640	-292.44	C	30
1042												
1047	38.8	68.0	78.8	17.3	9.02	10.01	0.89	481.1	0.67 ~660	-293.17	C	30
1053												
1121	32.1	69.3	129.6	18.0	8.85	9.91	0.90	511.25	0.64 ~645	-292.21	C	50
1218	29.3	67.2	425.7	22.6	9.03	10.09	0.93	480.39	0.66 ~645	-293.3	D	50
1230	32.1	68.6	457.79	24.6	8.88	9.96	0.94	514.08	0.73 ~685	-293.15	D	50
1249	41.1	72.9	500.39	28.5	8.91	10.0	0.94	518.12	0.66 ~655	-293.13	C	50

TEST LOG

WCF- 11Date 18 July 93Hearth Erosion

Depth thermocouple port to bottom (in): Initial
 Time 1255 Intermediate 48.5
 Time 1427 Intermediate 52.0
 Time 1558 Intermediate 52.5
 Time Intermediate
 Final
 Erosion

Conditions During Test

Chan	2	4	7	8	12	13	14	15	16	19	Tap	Rh	SLAG Temp
Time	T ₂	T ₄	T ₇	T ₈	P ₃	P ₄	P ₅	V ₁	V ₂	kW			
1301	43.7	76.1	521.7	31.4	8.85	9.97	0.93	487.26	^{0.68} ~660	-	C	50	
1308	41.7	76.1	539.0	33.5	9.84	9.96	0.93	513.15	^{0.68} ~660	-	C	40	1470
1324	38.8	74.8	568.79	37.7	9.13	10.35	0.97	501.54	^{~680} 0.72	-	C	40	1825
1343	45.2	79.1	612.40	43.7	9.10	9.97	0.99	485.35	^{~690} 0.74	-	C	50	GAS ANAL have gas
1355	50.50	82.80	642.79	47.7	9.06	10.26	0.97	486.91	^{0.69} ~665	-	C	50	
1412	55.3	86.20	686.79	53.7	9.14	10.31	0.95	524.97	^{0.68} ~660	-	C	60	
1417	59.6	88.8	730.09	60.0	8.86	10.05	0.93	538.00	^{0.72} ~680	-	C	60	
1453	63.00	91.9	809.29	70.9	9.10	10.33	1.33	506.01	^{0.68} ~665	-	C	50	
1511	62.5	91.9	853.79	78.00	9.18	10.44	1.01	519.17	^{0.69} ~665	-	C	50	
1520	60.3	94.9	881.79	82.2	9.37	10.59	0.98	499.85	^{0.64} ~640	-	C	50	1530 SA TEMP
1542	63.70	93.1	935.20	91.50	9.67	10.93	1.01	497.78	^{0.68} ~660	-	C	50	
1558	63.90	94.30	976.50	96.2	9.52	10.85	1.03	488.82	^{0.72} ~680	-	C	50	
1608	66.48	96.60	1,005	99.60	9.53	10.86	1.02	519.96	^{0.72} ~680	-	C	50	Turn on HEARTH F.
1624	69.40	97.20	1,032	93.60	9.60	10.92	1.02	540.27	^{0.73} ~685	-	C	50	
1655	72.20	100.70	1,081	109.30	9.67	11.06	1.04	553.15	^{0.74} 690	-	C	60	
1667	73.20	102.30	1,120	116.20	9.84	11.19	1.02	560.48	^{0.75} 695	-	C	75	FAN ON
1525	77.20	99.80	1,154	114.68	9.51	10.89	1.04	588.32	^{0.73} 685	-	C	75	
1536	74.70	100.80	1,177	120.30	9.60	10.95	1.04	565.10	^{0.76} 700	-	-	0	

WCF- 11

TEST LOG

Date 7-19-93

Hearth Erosion

Depth thermocouple port to bottom (in): Initial 49 1/2
 Time _____ Intermediate _____
 Time _____ Intermediate _____
 Time _____ Intermediate _____
 Time _____ Intermediate _____
 Final _____
 Erosion _____

Conditions During Test

T₁

Chan	2	4	7	8	12	13	14	15	16	19	Tap	Rh
Time	T ₂	T ₄	T ₇	T ₈	P ₃	P ₄	P ₅	V ₁	V ₂	kW		
0751	21.50	55.20	—	102.30	9.10	10.12	0.89	433.91	164 645	-0.14	—	—
0812	22.50	55.70	—	99.50	9.63	10.74	0.97	462.07	0.73 685	-0.14	—	—
0818	469.70	81.40	—	98.6	11.41	12.51	0.48	333.04	1.77 705		D	0
0821	584.7	116.30	—	98.30	11.14	12.20	0.90	418.70	1.66 655	150	D	20
0825	145.64	88.40	—	97.50	10.71	12.00	1.00	445.23	1.73 685	400	D	40
0836	142.00	74.80	—	96.50	10.4	11.40	1.01	463.41	1.71 675	450	D	60
0851	181.89	71.10	112.60	94.60	9.94	11.20	1.00	498.73	1.74 690	475	D	60 55 60
0904	194.89	71.20	118.68	93.20	10.48	11.66	1.01	448.34	1.72 680	450	D	60 55 60
0918	256.58	75.40	133.60	92.10	10.78	11.96	1.03	473.10	1.76 700	450	D	60 58 60
0933	280.10	76.70	139.00	91.30	9.41	11.20	1.09	440.35	1.78 710	450	D	60 58 60
0942	262.79	77.50	147.81	90.80	10.73	11.97	1.00	445.57	1.71 675	450	D	60 58 60
0953	221.70	76.40	115.90	90.70	9.94	11.49	1.04	422.39	1.77 705	450	D	60 58 60
1020	194.8	84.10	130.4	92.80	10.93	12.30	1.12	502.12	1.81 725	725	A	60 58 60
1030	177.0	86.1	129.6	94.00	10.73	12.10	1.14	423.14	1.82 730	600	A	65 65 65
1047	181.10	82.1	132.6	98.10	10.75	12.13	1.13	459.13	1.79 715	600	A	65 65 65
1103	84.10	82.7	137.6	104.00	10.80	12.20	1.13	471.91	1.80 720	600	A	65 65 65
1123	74.20	82.9	139.4	111.98	10.08	11.45	1.12	569.98	1.80 720	625	A	65 65 65
1133	71.60	82.50	138.4	117.40	9.34	10.81	1.06	584.60	1.75 695	600	A	65 65 65
1200	67.80	82.50	143.1	131.61	9.53	10.80	1.06	533.53	0.74 675	600	A	65 65 65

T₅ = 73.6°C

WCF- 11

TEST LOG

Date 19 July

Hearth Erosion

Depth thermocouple port to bottom (in): Initial _____
 Time 12:10 Intermediate 49 1/2 _____
 Time _____ Intermediate _____
 Time _____ Intermediate _____
 Time _____ Intermediate _____
 Final _____
 Erosion _____

Conditions During Test

Chan	2	4	7	8	12	13	14	15	16	19	Tap	Rh	N	m	S
Time	T ₂	T ₄	T ₇	T ₈	P ₂	P ₄	P ₅	V ₁	V ₂	kW					
1270	63.5	85.50	-	143.60	9.61	10.88	1.08	535.78	1.73 ~685	600	A	65	65	65	
1240	71.00	86.70	-	154.8	9.21	10.51	1.07	731.01	1.74 ~640	600	A	65	65	65	
1257	66.10	85.00	-	163.80	9.37	10.62	1.03	812.71	1.77 ~650	600	A	65	65	65	
1310	61.40	90.70	-	171.10	8.69	10.40	1.05	829.51	1.74 ~690	600	A	65	65	65	
1328	126.80	88.50	-	179.58	8.78	10.65	1.09	826.90	1.72 ~690	625	A	65	65	65	
1331	120.48	87.50	-	183.09	8.57	9.82	1.06	557.8	1.74 ~690	625	A	65	65	65	
1349	70.00	84.30	-	194.80	8.56	9.82	1.10	462.88	1.74 ~690	625	A	65	65	65	Shut down
1356	65.00	83.40	-	198.09	8.57	9.81	1.06	487.19	1.70 ~669	625	A	65	65	65	open
1411	61.50	83.30	-	207.89	8.72	9.90	1.04	465.10	1.70 ~669	625	A	65	65	65	
1424	59.70	84.20	-	216.10	8.41	9.72	1.04	560.01	1.69 ~665	600	A	65	65	65	
1442	60.80	84.70	-	228.39	8.31	9.64	1.08	545.01	1.72 ~680	600	A	65	65	65	
1506	67.70	86.10	-	243.39	8.30	9.57	1.10	555.97	1.70 ~669	600	A	65	65	65	
1519	65.70	85.60	-	252.38	8.10	9.60	1.11	525.62	1.72 ~680	600	A	65	65	65	
1542			-												Penetration
1758	66.50	85.40	-	283.00	8.23	9.73	1.10	567.85	1.70	750	D	80	80	80	
1635	61.20	85.90	-	314.00	7.72	9.72	1.08		1.69	600	B	70	70	70	
1710	96.90	87.90	-	336.70	7.38	8.58	1.04	905.21	~660	700	A	65	65	65	

WCF- 11

TEST LOG

Date 20 July

Hearth Erosion

Depth thermocouple port to bottom (in): Initial 50"
 Time 1200 Intermediate 55"
 Time Intermediate
 Time Intermediate
 Time Intermediate
 Final
 Erosion

Conditions During Test

Chan	2	4	7	8	12	13	14	15	16	19	Tap	Rh
Time	T ₂	T ₄	T ₇	T ₈	P ₃	P ₄	P ₅	V ₁	V ₂	kW		
0831	17.1	62.4	51.90	114.20	1.46	1.97	0.23	-2.30	0.08	-0.14	—	—
0846	18.1	59.9	51.20	110.90	9.40	10.60	1.01	370.42	6.65	—	—	—
0902	18.3	58.9	50.40	107.70	9.68	10.87	1.05	321.81	6.75	—	—	—
0909	60.0	61.6	50.10	106.20	11.15	12.46	1.13	283.67	7.22	300	D	50 50 50
0917	123.40	72.0	49.90	105.10	11.98	13.42	1.20	229.39	7.50	400	C	50 50 50
0928	105.90	69.10	49.50	103.10	11.12	12.57	1.20	271.00	7.46	350	C	60 60 60
0930	93.70	68.90	51.80	101.90	11.03	12.47	1.19	243.83	7.30	450	C	60 60 60
0949	68.10	70.30	60.00	102.00	11.69	13.12	1.20	248.71	7.34	450	B	55 55 55
1010	46.80	72.70	73.90	106.90	10.52	12.50	1.23	267.0	7.06	500	A	40 40 40
1022	46.80	76.00	80.60	112.40	10.19	12.34	1.23	276.59	7.50	450	C	40 40 40
1039	51.40	75.00	100.20	127.50	11.43	12.92	1.21	301.11	7.38	500	A	40 40 40
1107	60.40	80.00	112.80	153.50	11.08	12.57	1.18	284.77	7.32	500	A	40 40 40
1117	55.30	78.70	262.09	141.70	11.18	12.69	1.17	334.69	7.36	500	A	40 40 40
1128	58.60	80.40	314.50	141.80	11.25	12.77	1.19	308.07	7.36	500	A	40 40 40
1136	64.00	83.20	337.29	144.00	11.32	12.02	1.17	386.95	7.36	500	A	40 40 40
1150	68.40	86.70	381.40	145.89	11.39	12.89	1.18	301.50	7.28	500	A	40 40 40
1202	72.80	91.00	396.20	155.89	11.26	12.74	1.18	324.85	7.44	600	A	60 60 60
1213	73.3	89.70	411.60	166.89	11.56	13.01	1.17	360.79	7.24	600	A	60 60 60
1223	61.90	91.20	419.70	174.00	18.41	12.84	1.18	348.42	7.28	500	A	45 45 45

Power on 0906

OPEN
TAP

WCF- 11

TEST LOG

Date 7-20

Hearth Erosion

Depth thermocouple port to bottom (in): Initial _____
 Time _____ Intermediate _____
 Time _____ Intermediate _____
 Time _____ Intermediate _____
 Time _____ Intermediate _____
 Final _____
 Erosion _____

Conditions During Test

Chan	2	4	7	8	12	13	14	15	16	19		Tap	Rh	
Time	T ₂	T ₄	T ₇	T ₈	P ₃	P ₄	P ₅	V ₁	V ₂	kW			N M S	
1231	60.20	90.90	425.50	179.20	11.16	12.74	1.14	289.26	^{.78} 716	600		A	60 60 60	
1243	67.20	92.00	432.70	184.60	12.30	13.44	1.28	349.86	^{.86} ~750	600		A	60 60 60	
1252	70.80	91.80	434.10	182.80	12.03	13.69	1.28	324.85	^{.86} ~750	575		A	60 60 60	
1259	71.20	91.50	426.74	192.10	12.19	13.77	1.27	281.04	^{.84} ~742	600		A	60 60 60	
1310	68.80	90.00	439.10	196.39	12.03	13.67	1.28	292.01	^{.89} ~762	600		A	60 60 60	
1320	66.80	90.40	444.60	199.60	11.46	13.20	1.34	280.76	^{.85} ~746	600		A	60 60 60	
1330	65.50	90.50	440.20	202.10	11.76	13.39	1.24	278.42	^{.84} ~742	600		A	60 60 60	
1340	61.60	92.10	485.89	204.80	11.61	13.20	1.28	280.78	^{.90} 764	600		A	65 65 65	
1356	73.70	95.20	394.74	208.39	11.32	13.25	1.29	336.25	^{.83} ~738	600		A	65 65 65	
1405	83.00	93.50	376.89	210.10	10.36	12.35	1.38	333.76	^{.90} ~764	400		B	45 45 45	
1417	71.40	88.60	386.29	209.70	11.08	12.82	1.34	389.89	^{.84} ~742	400		B	45 45 45	
1430	59.80	82.50	396.20	211.50	11.10	12.87	1.35	341.31	^{.86} ~750	400		B	45 45 45	
1441	66.10	86.10	396.60	211.60	9.73	11.19	1.20	313.04	^{.79} ~720	400		B	45 45 45	
1454	60.20	84.00	389.39	210.70	9.00	10.04	1.32	295.70	^{.78} ~724	400		C	60 60 60	
1505	60.30	84.90	422.74	210.50	9.48	10.80	1.23	330.74	^{.79} ~720	375		C	60 60 60	
1518	59.00	84.20	419.89	209.60	9.39	10.84	1.18	343.40	^{.80} ~724	375		C	60 60 60	
1529	58.00	83.70	417.20	209.68	9.60	11.20	1.20	347.14	^{.68} ~659	410		C	60 60 60	
1548	57.80	85.80	410.60	207.50	9.29	11.40	1.19	338.23	^{.75} ~704	350		C	60 60 60	
1608	58.60	83.10	404.28	205.23	10.04	11.56	1.18	347.64	^{.76} ~708	410		C	60 60 60	

TEST LOG

WCF- 11

Date 7-20

Hearth Erosion

Depth thermocouple port to bottom (in): Initial _____
 Time _____ Intermediate _____
 Time _____ Intermediate _____
 Time _____ Intermediate _____
 Time _____ Intermediate _____
 Final 63"
 Erosion _____

Conditions During Test

Chan	2	4	7	8	12	13	14	15	16	19	Tap	Rh
Time	T ₂	T ₄	T ₇	T ₈	P ₃	P ₄	P ₅	V ₁	V ₂	kW		
1627	58.40	82.10	342.70	203.80	9.87	11.52	1.22	300.16	^{.79} ~665	390	C	60 60 60
1638	61.90	84.90	346.00	201.70	9.27	11.15	1.20	376.23	^{.82} ~730	380	C	60 60 60
1714	58.40	82.90	389.70	193.10	8.54	10.36	1.19	444.94	^{.75} ~695	390	C	60 60 60
1727	55.70	82.90	387.70	198.68	8.54	10.80	1.21	436.38	^{.76} ~700	420	C	60 60 60
1738	57.50	84.50	386.70	189.50	8.50	10.13	1.21	489.81	^{.76} ~700	390	C	60 60 60
1752	57.70	86.80	385.15	188.20	8.53	10.10	1.20	500.70	^{.73} ~685	400	C	60 60 60
1813	61.90	86.40	383.0	187.39	8.75	9.71	1.16	518.94	^{.71} ~675	400	C	60 60 60
1826	59.60	84.20	381.89	186.89	7.69	9.17	1.14	461.07	^{.71} ~675	200	D	0 0 0
1846	49.20	77.90	—	225.00	8.49	9.89	1.16	—	^{.62} ~636	200	D	0 0 0
1915	48.60	71.00	—	248.70	8.11	9.66	1.18	—	^{.72} ~680	600	B	70-70-70

54" lance
still not
working

WCF- 11

TEST LOG

Date 7-21-93Hearth Erosion

Depth thermocouple port to bottom (in): Initial 49 1/2
 Time 0928 Intermediate 50
 Time 1020 Intermediate 50 1/2
 Time 1131 Intermediate 53
 Time _____ Intermediate _____
 Final _____
 Erosion _____

Conditions During Test

Chan	2	4	7	8	12	13	14	15	16	19		Tap	Rh
Time	T ₂	T ₄	T ₇	T ₈	P ₃	P ₄	P ₅	V ₁	V ₂	kW			
0811	15.40	61.00	52.10	150.20	4.41	4.90	0.59	57.83	^{0.31} ~452	-	-	-	-
0835	15.40	59.00	49.10	145.10	10.05	11.44	1.23	466.53	^{1.77} ~705	-	-	-	-
0845	19.20	63.60	48.50	142.89	10.99	12.50	1.23	458.25	^{0.80} ~722	~244	D	20-20-20	
0852	24.60	65.80	48.10	141.80	10.77	12.29	1.30	470.76	^{0.83} ~734	~225	D	20-20-20	
0903	26.40	66.50	48.20	118.30	11.62	13.29	1.38	471.67	^{0.91} ~768	~270	D	20-20-20	
0913	27.40	67.80	47.60	106.00	11.50	13.23	1.38	455.63	^{1.12} ~770	~285	D	20-20-20	
0933	29.20	71.60	47.10	90.60	12.46	14.28	1.44	471.84	^{1.13} ~774	~570	B	70-70-70	
0956	50.40	82.00	56.30	80.20	12.67	14.59	1.42	473.75	^{1.17} ~790	~540	B	70-70-70	
1008	53.80	83.70	60.30	76.70	12.50	14.37	1.49	437.09	^{0.97} ~790	~500	B	70-70-70	
1022	56.70	87.60	64.60	73.30	12.81	14.82	1.51	493.20	^{0.99} ~800	~525	B	70-70-70	
1038	63.60	86.00	64.20	70.70	12.26	14.14	1.47	586.72	^{0.97} ~790	~510	B	70-70-70	
1049	70.00	86.60	63.20	69.50	12.15	14.07	1.48	484.42	^{0.97} 790	~510	B	70-70-70	
1057	69.30	88.30	61.90	68.60	12.20	14.12	1.47	518.26	^{0.94} ~778	~525	B	70-70-70	
1123	68.20	87.10	57.70	66.70	11.30	13.32	1.47	514.51	^{0.95} ~782	~560	B	70-70-70	
1133	66.30	86.00	56.80	67.10	10.56	12.59	1.45	520.09	^{0.91} ~778	~510	B	70-70-70	
1155	60.10	85.70	56.30	68.50	11.25	13.17	1.43	512.46	^{0.92} ~770	~510	B	70-70-70	
1210	58.90	85.60	56.90	69.50	10.83	12.77	1.41	535.88	^{1.90} ~764	~495	B	70-70-70	
1228	55.30	85.40	58.10	70.40	10.52	12.51	1.40	521.79	^{1.90} ~764	~555	B	70-70-70	
1249													

Power
off for
change

TEST LOG

WCF- 11

Date 21 July 93

Hearth Erosion

Depth thermocouple port to bottom (in): Initial _____
 Time 1455 Intermediate 55"
 Time _____ Intermediate _____
 Time _____ Intermediate _____
 Time _____ Intermediate _____
 Final 24 1/2"
 Erosion _____

Conditions During Test

Chan	2	4	7	8	12	13	14	15	16	19	Tap	Rh	on after		
Time	T ₂	T ₄	T ₇	T ₈	P ₃	P ₄	P ₅	V ₁	V ₂	kW		N	m	s	
1317	58.90	73.90	63.50	74.60	9.96	11.61	1.77	451.81	~708 ^{.77}	525	B	70	70	70	
1328	151.60	81.40	65.60	76.30	11.45	13.45	1.41	470.92	764 ^{.10}	510	B	70	70	70	
1337	131.50	84.5	66.50	77.00	11.15	13.50	1.38	515.71	~743 ^{.85}	345	C	40	40	40	
1346	101.20	81.30	67.60	79.30	10.77	12.79	1.36	503.26	~743 ^{.85}	405	C	60	60	60	
1353	76.90	80.70	68.10	80.90	10.74	12.78	1.36	576.91	~739 ^{.84}	375	C	60	60	60	
1405	55.00	81.00	69.00	84.50	10.38	12.46	1.31	538.21	~735 ^{.83}	375	C	60	60	60	
1424	48.70	81.60	72.10	87.80	14.87	13.11	1.37	522.07	~740 ^{.84}	495	B	60	60	60	
1435	61.80	85.30	74.20	89.20	11.02	13.37	1.38	539.77	~772 ^{.80}	400	C	60	60	60	
1448	59.20	83.20	76.10	91.90	11.20	13.60	1.39	534.25	~751 ^{.87}	360	C	40	40	40	
1504	52.30	81.60	79.30	93.60	10.53	12.95	1.37	534.25	~751 ^{.87}	420	C	40	40	40	
1524	53.50	78.9	80.30	96.80	10.91	13.39	1.38	511.95	~744 ^{.85}	405	C	40	40	40	
1600	61.90	85.4	80.40	104.90	11.05	13.72	1.42	496.95	~764 ^{0.90}	550	B	72	66	70	
1620	67.50	89.00	89.10	112.60	11.37	13.26	1.48	499.29	~792 ^{0.92}	480	B	72	66	70	
1700	81.20	95.5	103.2	122.4	10.88	13.03	1.51	479.20	~792 ^{0.97}	700	B	88	88	88	
1715	86.10	99.0	108.6	134.0	10.83	12.96	1.49	521.02	~792 ^{0.96}	700	B	88	88	88	
1730	88.40	100.3	113.9	141.39	11.09	12.15	1.48	541.73	~792 ^{0.92}	725	B	88	88	88	
1733	99.80	94.00	-	144.60	10.71	12.82	1.48	472.92	~792 ^{0.92}	500	D	66	66	66	penetration

WCF- 11

TEST LOG

Date 22 July

Hearth Erosion

Depth thermocouple port to bottom (in): Initial 49 1/2
 Time 1047 Intermediate 55
 Time 1148 Intermediate 56 1/2
 Time Intermediate
 Time Intermediate
 Final
 Erosion

Conditions During Test

Chan	2	4	7	8	12	13	14	15	16	19	Tap	Rh
Time	T ₂	T ₄	T ₇	T ₈	P ₃	P ₄	P ₅	V ₁	V ₂	kW		
0820	19.70	58.60	37.40	98.20	11.18	12.64	1.30	502.26	0.85 ~745	-	-	-
0844	130.30	71.70	36.40	94.50	11.97	13.62	1.36	536.94	0.90 765	300	D	25 25 25
0854	127.80	72.6	35.80	92.80	10.83	12.08	1.35	472.69	0.83 8.93	-	D	25 25 25
0900	119.90	72.9	35.90	92.20	10.29	12.06	1.33	451.6	0.82 10.94	-	C	40 40 40
0910	96.30	73.00	36.80	91.40	10.53	12.21	1.32	462.07	0.86 10.44	-	C	40 40 40
0917	82.20	72.70	37.40	91.50	10.66	12.31	1.33	434.26	0.87 12.96	-	B	50 50 50
0920	75.90	78.10	37.60	91.70	11.99	13.53	1.25	433.13	0.80 12.46	-	C	50 50 50
0933	56.60	75.30	40.30	94.10	11.16	12.97	1.36	462.67	0.86 15.83	-	B	50 50 50
0940	51.70	77.10	44.20	96.50	11.22	12.93	1.34	443.73	0.86 14.98	-	A	45 45 45
0950	54.30	82.10	51.20	100.90	11.87	13.73	1.39	463.29	0.89 14.99	-	B	45 45 45
1003	52.50	81.50	52.80	108.40	11.68	13.61	1.41	452.28	0.89 12.96	-	B	55 55 55
1015	56.10	82.90	55.30	117.60	11.77	13.37	1.41	456.24	0.92 16.50	-	B	75 75 75
1024	60.40	84.00	58.20	124.80	11.83	13.31	1.41	445.14	0.90 15.49	-	B	75 75 75
1047	70.10	88.10	68.60	146.60	11.79	13.76	1.41	487.62	0.91 540	-	B	78 78 78
1102	67.30	86.40	77.30	160.80	11.71	13.68	1.42	455.63	0.91 560	-	B	78 78 78
1119	62.20	83.80	85.20	179.70	11.36	13.57	1.40	460.94	0.89 560	-	B	80 80 80
1143	64.60	85.30	94.80	203.30	11.29	13.28	1.41	466.10	0.80 630	-	B	80 80 80
1208	73.00	96.30	102.60	178.60	11.03	13.00	1.32	508.00	0.82 630	-	B	80 80 80
1243	61.30	97.90	173.89	189.80	11.10	13.19	1.38	451.73	0.76 16.99	-	B	70 70 70

②

Date 22 July

Depth thermocouple port to bottom (in):

to bottom (in):		Initial
Time	1331	Intermediate 55 1/2"
Time	1452	Intermediate 53 1/2"
Time	1610	Intermediate 57"
Time	1729	Intermediate 57"
		Final
		Erosion

Chan	2	4	7	8	12	13	14	15	16	19			
Time	T ₂	T ₄	T ₇	T ₈	P ₃	P ₄	P ₅	V ₁	V ₂	kW	Tap	Rh	
1311	64.20	97.00	208.70	207.50	11.02	13.16	1.31	434.47	~768 0.89	585	B	N S 80 80 80	
1332	70.30	95.50	226.80	221.50	10.00	12.36	1.40	443.32	~768 0.91	570	B	82 82 82	
1418	211.20	79.60	250.39	236.80	10.72	12.45	1.26	344.39	~730 1.82	570	B	82 82 82	
1435	154.80	83.10	253.89	238.89	10.93	12.76	1.30	366.60	~747 1.86	630	B	82 82 82	
1440	109.30	86.20	256.29	241.00	11.08	12.98	1.32	460.01	~747 1.86	585	B	82 82 82	
1453	87.40	89.40	259.29	243.39	10.92	12.86	1.32	394.20	~747 1.86	585	B	82 82 82	
1530	82.1	92.90	272.39	244.6	10.83	12.90	1.34	405.03	~747 0.85	600	B	82 82 82	
1611	79.9	94.70	293.50	241.89	10.94	13.17	1.36	372.61	~747 0.86	615	B	82 82 82	
1639	78.3	94.60	309.00	240.50	10.72	13.02	1.36	391.66	~747 0.86	600	E	82 82 82	
1732	77.10	97.00	331.89	234.50	10.51	12.76	1.37	362.67	~755 0.88	600	E	82 82 82	
1820	60.20	75.30	-	289.89	7.51	9.24	1.08	-	-	-	-	-	12

TEST LOG

WCF- 11

Date 7-23-93

Hearth Erosion

Depth thermocouple port to bottom (in): Initial 53"
 Time 9:25 Intermediate 55
 Time 10:18 Intermediate 56
 Time 11:01 Intermediate 55
 Time 12:25 Intermediate
 Final
 Erosion

Conditions During Test

Chan	2	4	7	8	12	13	14	15	16	19	Tap	Rh
Time	T ₂	T ₄	T ₇	T ₈	P ₅	P ₄	P ₈	V ₁	V ₂	kW		^m s
0822	39.1	78.10	-	118.30	12.03	13.91	1.21	361.51	^{0.81} .726	~400	D	0 0 0
0835	73.3	100.6	-	115.6	11.75	14.12	1.32	395.34	.830	360	D+C	55 55 55
0845	59.0	81.60	-	114.30	11.41	12.75	1.26	381.17	.790	400	C+D	60 60 60
0849	55.1	79.4	-	113.60	11.46	13.62	1.34	402.34	.860	450	C	60 60 60
0855	55.5	75.1	45.6	112.60	10.50	12.52	1.27	322.54	.810	350	C	60 60 60
0910	58.3	78.7	45.6	111.00	11.52	13.57	1.34	402.13	.850	440	C	60 60 60
0925	58.4	79.3	44.90	112.60	10.08	12.82	1.39	408.50	.880	400	C	60 60 60 55" 14
1007	98.9	101.5	46.3	138.60	11.66	13.98	1.42	418.41	.900	400	C	50 50 50
1017	104.7	112.7	47.2	150.39	12.01	14.29	1.35	439	.890	420	B	50 50 50 56"
1025	116.6	126.2	48.3	156.1	12.25	14.69	1.39	450	.91	500	A	40 40 40
1030	119.2	^(275°F) 134.3	50.0	162.39	12.34	14.7	1.38	465	.87	430	A+B	45 45 45 60 0
1037	124.6	131.2	52.8	170.6	12.12	14.6	1.40	426	.87	370	B	50 50 50
→ 1045	131.0	138	56.9	172.1	12.69	15.24	1.38	434	.92	480	B	68 68 68 55"
1100	131	133.0	63.8	161.7	12.86	15.24	1.47	435	.93	480	B	68 68 68
1110	145.8	132.6	69.0	162.4	12.59	15.08	1.47	467	.93	480	B	68 68 68
1120	134.8	139.6	75.7	165	12.70	15.27	1.44	502.51	.93	440	B	68 68 68
1125	135	144.5	83.1	167.8	12.47	14.99	1.44	515	.94	Ø	B	Power off
1145	62.7	93.9	89.6	177.9	-	-	-	-	-	-	B	" "
1200	48.9	98.6	93.5	188.6	-	-	-	-	-	-	B	Power on

Turned
plastic
fin on

Power on
again
at 11:45

TEST LOG

WCF- 11

Date 7-23-93

Hearth Erosion

Depth thermocouple port to bottom (in):

Initial	
Time <u>13:09</u>	Intermediate <u>53.5"</u> 17" slag depth
Time <u>13:45</u>	Intermediate <u>54.0</u> 20" slag depth
Time <u>14:35</u>	Intermediate <u>55</u> 15 1/2" slag depth
Time <u>15:45</u>	Intermediate <u>52 1/2</u> 14 3/4" slag depth
Final	<u>51" @ 16:37</u>
Erosion	

Conditions During Test

Chan	2	4	7	8	12	13	14	15	16	19		
Time	T ₂	T ₄	T ₇	T ₈	P ₁₂	P ₁₃	P ₁₄	V ₁₅	V ₁₆	kW	Tap	Rh
1203	47.3	84.2	93.2	190.5	9.48	11.52	1.33	439	.76	570	B	66 66 64 manual
1220	73.8	97.1	95.9	201.6	10.53	12.93	1.33	417	.75	410	C	68 68 68
1230	65.6	82.5	97.7	207.8	9.99	12.62	1.36	451	.77	460	C	68 68 68
1240	59.2	85.7	99.8	213.5	10.24	12.86	1.34	431	.76	500	B	68 68 68
1247	70.9	101	103	219.0	11.90	14.80	1.39	454	.50	400 → 600	C → B	68 68 68 12:43-13:47 TAPPING
1325	122	145	122.2	236.6	13.51	15.96	1.54	434	.94	450	C	72 72 72
1345	89.3	102.7	131.1	243.81	12.64	15.04	1.65	482	.97	500	B	65, 64, 66
1425	68.2	96.3	150.1	259.2	13.14	15.48	1.65	536	.98	500	B	75, 74, 74
1450	63.40	93.9	159.3	263.5	13.04	15.44	1.66	558	.98	580	B	74, 74, 74
1600	70.3	88.8	191.3	276.1	8.51	10.4	1.25	499.64	.71	700	C	95, 95, 95
1632	72.7	85.5	—	319.29	7.32	8.83	1.11	—	.59	—	D	0, 0, 0

Sampling
to N feed
from M feed
Feed rate
Not accurate
for new 2

add
C₂ in
pilot

Appendix B-5

Slag and Metal Product Log

The Slag and Metal Product Log was used to record the times and weights for each slag pot filled during tapping from the slag launder and from the metals tap hole. Sample times for conical spoon samples of slag and metal were also recorded. The following pages include the Slag and Metal Product Log pages for the baseline tests.

SLAG AND METAL PRODUCT LOG

A record of materials tapped from the furnace.

Examples of product designations: (a) Slag pot from slag tap hole: S-60-S1.
(b) Ladle from metal tap hole: S-60-L1.
(c) Slag pot from metal tap hole: S-60-SM1.

Furnace Test: WCF- 11

Beginning Date: 7/18/93

		<u>Tap Time</u>		<u>Weights</u>		
<u>Date</u>	<u>Designation</u>	<u>Begin</u>	<u>Sample</u>	<u>End</u>	<u>Total</u>	<u>Net</u>
7/18/93	SUR 1	10:30		11:04		
	SUR 1	11:15		11:30	1895	
	SUR 1	12:47		1:00		1070 825
	2	1:00		1:14		
	2	1:23		1:47		
	3	2:10		2:20	1763	1076 687
	3	2:30		2:55		
	3	3:07		3:20		
	3	3:40		3:51	1738	990 748
	4	4:00		4:40		
	4	4:55		5:05	1774	956
	5	5:15			1400	992
	METAL SIDE				1834	998

SLAG AND METAL PRODUCT LOG

A record of materials tapped from the furnace.

Examples of product (a) Slag pot from slag tap hole: S-60-S1.

designations: (b) Ladle from metal tap hole: S-60-L1.

(c) Slag pot from metal tap hole: S-60-SM1.

Furnace Test: WCF- 11

Beginning Date: 7/19/93

[illegible]

148* slag recovered from
metal tap side pit

SLAG AND METAL PRODUCT LOG

A record of materials tapped from the furnace.

Examples of product designations: (a) Slag pot from slag tap hole: S-60-S1.
(b) Ladle from metal tap hole: S-60-L1.
(c) Slag pot from metal tap hole: S-60-SM1.

Furnace Test: WCF- 11

Beginning Date: 7-20-93

		Tap Time			Weights		
Date	Designation	Begin	Sample	End	Total	Tare	Net
Wet Sand erupted! 7-20-93	S-64-S1	12:00	12:04	12:13	1392	956	436
	S-64-S2	12:13	12:27	13:00	1892	1010	882
	S-64-S3	13:00	1:13	1:23	1155		
	"	1:42		13:50	1856	990	866
	S-64-S4	13:50		13:56			
	"	2:05		2:16			
	"	2:52	2:55	3:20	1953	1070	883
	S-64-S5	3:20	3:30	4:13	1774	980	794
	S-64-S6	4:35	4:52	5:30	1816	1001	814
	S-64-S7	5:30	5:50	6:30	1537	992	545
	final tap sample			8:03			
	METAL SLIDE				1111		
	S-60-4-L1				1952	974	978
	S-60-4-SM1				1406	982	424
							129
							268
							TOTAL 701916

S-64 = S-60-IV

129# slag removed
from pit metal tap.
268# slag removed
from pit slag tap

SLAG AND METAL PRODUCT LOG

A record of materials tapped from the furnace.

- Examples of product designations: (a) Slag pot from slag tap hole: S-60-S1.
 (b) Ladle from metal tap hole: S-60-L1.
 (c) Slag pot from metal tap hole: S-60-SM1.

Furnace Test: WCF- 11

Beginning Date: 7/21/93

<u>Tap Time</u>					<u>Weights</u>		
<u>Date</u>	<u>Designation</u>	<u>Begin</u>	<u>Sample</u>	<u>End</u>	<u>Total</u>	<u>Tare</u>	<u>Net</u>
7-21-93	N-80-S1	10:30	10:44	11:22	1924	972	952
	N-80-S2	11:22	11:39	12:00	1670	992	678
	N-80-S3	12:00	12:20	12:47	1647	980	667
	N-80-M-S4	13:45	14:05	14:17	1738	980	758
	N-80-M-S5	14:17	14:34	14:38			
	"	14:53		15:00			
	"	15:00		15:03			
	"	15:09		15:30	1755	1006	749
	N-80-M-S6	15:30		15:34			
	"	15:39	16:00	16:40	1874	1070	804
	N-80-M-S7	16:40	17:00	17:25	1724	990	734
	METH/ SIDE						
	N-80-M-L1				1908	974	934
	N-80-M-SMX				2028	982	1046
						Pit	88
						Total	7410

88 # slag removed from
pit metal tap

SLAG AND METAL PRODUCT LOG

A record of materials tapped from the furnace.

Examples of product designations: (a) Slag pot from slag tap hole: S-60-S1.
 (b) Ladle from metal tap hole: S-60-L1.
 (c) Slag pot from metal tap hole: S-60-SM1.

Furnace Test: WCF- 11

Beginning Date: 7/22/93

		<u>Tap Time</u>			<u>Weights</u>		
<u>Date</u>	<u>Designation</u>	<u>Begin</u>	<u>Sample</u>	<u>End</u>	<u>Total</u>	<u>Tare</u>	<u>Net</u>
7/22/93	N-80-IV-S1	11:05		12:32			
	"	11:50		12:00	1736	974	762
	N-80-IV-S2	12:00	12:15	12:35	1693	972	721
	N-80-IV-S3	12:35	12:50	13:19	1707	990	717
	N-80-IV-S4	13:19	13:28	1:45	1417	1070	347 2547
	N-80-IV-M-S5	14:34	14:38	15:00	1731	992	739
	N-80-IV-M-S6	15:00	15:18	15:34	1849	1007	842
	N-80-IV-M-S7	15:34	15:36	16:25	1768	980	788
	N-80-IV-M-S8	16:25	16:34	17:08	1894	1076	818
	N-80-IV-M-S9	17:08	17:16	17:40	1688	956	732
	N-80-IV-M-S10	17:40	17:40		1307	990	317 41236
	<u>METAL SIDE</u>						
	N-80-IV-M-LV				1955	974	981
	N-80-IV-M-SM1				1998	982	1016 1997
					<u>TOTAL</u>		8780

SLAG AND METAL PRODUCT LOG

A record of materials tapped from the furnace.

Examples of product (a) Slag pot from slag tap hole: S-60-S1.

designations: (b) Ladle from metal tap hole: S-60-L1.

(c) Slag pot from metal tap hole: S-60-SM1.

Furnace Test: WCF- 11

Beginning Date: 7/23/93

[illegible]

* 9016 metal added
to metal "slog" pots.

SLAG AND METAL PRODUCT LOG

A record of materials tapped from the furnace.

Examples of product designations: (a) Slag pot from slag tap hole: S-60-S1.
 (b) Ladle from metal tap hole: S-60-L1.
 (c) Slag pot from metal tap hole: S-60-SM1.

Furnace Test: WCF- 11

Beginning Date: _____

Tap Time					Weights		
Date	Designation	Begin	Sample	End	Total	Tare	Net
_____	_____	_____	_____	_____	_____	_____	_____
_____	M-60M-C1	_____	14:28	_____	_____	_____	_____
_____	2	_____	14:38	_____	_____	_____	_____
_____	3	_____	14:48	_____	_____	_____	_____
_____	4	_____	14:58	_____	_____	_____	_____
_____	M-60M-S4	14:58	_____	_____	_____	_____	_____
_____	M-60-M-C5	_____	15:08	_____	_____	_____	_____
_____	C6	_____	15:18	15:40	1748	956	_____
_____	M-60-M-S5	15:40	_____	_____	_____	_____	_____
_____	C7	_____	15:48	_____	_____	_____	_____
_____	C8	_____	16:13	_____	1878	1004	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	METAL SLIDE	_____	_____	_____	_____	_____	_____
_____	M-60-M-L1	_____	_____	_____	1914	974	_____
_____	M-60-M-SM1	_____	_____	_____	1815	982	_____
_____	_____	_____	_____	_____	_____	_____	_____
(71+81 cpm)	SLAG & OTHER MATERIAL IN FURNACE	_____	_____	_____	_____	_____	56
56 cpm	METAL IN FURNACE	_____	_____	_____	1263	49	1214
_____	_____	_____	_____	_____	24	3	21

TOTAL → 1235

Appendix B-6

Fume Solids Log

The Fume Solids Log was used to record the weights of all of the fume solids recovered from the offgas control system following each test. Fume solids were quantitatively recovered and saved from fume trap 1, fume trap 2, and the baghouse hopper. The following pages include the Fume Solids Log pages for the baseline tests.

Fume Solids Log

WCF- 11, Date 7/18/93, Background radiation — 40

Collect fume solids after each major change in furnace operation.
Store solids in metal cans for possible analysis.

Clock time	Source	Weight	Radiation and remarks
1900	Fume Trap	Net 1.75	
1900	Spark Trap	4.5 lb	
1900	Baghouse	25 lb	
	7/19/93		
1830	S-60-F1	8.0 lb	86 cpm
(7/20/93) 0740	S-60-T2	49 lb	112 cpm
1900	S-60-B1 +	83.5 lb	269 cpm
	S-60-FD	107 lb	65 cpm
	(fugitive dust)		
FD is fugitive dust recovered from the baghouse servicing the feed system within the building.			

Fume Solids Log
WCF- 11, Date 7/20/95, Background radiation 42 cpm

Collect fume solids after each major change in furnace operation.
Store solids in metal cans for possible analysis.

B-6.4

Fume Solids Log

WCF- 11, Date 7/21/93, Background radiation 42 cpm

Collect fume solids after each major change in furnace operation.
Store solids in metal cans for possible analysis.

B-6.5

WCF- 11, Date 11-1-55, Background radiation 0.20 m

Collect fume solids after each major change in furnace operation.
Store solids in metal cans for possible analysis.

B-6.6

WCF- 11, Date 7/23/88, Fume Solids Log Background radiation 36 cpm

Collect fume solids after each major change in furnace operation.
Store solids in metal cans for possible analysis.

B-6.7

FUME SOLIDS LOG

WCF- 11, Date 7/27/93, Background radiation 41 cpm

A record of all solids recovered from the fume traps and the baghouse during and after a furnace test.

Collect fume solids after each major change in furnace operation.
Store solids in metal cans for possible analysis.

[illegible]

Appendix B-7

Electrode Log

The Electrode Log was used to record the graphite electrode consumption. Initial and final weights and lengths of all of the electrodes were recorded for each test. The following pages include the Fume Solids Log pages for the baseline tests.

ELECTRODE LOG

A record of electrode consumption.

Furnace Test: WCF-11

Date: July 18-23, 1993

Electrode Position	Initial		Final		Consumption	
	Weight	Length	Weight	Length	Weight	Length
North	87	115	80 [#]	110"		
7-19-93						
Addition 1	28	36				
7-21-93						
Addition 2	28	36				
7-22-93						
Addition 3	29	36				
Total						
Center	87	114	74 [#]	103 ³ / ₄ "		
7-19-93						
Addition 1	28	36				
7-21-93						
Addition 2	28	36				
7-22-93						
Addition 3	29	36				
Total						
South	86	113	70 [#]	100 ³ / ₄ "		
7-19-93						
Addition 1	29	36				
7-21-93						
Addition 2	27	36				
7-22-93						
Addition 3	29	36				
Total						
Grand total						

Appendix B-8

Operations Log

The Operations Log was used to recap the overall mass balance for the melter system for each test. Feed and tapping rates and cumulative feed, slag and fume solid weights were recorded. These values were used with the electrode power input to determine the overall mass balance of material through the system, and to calculate the melting energy efficiency. The following pages include the Operations Log pages for the baseline tests.

WCF-11: S-60 Run 07/19/93
Operations Log

Time	Feed Rate lb/hr	Cumulative Feed, lb	Slag Pot No.	Tap Time min	Tap Weight, lb	Tap Rate lb/hr	Cumulative Tap, lb	Cum. Feed -Cum. Tap	Feed Rate -Tap Rate	kWh	kWh/lb
10:25	1787	1717	1	37	888	1440	888	829	347	1078	0.63
10:43	1117	2551	---	---	---	0	888	1663	1117	---	---
11:13	1225	3109	2	48	865	1081	1753	1358	144	1523	0.49
12:00	1225	4159	3	25	843	2023	2598	1583	798	1980	0.48
12:55	1225	5384	4	60	876	876	3472	1912	349	---	---
13:43	1117	6262	5	35	870	1491	4342	1920	374	3148	0.50
14:58	1158	7025	6	46	848	1108	5190	1835	52	3788	0.54
15:45	1158	7932	7	47	754	983	5944	1988	195	4192	0.53
16:30	1158	8801	8	45	858	1144	6802	1989	14	4425	0.50
17:00	1340	9813	9	---	143	---	8945	2088	---	4674	0.47
---	---	---	L1	---	988	---	7931	---	---	---	---
---	---	---	M1	---	981	---	8892	---	---	---	---
17:55	---	9813	Overflow	---	148	---	9040	873	---	5083	0.51

Feed	lb
Total	8913

Product	lb
Slag	8040
Fume	140
Dust	107
Total	9287

WCF-11: S-80-IV Run 07/20/93
Operations Log

Time	Feed Rate lb/hr	Cumulative Feed, lb	Slag Pot No.	Tap Time min	Tap Weight, lb	Tap Rate lb/hr	Cumulative Tap, lb	Cum. Feed -Cum. Tap	Feed Rate -Tap Rate	kWh	kWh/lb
12:13	1340	3277	1	13	436	2012	436	2841	672	1399	0.43
13:45	1525	5592	2	47	882	1128	1318	4274	399	---	---
13:45	1525	5592	3	50	868	1039	2184	3408	488	2270	0.41
14:58	939	5909	---	---	---	---	2184	3725	939	2855	0.45
15:49	1058	6490	4	100	883	530	3087	3423	526	3002	0.46
17:10	939	7151	5	53	794	889	3881	3290	40	3449	0.48
18:05	1158	8305	6	55	814	888	4675	3630	270	3955	0.48
19:05	1158	8305	7	60	545	545	5220	3085	613	4227	0.51
---	---	---	L1	---	978	---	6198	2107	---	---	---
---	---	---	M1	---	424	---	6622	1683	---	---	---
20:03	---	8305	Overflow	---	397	---	7019	1286	---	4824	0.58

Feed	lb
Total	8305

Product	lb
Slag	7019
Fume	164
Dust	32
Total	7215

WCF-11: N-80 & N-80M Runs 07/21/93
Operations Log

Time	Feed Rate lb/hr	Cumulative Feed, lb	Slag Pot No.	Tap Time min	Tap Weight, lb	Tap Rate lb/hr	Cumulative Tap, lb	Cum. Feed -Cum. Tap	Feed Rate -Tap Rate	kWh	kWh/lb	Net kWh	Net kWh/lb
11:20	1243	2453	1	52	952	1098	952	1501	145	1220	0.50	1220	0.50
12:40	1100	3898	2	48	878	848	1630	2288	253	1900	0.49	1900	0.49
12:49	1100	4819	3	47	887	851	2287	2322	249	1924	0.42	1924	0.42
Subtotal N-80 Run		4819					2287	2322					
14:11	1108	824	4	32	758	1421	758	88	315	354	0.43	2278	0.42
15:41	885	2081	5	53	749	848	1507	554	37	1015	0.49	2939	0.44
16:11	885	2523	6	85	804	742	2311	212	143	1328	0.53	3252	0.48
16:58	1032	3793	7	45	734	979	3045	748	53	1730	0.48	3854	0.43
Subtotal N-80M Run		3793					3045	748					
			L1		934		6278						
			M1		1048		7322						
17:47		8412	Overflow		88		7410	1002		4142	0.49	4142	0.49

Feed	lb
Total	8412

Product	lb
Slag	7410
Fume	230
Dust	48
Total	7688

WCF-11: N-80-IV & N-80M-IV Runs 07/22/93
Operations Log

Time	Feed Rate lb/hr	Cumulative Feed, lb	Slag Pot No.	Tap Time min	Tap Weight, lb	Tap Rate lb/hr	Cumulative Tap, lb	Cum. Feed -Cum. Tap	Feed Rate -Tap Rate	kWh	kWh/lb	Net kWh	Net kWh/lb
10:08	885	1598	---	---	---	---	---	---	---	---	---	---	---
11:00	1000	2331	---	---	---	---	---	---	---	---	---	---	---
12:07	1108	3413	1	55	782	831	782	2851	275	1930	0.57	1930	0.57
12:30	1108	3837	2	35	721	1238	1483	2354	130	2103	0.55	2103	0.55
13:07	1108	4711	3	44	717	978	2200	2511	128	2444	0.52	2444	0.52
13:45	1108	5545	4	28	347	801	2547	2808	305	2783	0.50	2783	0.50
Subtotal N-80-IV Run		5545	---	---	---	---	2547	2808	---	---	---	---	---
14:38	1108	295	5	28	739	1705	739	- 444	- 599	292	0.99	3075	0.53
15:12	1327	1114	6	32	842	1579	1581	- 487	- 252	872	0.80	3455	0.52
16:20	1290	2778	7	53	788	892	2369	409	398	1312	0.47	4095	0.49
16:48	1290	3380	8	65	818	755	3187	193	535	1738	0.51	4519	0.51
17:40	1408	4498	9	45	732	978	3919	579	432	2174	0.48	4957	0.49
18:10	1024	5010	10	30	317	834	4236	774	390	2398	0.48	5181	0.49
Subtotal N-80M-IV Run		5010	---	---	---	---	4236	774	---	---	---	---	---
---	---	---	L1	---	981	---	7764	---	---	---	---	---	---
---	---	---	M1	---	1018	---	8780	---	---	---	---	---	---
18:22	---	10555	Overflow	---	0	---	8780	1775	---	5214	0.49	5214	0.49

Feed	lb
Total	10555

Product	lb
Slag	8780
Fume	237
Dust	51
Total	9068

WCF-11: M-60 & M-60M Runs 07/23/93
Operations Log

Time	Feed Rate lb/hr	Cumulative Feed, lb	Slag Pot No.	Tap Time min	Tap Weight, lb	Tap Rate lb/hr	Cumulative Tap, lb	Cum. Feed -Cum. Tap	Feed Rate -Tap Rate	kWh	kWh/lb	Net kWh	Net kWh/lb
9:04	1572	849	---	---	---	---	---	849	1572	297	0.35	297	0.35
9:43	1729	1700	---	---	---	---	---	1700	1729	547	0.32	547	0.32
10:43	829	2818	---	---	---	---	---	2818	829	959	0.34	959	0.34
11:23	1100	3265	---	---	---	---	---	3265	1100	1321	0.40	1321	0.40
Subtotal M-60 Run		3265	---	---	---	---	0	3265	---	---	---	---	---
13:27	821	818	---	---	---	---	---	818	821	593	0.98	1914	0.31
14:08	1290	1046	1	70	817	700	817	229	590	921	0.88	2242	0.34
14:29	1290	1540	2	23	770	2009	1587	47	-719	1112	0.72	2433	0.34
14:48	1290	1949	3	35	734	1258	2321	372	32	1381	0.70	2882	0.38
15:48	1290	3008	4	42	792	1131	3113	107	159	1878	0.82	3199	0.37
16:20	---	3008	5	40	372	558	3485	479	-558	2188	0.73	3507	0.41
Subtotal M-60M Run		3008	---	---	---	---	3485	479	---	---	---	---	---
---	---	---	L1	---	850	---	4335	---	---	---	---	---	---
---	---	---	M1	---	833	---	5168	---	---	---	---	---	---
---	---	---	Metal	---	1235	---	6403	---	---	---	---	---	---
16:30	---	6271	Furnace	---	58	---	6460	-188	---	3520	0.58	3520	0.58

Feed	lb
Total	6271

Product	lb
Slag	5224
Metal	1235
Fume	121
Dust	6
Total	6585

Appendix C

CEMS Field Summary Data

Key CEMS data was partially reduced and compiled each test day during the baseline tests. This was done to better understand the averages, maximum and minimum values, and trends from test to test and from day to day. These summary data are provided in the following pages.

GENS REC

ENTROPY

DATE	TIME	LOCATION	MAX EMISSION (UNCORR.)					MIN EMISSION (UNCORR.)					AVE EMISSION (CORRECTED)				
			NOx	O ₂	CO ₂	CO	SO ₂	NOx	O ₂	CO ₂	CO	SO ₂	NOx	O ₂	CO ₂	CO	SO ₂
7/19	1013-1131	PORT #2	49	20.05	2.97	5113	1060	17.3	13.14	1.61	1835	1038	28.8	20.08	2.07	3172.5	1046
7/19	1401-1528	PORT #2	34.5	20.53	1.82	(2653)	5970	5.2	20.72	1.23	(679.2)	3590	14.3	20.41	1.50	1363.2	5055.1

ENTROPY

DATE	TIME	LOCATION	MAX EMISSION (UNCONT.)				MIN EMISSION (UNCONT.)				AVG EMISSION (CO. TEST)			
			NO _x	O ₂	CO ₂	CO	NO _x	O ₂	CO ₂	CO	NO _x	O ₂	CO ₂	CO
7/20	0910-1025	port #11	51.3	20.19	2.82	10.143	5.90	2.3	18.81	.69	4.2	108.4	14.3	20.15
7/20	1229-1350	port #2	78.4	20	4.73	(18.865)	7.66	12	19	1.78	2.240	2320	33.6	19.99
7/20	1501-1750	port #2	31.3	21.74	2.28	4.82	4.300	1.4	20.47	.84	5.64	1001	8.9	20.98
7/20	1752-1921	port #2	4.9	21.34	.61	7.97	107.2	0.1	21.05	.11	16.8402		0.4	21.51

ENTROPY

ENTROPY

DATE	TIME	LOCATION	CEMS					(CORRECT)				
			MAX EMISSION (UNCORRECTED)	MIN EMISSION (UNCOR)				AVG. EMISSION				
			NOx	O ₂	CO ₂	CO	SO ₂	NOx	O ₂	CO ₂	CO	SO ₂
7/21	0500 - 1210	Port # 99	4.3	20.44	193	6136	124.7	0.2	19.97	.44	537	-.4
7/21	1404 - 1659	Port # 21	20	20.46	12.18	9434	119.8	3.2	18.23	1.94	2144	7.8
								5.7	20.6	(2.88)	5433	11.7

ENTROPY

DATE	TIME	LOCATION	CEMS RES.									
			Unconnected MAX EMISSION					Unconnected MIN EMISSION				
			NO _x	O ₂	CO	CO ₂	SO ₂	NO _x	O ₂	CO	CO ₂	SO ₂
7/22	0828- 0912	port #11	4.3	20.44	103	6136	141.7	2	19.97	44	537.3	-4
			13	20.16	2.4	(7235)	73.3	4	19.01	1.26	369	7.9
7/22	0925- 1156	port #2	80.9	20.57	3.84	8954	277.1	3.7	18.95	.09	5.9	21.5
7/22	1206- 1255	port #11	37.5	20.51	4.26	6715	101.7	3.0	19.34	.66	5.1	22.9
7/22	1308- 1510	Baghouse Outlet	100	20.98	4.94	5875	93.1	2.3	2.34	.49	2.4	17.3
7/22	1631- 1758	Baghouse Outlet	17.9	20.48	3.7	613	52	.3	19.73	.83	167	17.8

Correct				
Avg. Emission				
NO _x	O ₂	CO	CO ₂	SO ₂
4.2	(19.97)	1.99	(3800)	12.1
16.3	19.9	3.14	5886	50.9
11.0	19.6	3.82	5607	50.7
17.3	19.94	2.44	2903	39.3
.9	20.04	3.14	5296	

ENTROPY #

Sen: 38.1

Appendix D
Daily CEMS Data

Appendix D-1

**CEMS Data
19 July 1993, S60 Melt**

CONTINUOUS EMISSIONS MONITORING SET-UP

SOURCE: US BUREAU OF MINE ALBANY-OREGON

DATE: 07-19-1993 TIME: 06:46

A/D CHAN	DESCRIP	UNITS	SPAN	INPUT VOLTAGE	ZERO OFFSET
12	TECO8	ppmNOx	100	10.00 V	0%
15	TELE12	% O2	25	1.00 V	0%
14	FUJIA	% CO2	20	1.00 V	0%
13	TECOA	ppm CO	1000	10.00 V	0%
11	WESTR4	ppmSO2	250	1.00 V	0%

AVERAGING PERIODS: 30 MINUTES,
NO EMISSION RATE CALCULATIONS

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: INITIAL DIRECT CAL FOR NOX AND SO2

DATE : 07-19-1993 TIME: 07:53 - 08:06

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	0.1
12	TECO8	ppmNOx	25.0	24.8
12	TECO8	ppmNOx	48.5	49.9
12	TECO8	ppmNOx	89.9	90.2
11	WESTR4	ppmSO2	0.0	1.0
11	WESTR4	ppmSO2	23.7	24.5
11	WESTR4	ppmSO2	90.6	90.7

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: SYSTEM BIAS FOR NOX AND SO2

DATE : 07-19-1993 TIME: 08:07 - 08:18

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	-0.2
12	TECO8	ppmNOx	25.0	24.2
11	WESTR4	ppmSO2	0.0	0.2
11	WESTR4	ppmSO2	23.7	22.9

ENTROPY

D-1.5

US BUREAU OF MINE ALBANY-OREGON			07-19-1993		
	CHAN12	CHAN15	CHAN14	CHAN13	CHAN11
	TECOB	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
10:02	4.4	24.42*	1.42	979.8	312.6*
10:03	4.3	23.61*	1.35	977.8	312.6*
10:04	4.3	24.68*	1.42	975.6	312.6*
10:05	5.8	23.95*	1.65	978.9	312.6*
10:06	6.3	23.83*	1.67	977.4	312.6*
10:07	5.9	25.07*	1.75	977.5	312.6*
10:08	6.0	24.25*	2.09	976.5	302.2*
10:09	8.0	24.84*	2.49	976.8	0.4
10:10	10.2	25.32*	2.79	973.9	0.4
10:11	20.4	15.01*	2.96	127.1	0.2
10:12	15.8	19.69	3.09	531.4	57.5*
10:13	17.3	19.77	2.90	0.4	0.1
10:14	19.5	19.77	2.93	0.4	0.2
10:15	20.2	19.85	2.74	0.4	0.1
10:16	22.0	19.86	2.71	0.4	0.2
10:17	23.1	19.91	2.63	0.4	0.1
10:18	24.5	19.91	2.63	0.4	0.2
10:19	27.9	19.96	2.49	0.4	0.2
10:20	31.0	19.90	2.62	0.4	0.1
10:21	35.5	19.89	2.55	0.4	0.1
10:22	30.2	19.90	2.52	0.4	0.1
10:23	38.7	19.78	2.82	0.4	0.2
10:24	39.3	19.81	2.72	0.4	0.2
10:25	39.1	19.80	2.76	0.4	0.2
10:26	39.0	19.76	2.88	0.3	0.2
10:27	35.6	19.80	2.78	0.4	0.2
10:28	44.8	19.73	2.97	0.4	0.2
10:29	40.6	19.82	2.66	0.4	0.1
10:30	37.5	19.82	2.65	0.4	0.2
10:31	32.5	19.88	2.46	0.4	0.2
AVERAGE VALUES FOR THE LAST 30 MINUTES					
10:31	23.0	21.05	2.47	315.3	74.6
10:32	38.3	19.81	2.64	0.4	0.1
10:33	49.0	13.14*	2.64	0.4	0.1

COMMENTS: CALIBRATION CHECK

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: SYSTEM CALIBRATION CHECK

DATE : 07-19-1993 TIME: 10:34 - 10:36

<u>A/D CHAN</u>	<u>MONITOR DESCRIPTION</u>	<u>UNITS</u>	<u>GAS VALUE</u>	<u>MONITOR RESPONSE</u>
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ENTROPY

D-1.7

CONTINUOUS EMISSIONS MONITORING SET-UP

SOURCE: US BUREAU OF MINE ALBANY-OREGON

DATE: 07-19-1993 TIME: 10:36

A/D CHAN	DESCRIP	UNITS	SPAN	INPUT VOLTAGE	ZERO OFFSET
12	TECOB	ppmNOx	100	10.00 V	0%
15	TELE12	% O2	25	1.00 V	0%
14	FUJIA	% CO2	20	1.00 V	0%
13	TECOA	ppm CO	1000	10.00 V	0%
11	WESTR4	ppmSO2	250	1.00 V	0%

AVERAGING PERIODS: 30 MINUTES,
NO EMISSION RATE CALCULATIONS

ENTROPY

D-1.8

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: CHANGE O2 TO CHANNEL 10 SYSTEM CAL CHECK

DATE : 07-19-1993 TIME: 10:39 - 10:53

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	0.5
12	TECO8	ppmNOx	25.0	23.7
10	TELE12	% O2	0.00	0.16
10	TELE12	% O2	9.02	8.98
10	TELE12	% O2	19.12	18.81
14	FUJIA	% CO2	0.00	0.11
14	FUJIA	% CO2	5.01	5.09
13	TECOA	ppm CO	0.0	0.4
13	TECOA	ppm CO	895.0	887.9
11	WESTR4	ppmSO2	0.0	0.2
11	WESTR4	ppmSO2	23.7	33.3

ENTROPY

US BUREAU OF MINE ALBANY-OREGON

07-19-1993

	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
10:57	34.8	20.02	1.94	952.4*	312.6*
10:58	41.2	19.97	2.08	961.2*	312.6*
10:59	41.2	19.96	2.01	955.9*	312.6*
11:00	37.1	20.02	1.92	955.5*	312.6*
11:01	34.6	20.02	1.90	953.4	312.6*
11:02	34.8	19.94	2.10	955.0	312.6*
11:03	45.1	19.85	2.27	955.9*	312.6*
11:04	34.5	19.99	1.93	954.0	312.6*
11:05	32.3	20.00	1.91	954.2	312.6*
11:06	39.0	19.94	2.04	956.6*	312.6*
11:07	38.8	19.99	1.90	953.5*	312.6*
11:08	38.5	19.95	1.93	954.4*	312.6*
11:09	38.9	19.97	1.88	953.9*	312.6*
11:10	36.4	20.00	1.80	954.7*	312.6*
11:11	34.5	20.02	1.70	952.6	312.6*
11:12	36.7	19.96	1.86	954.6*	312.6*
11:13	38.4	19.97	1.82	955.3*	312.6*
11:14	37.9	19.93	1.93	951.6*	312.6*
11:15	39.9	19.95	1.94	955.3*	312.6*
11:16	37.7	19.97	1.87	951.0*	312.6*
11:17	36.4	20.00	1.74	955.2	312.6*
11:18	35.9	19.98	1.76	951.6	312.6*
11:19	35.5	20.02	1.69	952.1	312.6*
11:20	37.6	19.98	1.75	955.0	312.6*
11:21	42.8	19.97	1.80	955.5*	312.6*
11:22	33.7	20.02	1.65	947.8	312.6*
11:23	37.4	19.98	1.72	955.4	312.6*
11:24	36.4	19.93	1.86	952.0*	312.6*
11:25	44.6	19.93	1.86	956.1*	312.6*
11:26	33.5	20.03	1.63	951.2*	312.6*

- SO₂ was on
0-250 ppm run
- CO was on
0-1000 ppm

AVERAGE VALUES FOR THE LAST 30 MINUTES

11:26	37.5	19.98	1.87	954.1	312.6
11:27	38.3	20.00	1.69	953.7*	312.6*
11:28	36.8	20.05	1.61	954.2*	312.6*
11:29	39.7	19.99	1.83	955.5*	312.6*
11:30	35.8	19.98	1.82	948.8*	312.6*
11:31	34.7	19.98	1.77	952.2*	312.6*

COMMENTS: END TEST RUN 1

ENTROPY

D-1.10

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: POST TEST SYSTEM BIAS

DATE : 07-19-1993 TIME: 11:31 - 11:49

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	-0.1
12	TECO8	ppmNOx	25.0	21.6
10	TELE12	% O2	0.00	0.07
10	TELE12	% O2	19.12	18.93
14	FUJIA	% CO2	0.00	0.11
14	FUJIA	% CO2	5.01	5.12
13	TECOA	ppm CO	0.0	0.4
13	TECOA	ppm CO	895.0	917.7
11	WESTR4	ppmSO2	0.0	12.0
11	WESTR4	ppmSO2	23.7	33.0

ENTROPY

D-1.11

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: DIRECT CALIBRATION FOR CO AND SO2 FOR HIGHER RANGE

DATE : 07-19-1993 TIME: 13:19 - 13:30

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	-0.2
12	TECO8	ppmNOx	25.0	24.4
10	TELE12	% O2	0.00	0.07
10	TELE12	% O2	9.02	8.96
10	TELE12	% O2	129.12	19.09
14	FUJIA	% CO2	0.00	0.02
14	FUJIA	% CO2	5.01	5.10
14	FUJIA	% CO2	10.56	10.56
13	TECOA	ppm CO	0.0	7.3
13	TECOA	ppm CO	506.0	483.5
13	TECOA	ppm CO	895.0	896.2
11	WESTR4	ppmSO2	0.0	0.8
11	WESTR4	ppmSO2	90.6	90.6

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: SYSTEM BIAS

DATE : 07-19-1993 TIME: 13:36 - 13:47

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	1.0
12	TECO8	ppmNOx	25.0	25.5
10	TELE12	% O2	0.00	0.14
10	TELE12	% O2	19.12	19.07
14	FUJIA	% CO2	0.00	0.09
14	FUJIA	% CO2	5.01	4.99
13	TECOA	ppm CO	0.0	1.3
13	TECOA	ppm CO	895.0	886.4
11	WESTR4	ppmSO2	0.0	3.1
11	WESTR4	ppmSO2	90.6	89.0

ENTROPY

D-1.13

US BUREAU OF MINE ALBANY-OREGON 07-19-1993

	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
14:01	22.2	20.43	1.61	1477.1	3125.8*
14:02	26.5	20.41	1.63	1989.3	3125.8*
14:03	34.5	20.37	1.75	2653.0	3125.8*
14:04	21.6	20.48	1.41	1708.2	3125.8*
14:05	21.1	20.52	1.32	1401.2	3114.3*
14:06	22.3	20.51	1.38	1216.6	3120.5*
14:07	28.6	20.43	1.66	1951.4	3125.8*
14:08	22.2	20.47	1.48	2298.4	3125.8*
14:09	23.2	20.42	1.64	2065.3	3125.8*
14:10	19.9	20.45	1.58	1887.7	3125.8*
14:11	22.4	20.41	1.69	1831.3	3125.8*
14:12	19.0	20.45	1.54	1683.0	3125.8*
14:13	18.2	20.45	1.57	1524.2	3125.8*
14:14	17.7	20.46	1.55	1641.4	3125.8*
14:15	22.0	20.39	1.73	1709.1	3125.8*
14:16	19.0	20.43	1.58	1719.7	3125.8*
14:17	22.0	20.40	1.67	1738.6	3125.8*
14:18	20.0	20.44	1.61	1556.8	3125.8*
14:19	17.8	20.43	1.61	1514.3	3125.8*
14:20	17.8	20.45	1.55	1435.1	3125.8*
14:21	15.5	20.53	1.33	1109.1	3125.8*
14:22	17.1	20.44	1.55	1342.9	3125.8*
14:23	16.3	20.42	1.63	1427.1	3125.8*
14:24	16.7	20.42	1.62	1825.9	3125.8*
14:25	16.9	20.40	1.73	1746.4	3125.8*
14:26	16.7	20.40	1.67	1765.1	3125.8*
14:27	17.2	20.42	1.59	1660.1	3125.8*
14:28	16.7	20.45	1.51	1585.2	3125.8*
14:29	24.6	20.38	1.70	2236.5	3125.8*
14:30	19.6	20.39	1.59	2260.9	3125.8*

AVERAGE VALUES FOR THE LAST 30 MINUTES

14:30	20.5	20.44	1.58	1732.0	3125.2
14:31	20.1	20.38	1.57	1614.1	3125.8*
14:32	21.1	20.32	1.69	1768.8	3125.8*
14:33	24.8	20.38	1.54	2043.0	3125.8*
14:34	14.6	20.41	1.48	1252.4	3125.8*
14:35	16.0	20.33	1.60	1522.9	3125.8*
14:36	15.3	20.37	1.54	1436.6	3125.8*
14:37	13.6	20.40	1.41	1310.8	3125.8*
14:38	13.9	20.42	1.34	1188.5	3119.9*
14:39	16.1	20.36	1.48	1447.5	3125.8*
14:40	14.3	20.38	1.38	1328.5	3125.8*
14:41	17.9	20.38	1.47	1323.3	3125.8*
14:42	17.6	20.37	1.48	1583.4	3125.8*
14:43	14.3	20.36	1.47	1320.6	3125.8*
14:44	18.0	20.33	1.61	1464.4	3125.8*
14:45	17.1	20.31	1.57	1282.4	3125.8*
14:46	16.3	20.29	1.60	1435.0	3125.8*
14:47	12.5	20.30	1.58	987.2	3125.8*
14:48	16.7	20.25	1.71	1399.3	3125.8*
14:49	11.9	20.24	1.65	1200.6	3125.8*
14:50	11.0	20.22	1.68	1037.7	3125.8*
14:51	8.7	20.24	1.63	936.2	3125.8*

ENTROPY

US BUREAU OF MINE ALBANY-OREGON				07-19-1993	
	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
14:52	8.1	20.32	1.40	822.5	3125.8*
14:53	8.3	20.36	1.29	681.0	3125.8*
14:54	8.6	20.38	1.23	817.5	3125.8*
14:55	7.7	20.36	1.30	679.2	3125.8*
14:56	8.9	20.32	1.47	846.6	3125.8*
14:57	8.3	20.31	1.47	806.9	3125.8*
14:58	9.6	20.27	1.57	1046.3	3125.8*
14:59	9.7	20.26	1.65	1033.1	3125.8*
15:00	15.3	20.22	1.80	1425.1	3125.8*

AVERAGE VALUES FOR THE LAST 30 MINUTES

15:00	13.9	20.33	1.52	1234.7	3125.6
15:01	9.8	20.25	1.67	1290.6	3125.8*
15:02	10.6	20.24	1.71	1116.0	3125.8*
15:03	9.8	20.22	1.75	1129.8	3125.8*
15:04	10.3	20.25	1.70	1266.9	3125.8*
15:05	11.8	20.24	1.76	1340.4	3125.8*
15:06	14.1	20.23	1.82	1456.2	3125.8*
15:07	14.2	20.23	1.76	1528.9	3125.8*
15:08	11.7	20.27	1.65	1412.8	3125.8*
15:09	12.3	20.23	1.76	1424.0	3125.8*
15:10	9.0	20.24	1.64	1230.9	3125.8*
15:11	9.4	20.27	1.63	1184.3	3125.8*
15:12	9.1	20.26	1.65	1155.8	3125.8*
15:13	13.2	20.22	1.75	1389.5	3125.8*
15:14	9.6	20.30	1.56	1111.8	3125.8*
15:15	7.8	20.29	1.63	975.8	3125.8*
15:16	7.2	20.27	1.64	1060.8	3125.8*
15:17	6.4	20.25	1.61	1030.6	3125.8*
15:18	5.2	20.26	1.54	855.9	3125.8*
15:19	5.3	20.31	1.39	848.9	3125.7*
15:20	5.3	20.31	1.48	872.0	3125.8*
15:21	6.6	20.31	1.43	1107.9	3125.8*
15:22	6.5	20.32	1.39	1098.7	3125.8*
15:23	5.5	20.34	1.32	915.1	3125.8*
15:24	6.3	20.34	1.32	941.9	3125.8*
15:25	6.7	20.33	1.34	983.9	3125.8*
15:26	6.5	20.30	1.41	912.0	3125.8*
15:27	7.7	20.30	1.48	1059.5	3125.8*
15:28	5.3	20.29	1.38	856.9	3125.8*
15:29	2.8	20.30	1.33	593.9	3125.8*
15:30	1.9	20.31	1.25	489.3	3125.8*

AVERAGE VALUES FOR THE LAST 30 MINUTES

15:30	8.3	20.28	1.56	1088.0	3125.8
15:31	2.1	20.32	1.23	421.3	3125.8*
15:32	1.5	20.30	1.25	380.4	3125.8*
15:33	1.3	20.29	1.22	350.6	3125.8*
15:34	1.1	20.31	1.15	335.5	3125.8*
15:35	1.1	20.36	1.03	303.9	3125.8*
15:36	1.3	20.38	0.94	279.0	3125.8*
15:37	1.3	20.39	0.91	267.2	3125.8*
15:38	1.3	20.38	0.82	228.6	3125.8*

ENTROPY

US BUREAU OF MINE ALBANY-OREGON

07-19-1993

TIME	CHAN12 TECO8 ppmNOx	CHAN10 TELE12 % O2	CHAN14 FUJIA % CO2	CHAN13 TECOA ppm CO	CHAN11 WESTR4 ppmSO2
15:39	2.3	20.33	0.76	272.2	3125.8*
15:40	4.2	20.31	0.67	283.8	3125.8*
15:41	4.6	20.29	0.66	333.0	3125.8*
15:42	4.5	20.04	1.36	577.8	3069.2*
15:43	1.8	20.46	0.68	287.4	2347.4*
15:44	1.5	20.53	0.52	139.8	1965.7
15:45	1.4	20.54	0.44	104.3	1990.1
15:46	1.5	20.50	0.45	94.7	2341.8*
15:47	1.6	20.56	0.30	52.1	1558.6
15:48	2.5	20.42	0.51	59.9	2133.5*
15:49	1.9	20.57	0.37	38.5	1378.8
15:50	2.2	20.54	0.44	54.0	1430.6
15:51	6.8	20.40	0.68	120.4	2541.3*
15:52	2.5	20.37	0.48	32.9	1970.7
15:53	4.1	20.19	0.46	30.0	1527.2
15:54	3.9	20.24	0.40	32.5	1295.8
15:55	10.6	20.29	0.47	24.7	1047.2
15:56	30.4	20.32	0.74	133.3	2703.8*
15:57	30.2	20.27	0.95	252.8	3125.8*
15:58	20.0	20.22	1.03	258.6	3125.8*
15:59	8.6	20.21	0.98	314.5	3125.8*
16:00	6.5	20.16	1.02	298.6	3125.8*

AVERAGE VALUES FOR THE LAST 30 MINUTES

16:00	5.5	20.35	0.76	212.1	2539.6
16:01	3.7	20.17	0.93	311.4	3125.8*
16:02	3.2	20.25	0.73	255.6	3125.8*
16:03	2.5	20.45	0.41	192.0	2242.8*
16:04	12.3	20.64	0.09	28.1	247.9
16:05	15.4	20.59	0.11	31.5	140.4
16:06	15.7	20.58	0.11	33.7	152.1
16:07	17.8	20.57	0.11	42.4	138.7
16:08	18.4	20.43	0.36	207.4	253.7
16:09	18.9	20.37	0.46	273.6	681.2
16:10	18.5	20.34	0.47	333.0	916.8
16:11	19.5	20.33	0.50	340.9	1147.9
16:12	20.4	20.34	0.48	330.0	1394.9
16:13	18.1	20.32	0.48	119.0	1530.1
16:14	17.5	20.34	0.50	115.8	886.1

COMMENTS: END TEST 2 PROBE AND SAMPLE LINE
PLUGGED

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: INITIAL DIRECT CALIBRATION

DATE : 07-19-1993 TIME: 06:49 - 07:04

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
15	TELE12	% O2	0.00	0.05
15	TELE12	% O2	9.02	9.01
15	TELE12	% O2	19.12	19.14
14	FUJIA	% CO2	0.00	0.07
14	FUJIA	% CO2	5.01	5.12
14	FUJIA	% CO2	10.56	10.54
13	TECOA	ppm CO	0.0	1.5
13	TECOA	ppm CO	506.0	499.3
13	TECOA	ppm CO	895.0	886.0

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: INITIAL SYSTEM BIAS CHECK

DATE : 07-19-1993 TIME: 07:09 - 07:37

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
15	TELE12	% O2	0.00	0.07
15	TELE12	% O2	9.02	9.01
14	FUJIA	% CO2	0.00	0.11
14	FUJIA	% CO2	5.01	5.06
13	TECOA	ppm CO	0.0	0.3
13	TECOA	ppm CO	506.0	493.3

ENTROPY

Appendix D-2

**CEMS Data
20 July 1993, S60-IV Melt**

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: INITIAL DIRECT CALIBRATION

DATE : 07-20-1993 TIME: 07:35 - 08:06

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	-0.2
12	TECO8	ppmNOx	25.0	24.1
12	TECO8	ppmNOx	48.5	48.5
10	TELE12	% O2	0.00	0.04
10	TELE12	% O2	9.02	9.07
10	TELE12	% O2	19.12	19.11
14	FUJIA	% CO2	0.00	0.01
14	FUJIA	% CO2	5.01	5.04
14	FUJIA	% CO2	10.56	10.53
13	TECOA	ppm CO	0.0	0.4
13	TECOA	ppm CO	506.0	478.6
13	TECOA	ppm CO	895.0	891.3
11	WESTR4	ppmSO2	0.0	1.3
11	WESTR4	ppmSO2	23.7	23.9
11	WESTR4	ppmSO2	90.6	92.8

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: SYSTEM BIAS CHECK

DATE : 07-20-1993 TIME: 08:27 - 08:45

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	-0.2
12	TECO8	ppmNOx	25.0	24.0
10	TELE12	% O2	0.00	0.13
10	TELE12	% O2	19.12	18.96
14	FUJIA	% CO2	0.00	0.03
14	FUJIA	% CO2	5.01	5.02
13	TECOA	ppm CO	0.0	2.3
13	TECOA	ppm CO	895.0	896.2
11	WESTR4	ppmSO2	0.0	-0.8
11	WESTR4	ppmSO2	90.6	90.2

ENTROPY

CONTINUOUS EMISSIONS MONITORING SET-UP

SOURCE: US BUREAU OF MINE ALBANY-OREGON

DATE: 07-20-1993 TIME: 08:55

A/D CHAN	DESCRIP	UNITS	SPAN	INPUT VOLTAGE	ZERO OFFSET
12	TECO8	ppmNOx	100	10.00 V	0%
10	TELE12	% O2	25	1.00 V	0%
14	FUJIA	% CO2	20	1.00 V	0%
13	TECOA	ppm CO	5000	10.00 V	0%
11	WESTR4	ppmSO2	2500	1.00 V	0%

AVERAGING PERIODS: 30 MINUTES, ONE HOUR,
NO EMISSION RATE CALCULATIONS

ENTROPY

CONTINUOUS EMISSIONS MONITORING SET-UP

(SOURCE: US BUREAU OF MINE ALBANY-OREGON

DATE: 07-20-1993 TIME: 08:57

A/D CHAN	DESCRIP	UNITS	SPAN	INPUT VOLTAGE	ZERO OFFSET
12	TECO8	ppmNOx	100	10.00 V	0%
10	TELE12	% O2	25	1.00 V	0%
14	FUJIA	% CO2	20	1.00 V	0%
13	TECOA	ppm CO	10000	10.00 V	0%
11	WESTR4	ppmSO2	2500	1.00 V	0%

AVERAGING PERIODS: 30 MINUTES, ONE HOUR,
NO EMISSION RATE CALCULATIONS

ENTROPY

US BUREAU OF MINE ALBANY-OREGON			07-20-1993		
	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
09:03	-0.1	20.65	0.10	4.3	-1.7
09:04	-0.1	20.65	0.09	4.3	-2.2
09:05	-0.1	20.61	0.09	4.2	-2.8
09:06	-0.1	20.56	0.09	4.0	-3.7
09:07	-0.1	20.55	0.09	4.3	-4.5
09:08	-0.1	20.54	0.09	4.2	-4.8
09:09	12.0	20.14	0.44	10.0	-1.6
09:10	51.3*	19.82	1.09	2893.8	276.1
09:11	12.5	19.79	0.94	9549.0	317.7
09:12	5.0	19.83	0.77	4633.8	196.9
09:13	2.3	19.77	0.69	4.2	108.4
09:14	11.5	19.10	2.31	2858.3	487.8
09:15	12.0	18.81	2.68	7261.7	754.6
09:16	6.9	19.17	1.90	5984.9	580.3
09:17	3.0	19.60	1.18	4.4	145.6
09:18	3.8	19.75	1.13	4.3	290.9
09:19	4.1	20.06	0.96	7205.5	753.0
09:20	3.7	20.11	0.89	7841.4	930.6
09:21	2.9	20.13	0.91	5879.1	679.0
09:22	3.0	20.08	1.04	5887.6	757.4
09:23	2.6	20.14	1.03	5598.7	829.9
09:24	3.0	20.05	1.14	7027.8	891.9
09:25	3.3	20.01	1.21	8927.6	884.3
09:26	2.5	20.02	1.26	8999.8	976.0
09:27	2.5	20.11	1.23	6999.2	989.7
09:28	3.8	20.13	1.27	6620.2	1302.2
09:29	5.9	20.17	1.19	6658.0	1791.7
09:30	8.1	20.19	1.17	6713.1	2207.3
09:31	11.3	20.14	1.31	7526.1	2865.8*
09:32	14.3	20.11	1.45	8018.5	3124.0*

AVERAGE VALUES FOR THE LAST 30 MINUTES

09:32	6.3	20.03	0.99	4437.7	737.3
09:33	14.8	20.08	1.53	7993.4	3125.8*
09:34	16.2	20.07	1.57	7927.8	3125.8*
09:35	15.0	20.11	1.61	8066.2	3125.8*
09:36	14.5	20.07	1.72	7531.9	3125.8*
09:37	13.3	20.09	1.66	7380.8	3008.8*
09:38	16.6	19.96	1.90	7950.8	2867.6*
09:39	17.2	20.06	1.68	7610.0	3125.8*
09:40	14.9	20.00	1.72	8131.8	3125.8*
09:41	15.9	19.99	1.79	9156.7	3123.7*
09:42	30.6	19.75	2.31	7036.9	3125.2*
09:43	21.0	20.01	1.65	6374.9	3125.8*
09:44	13.9	19.97	1.56	7256.3	2969.9*
09:45	17.0	19.88	1.77	8534.4	3081.4*
09:46	17.2	19.96	1.65	7609.8	3125.8*
09:47	14.6	19.93	1.61	7298.6	3125.8*
09:48	16.3	19.85	1.79	6895.6	3125.8*
09:49	21.8	19.94	1.79	7566.3	3125.8*
09:50	19.2	19.87	1.83	7166.9	3125.8*
09:51	21.6	19.94	1.80	7417.6	3125.8*
09:52	17.3	19.83	1.73	6283.3	3125.8*
09:53	18.8	19.75	1.84	6196.3	3125.8*

ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-20-1993

	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECOB	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
09:54	18.8	19.76	1.86	6621.7	3125.8*
09:55	17.1	19.81	1.68	7084.0	3104.3*
09:56	12.7	20.01	1.14	3259.3	2745.1*
09:57	11.2	19.91	1.34	1992.2	2554.9*
09:58	10.6	19.83	1.34	3533.7	2506.4*
09:59	12.8	19.79	1.55	4295.6	2753.3*
10:00	18.9	19.63	2.05	5905.1	3125.8*
10:01	46.1*	19.41	2.82	6408.5	3125.8*
10:02	16.8	19.85	1.62	3943.8	3102.8*

AVERAGE VALUES FOR THE LAST 30 MINUTES

10:02	17.8	19.90	1.73	6681.0	3040.2
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

10:02	12.1	19.96	1.36	5559.4	1888.8
10:03	10.4	19.87	1.54	4289.5	2560.1*
10:04	8.2	19.82	1.51	4121.1	2318.9
10:05	7.4	19.83	1.46	3483.0	2363.3*
10:06	9.3	19.70	1.75	3055.9	2949.5*
10:07	13.2	19.74	1.66	2667.4	3125.8*
10:08	6.8	19.84	1.45	2204.1	3125.8*
10:09	9.3	19.61	1.86	1939.5	3125.8*
10:10	36.3	19.57	1.92	3156.6	3125.8*
10:11	8.0	19.85	1.30	1840.5	3125.8*
10:12	5.1	19.83	1.25	1390.8	3066.9*
10:13	7.2	19.78	1.45	1583.4	3124.1*
10:14	10.6	19.83	1.53	2435.2	3125.8*
10:15	10.0	19.87	1.48	2246.6	3125.8*
10:16	9.6	19.77	1.56	1869.2	3125.8*
10:17	10.6	19.82	1.52	2122.3	3125.8*
10:18	10.8	19.85	1.46	2147.6	3125.8*
10:19	37.5*	19.64	2.18	3130.6	3125.8*
10:20	14.6	19.82	1.66	3315.7	3125.8*
10:21	12.3	19.82	1.62	2692.8	3125.8*
10:22	14.1	19.85	1.60	2404.3	3125.8*
10:23	14.2	19.87	1.60	2137.7	3125.8*
10:24	17.0	19.84	1.69	2296.9	3125.8*
10:25	16.2	19.84	1.61	2204.6	3125.8*
10:26	17.6	19.82	1.61	2197.1	3125.8*
10:27	18.3	19.73	1.66	2089.1	3125.8*
10:28	17.1	19.76	1.56	1786.5	3125.8*
10:29	14.6	19.79	1.54	1791.4	3125.8*
10:30	13.7	19.80	1.61	1818.4	3125.8*
10:31	17.5	19.76	1.71	2284.7	3125.8*
10:32	18.1	19.79	1.67	1935.3	3125.8*

AVERAGE VALUES FOR THE LAST 30 MINUTES

10:32	13.9	19.79	1.60	2421.3	3046.7
10:33	19.3	19.80	1.69	1800.0	3125.8*
10:34	20.3	19.80	1.72	1717.7	3125.8*
10:35	21.9	19.72	1.82	1753.1	3125.8*

COMMENTS: END TEST AT S-60 PORT 11
(CONTINUED ON ENTROPY)

US BUREAU OF MINE ALBANY-OREGON				07-20-1993	
	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
<u>TIME</u>	<u>ppmNOx</u>	<u>% O2</u>	<u>% CO2</u>	<u>ppm CO</u>	<u>ppmSO2</u>

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: ABORT

DATE : 07-20-1993 TIME: 10:36 - 12:07

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
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ENTROPY

D-2.10

US BUREAU OF MINE ALBANY-OREGON				07-20-1993	
	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
12:29	24.2	19.92	2.14	2836.0	3125.8*
12:30	24.3	19.88	2.29	2546.8	3125.8*
12:31	24.4	19.92	2.26	2789.3	3125.8*
12:32	23.7	19.96	2.24	3130.1	3125.8*
12:33	17.7	19.96	2.20	2927.1	3125.8*
12:34	13.9	19.91	2.25	2593.3	3125.8*
12:35	14.7	19.87	2.37	2239.8	3125.8*
12:36	12.0	19.87	2.34	2305.4	3125.8*
12:37	29.7	19.77	2.79	3180.6	3125.8*
12:38	24.3	19.91	2.45	4024.8	3125.8*

- stop , computer problem

ENTROPY

D-2.11

US BUREAU OF MINE ALBANY-OREGON

07-20-1993

	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
12:44	32.0	19.89	2.50	4762.6	3125.8*
12:45	28.1	19.73	3.00	3871.9	3125.8*
12:46	47.8	19.77	2.84	4634.8	3125.8*
12:47	30.3	19.79	2.71	4406.4	3125.8*
12:48	31.3	19.72	2.80	3818.8	3125.8*
12:49	34.0	19.74	2.68	4100.0	3125.8*
12:50	37.8	19.61	2.90	4228.9	3125.8*
12:51	41.2	19.61	2.74	4859.6	3125.8*
12:52	39.4	19.64	2.69	4933.2	3125.8*
12:53	33.6	19.66	2.65	4321.5	3125.8*
12:54	28.6	19.76	2.45	4046.4	3125.8*
12:55	29.3	19.80	2.41	4437.9	3125.8*
12:56	29.0	19.74	2.57	4614.5	3125.8*
12:57	37.2	19.74	2.68	4913.6	3125.8*
12:58	40.2	19.70	2.81	4982.1	3125.8*
12:59	36.0	19.70	2.77	4942.4	3125.8*
13:00	29.6	19.79	2.64	4824.8	3125.8*
13:01	31.0	19.74	2.73	4719.3	3125.8*
13:02	28.2	19.80	2.61	4952.3	3125.8*
13:03	32.6	19.75	2.77	4982.0	3125.8*
13:04	32.8	19.81	2.57	4982.1	3125.8*
13:05	26.6	19.80	2.54	4671.1	3125.8*
13:06	26.1	19.92	2.32	4476.4	3125.8*
13:07	30.5	19.84	2.65	4876.7	3125.8*
13:08	29.1	19.80	2.63	4982.2	3125.8*
13:09	22.7	19.81	2.56	4932.8	3125.8*
13:10	30.5	19.67	2.86	4968.6	3125.8*
13:11	43.8	19.73	2.78	4982.0	3125.8*
13:12	26.0	19.74	2.63	4982.0	3125.8*
13:13	21.3	19.63	2.79	4701.8	3125.8*

AVERAGE VALUES FOR THE LAST 30 MINUTES

13:13	32.2	19.75	2.68	4663.6	3125.8
13:14	35.8	19.68	2.74	4982.3	3125.8*
13:15	32.4	19.69	2.68	4982.1	3125.8*
13:16	28.6	19.74	2.60	4982.1	3125.8*
13:17	29.1	19.68	2.77	4982.0	3125.8*
13:18	30.3	19.66	2.79	4982.0	3125.8*
13:19	37.0	19.64	2.85	4982.2	3125.8*
13:20	32.4	19.68	2.67	4981.9	3125.8*
13:21	44.2	19.56	3.01	4981.9	3125.8*
13:22	47.4	19.57	3.05	4982.1	3125.8*
13:23	36.7	19.65	2.69	4982.0	3125.8*
13:24	31.3	19.67	2.58	4982.2	3125.8*
13:25	35.8	19.58	2.83	4982.3	3125.8*
13:26	26.3	19.61	2.71	4982.0	3125.8*
13:27	20.3	19.63	2.70	4981.8	3125.8*
13:28	25.1	19.66	2.66	4982.1	3125.8*
13:29	42.6	19.60	2.93	4982.0	3125.8*
13:30	32.1	19.58	2.86	4981.8	3125.8*
13:31	25.0	19.64	2.75	4982.1	3125.8*
13:32	26.1	19.70	2.57	4982.1	3125.8*
13:33	30.4	19.61	2.81	4981.9	3125.8*
13:34	32.4	19.54	2.96	4981.8	3125.8*

ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-20-1993

	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
13:35	49.1	19.45	3.25	4982.1	3125.8*
13:36	63.7*	19.47	3.45	4982.0	3125.8*
13:37	32.0	19.58	2.80	4981.9	3125.8*
13:38	35.9	19.55	2.90	4981.9	3125.8*
13:39	30.4	19.58	2.76	4982.2	3125.8*
13:40	38.8	19.52	2.87	4982.1	3125.8*
13:41	45.1	19.47	3.02	4982.2	3125.8*
13:42	23.7	19.67	2.40	4982.1	3125.8*
13:43	18.1	19.54	2.76	4982.0	3125.8*

AVERAGE VALUES FOR THE LAST 30 MINUTES

13:43	33.9	19.61	2.81	4982.0	3125.8
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

13:43	33.1	19.68	2.74	4822.8	3125.8
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13:44	32.1	19.49	2.91	4982.1	3125.8*
13:45	78.4*	19.00	4.73	4981.9	3125.8*
13:46	41.6	19.64	2.63	4982.1	3125.8*
13:47	28.0	19.57	2.66	4981.9	3125.8*
13:48	25.6	19.50	2.69	4981.9	3125.8*
13:49	35.8	19.53	2.67	4982.0	3125.8*
13:50	27.6	19.99	1.38	4646.3	2604.8*

COMMENTS: POST TEST SYSTEM BIAS

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: RUN 1 POST TEST SYSTEM BIAS

DATE : 07-20-1993 TIME: 13:51 - 14:00

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	0.8
12	TECO8	ppmNOx	25.0	23.8
10	TELE12	% O2	0.00	0.09
10	TELE12	% O2	19.12	18.71
14	FUJIA	% CO2	0.00	0.04
14	FUJIA	% CO2	5.01	5.00
13	TECOA	ppm CO	0.0	1.4
13	TECOA	ppm CO	895.0	891.3

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: SYSTEM BIAS FOR SO2

DATE : 07-20-1993 TIME: 14:05 - 14:07

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
11	WESTR4	ppmSO2	0.0	44.6
11	WESTR4	ppmSO2	90.6	133.4

ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-20-1993					
	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
15:01	11.2	20.50	1.68	1631.5	3125.8*
15:02	12.4	20.53	1.62	1681.9	3125.8*
15:03	12.9	20.53	1.66	1648.5	3125.8*
15:04	13.4	20.54	1.64	1681.8	3125.8*
15:05	13.6	20.56	1.61	1667.0	3125.8*
15:06	14.7	20.56	1.67	1804.8	3125.8*
15:07	14.2	20.53	1.66	1855.0	3125.8*
15:08	15.8	20.50	1.67	1882.8	3125.8*
15:09	15.7	20.52	1.59	1997.0	3125.8*
15:10	16.5	20.52	1.61	1902.8	3125.8*
15:11	17.1	20.50	1.61	1949.5	3125.8*
15:12	16.1	20.57	1.51	1841.5	3125.8*
15:13	17.6	20.53	1.66	2107.0	3125.8*
15:14	16.3	20.59	1.59	2136.1	3125.8*
15:15	14.8	20.60	1.52	2251.4	3125.8*
15:16	15.6	20.57	1.59	2551.7	3125.8*
15:17	14.6	20.62	1.50	2265.5	3099.9*
15:18	15.8	20.56	1.63	2600.9	3125.8*
15:19	15.8	20.57	1.63	2595.4	3125.8*
15:20	15.9	20.58	1.59	2720.6	3121.9*
15:21	13.5	20.67	1.51	2018.9	2928.1*
15:22	14.5	20.61	1.67	2487.5	3125.8*
15:23	14.1	20.59	1.74	2297.4	3125.8*
15:24	15.7	20.53	1.81	2522.3	3125.8*
15:25	17.3	20.55	1.72	2915.3	3125.8*
15:26	16.8	20.56	1.69	3045.0	3125.8*
15:27	15.9	20.58	1.64	2748.8	3125.8*
15:28	14.7	20.56	1.62	2494.3	3125.8*
15:29	13.2	20.57	1.59	2476.1	3078.4*
15:30	12.7	20.57	1.58	2543.7	3010.4*
AVERAGE VALUES FOR THE LAST 30 MINUTES					
15:30	15.0	20.56	1.63	2210.7	3112.8
15:31	12.8	20.54	1.62	2816.2	3040.7*
15:32	12.0	20.57	1.58	2584.3	3009.4*
15:33	11.7	20.54	1.60	2485.3	3057.0*
15:34	12.2	20.57	1.64	2501.0	3029.2*
15:35	12.3	20.54	1.66	2877.0	3124.6*
15:36	11.1	20.54	1.70	2969.4	3105.9*
15:37	10.0	20.55	1.68	2989.9	2960.8*
15:38	10.1	20.51	1.75	3261.8	3079.5*
15:39	10.1	20.51	1.75	3261.8	3079.5*
15:40	10.1	20.51	1.75	3261.8	3079.5*
15:41	10.1	20.51	1.75	3261.8	3079.5*
15:42	10.1	20.51	1.75	3261.8	3079.5*
15:43	10.1	20.51	1.75	3261.8	3079.5*
15:44	10.1	20.51	1.75	3261.8	3079.5*
15:45	10.1	20.51	1.75	3261.8	3079.5*
15:46	10.1	20.51	1.75	3261.8	3079.5*
15:47	10.1	20.51	1.75	3261.8	3079.5*
15:48	11.8	20.48	1.77	2887.5	3125.8*
15:49	10.9	20.48	1.67	2834.4	3125.8*
15:50	10.9	20.48	1.63	2913.2	3125.8*
15:51	10.2	20.51	1.59	2749.1	3121.8*
15:52	10.1	20.50	1.61	2819.2	3125.8*
US BUREAU OF MINE ALBANY-OREGON 07-20-1993					
15:55	11.9	20.64	1.60	3277.6	3066.8*

ENTROPY

15:56	11.5	20.58	1.75	4361.7	3097.9*
15:57	9.9	20.60	1.70	4254.4	2815.4*
15:58	9.2	20.62	1.70	4197.3	2758.1*
15:59	10.3	20.59	1.73	4088.9	2889.2*
16:00	12.3	20.62	1.58	4090.5	3078.7*

AVERAGE VALUES FOR THE LAST 30 MINUTES

16:00	10.8	20.54	1.67	3043.6	3066.1
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

16:00	12.9	20.55	1.65	2627.2	3089.4
16:01	12.9	20.64	1.59	4227.8	3107.4*
16:02	11.2	20.66	1.61	4103.1	2999.4*
16:03	9.7	20.62	1.76	3950.1	2982.6*
16:04	9.6	20.64	1.65	3878.2	2860.1*
16:05	7.3	20.68	1.60	3558.4	2357.2*
16:06	6.5	20.72	1.58	3015.0	2109.8
16:07	7.3	20.67	1.82	3518.6	2122.7
16:08	8.0	20.66	1.83	3716.2	2104.2
16:09	8.2	20.69	1.72	3225.4	2371.6*
16:10	8.8	20.67	1.78	3312.3	2608.3*
16:11	7.9	20.67	1.70	3398.0	2386.5
16:12	8.8	20.70	1.68	3051.9	2595.7*
16:13	7.9	20.65	1.72	3404.2	2657.1*
16:14	8.3	20.60	1.78	3460.0	2616.8*
16:15	31.3	20.47	2.28	4832.4	3125.5*
16:16	17.4	20.63	1.81	4518.6	3125.8*
16:17	9.6	20.60	1.78	4191.8	2807.2*
16:18	8.1	20.69	1.26	3474.7	2358.6*
16:19	6.3	20.70	1.50	3178.2	2097.7
16:20	6.0	20.50	1.88	2853.8	2889.0*
16:21	5.8	20.52	1.56	1768.9	3125.3*
16:22	5.9	20.56	1.63	2054.7	3125.8*
16:23	6.7	20.55	1.56	1608.2	3125.8*
16:24	8.8	20.72	1.44	2219.1	3125.8*
16:25	5.0	20.71	1.36	1553.6	3124.3*
16:26	2.5	20.80	1.27	850.1	3052.3*
16:27	2.5	20.78	1.40	696.8	3098.6*
16:28	2.2	20.75	1.43	772.0	3125.8*
16:29	1.6	20.81	1.33	625.8	3125.8*
16:30	1.5	20.81	1.39	563.7	3125.8*

AVERAGE VALUES FOR THE LAST 30 MINUTES

16:30	8.1	20.66	1.62	2852.7	2781.3
16:31	1.4	20.81	1.40	564.4	3125.8*
16:32	1.7	20.78	1.43	714.4	3125.8*
16:33	2.0	20.82	1.39	947.5	3000.5*
16:34	1.9	20.80	1.50	1232.7	2841.8*

ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-20-1993

	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
16:35	1.6	20.78	1.46	1167.2	2960.8*
16:36	2.6	20.84	1.49	1273.5	2733.6*
16:37	5.1	20.82	1.66	1906.4	2932.2*
16:38	5.4	20.78	1.82	2464.2	3124.3*
16:39	5.7	20.76	1.82	2319.3	3124.8*
16:40	6.1	20.79	1.68	2402.0	3125.8*
16:41	5.7	20.84	1.63	2209.9	3114.9*
16:42	6.3	20.83	1.57	2180.4	3125.8*
16:43	5.8	20.85	1.50	2080.4	3124.7*
16:44	5.1	20.84	1.49	1909.4	3095.8*
16:45	5.8	20.82	1.50	1852.5	3125.8*
16:46	5.3	20.82	1.48	1900.6	3125.8*
16:47	5.4	20.84	1.44	1933.5	3125.8*
16:48	5.3	20.88	1.36	1822.5	3030.7*
16:49	5.4	20.93	1.37	1870.9	2716.1*
16:50	5.2	20.88	1.37	2330.0	2713.9*
16:51	4.7	20.90	1.44	2023.7	2787.8*
16:52	5.5	20.92	1.56	1879.0	3066.2*
16:53	5.0	20.96	1.47	1610.2	3033.8*
16:54	5.0	20.97	1.59	1501.2	3070.0*
16:55	4.4	20.96	1.60	1428.2	3083.0*
16:56	4.6	21.04	1.48	1201.9	2932.1*
16:57	4.7	21.01	1.57	1271.1	2926.5*
16:58	5.5	21.02	1.59	1482.9	2996.8*
16:59	4.2	21.02	1.51	1633.0	2498.5*
17:00	3.8	21.07	1.43	1569.8	2298.5

AVERAGE VALUES FOR THE LAST 30 MINUTES

17:00	4.5	20.88	1.52	1689.4	2969.6
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

17:00	6.3	20.77	1.57	2271.1	2875.4

17:01	4.1	21.07	1.41	1409.2	2261.4
17:02	4.5	21.09	1.43	1397.0	2274.3
17:03	5.6	21.03	1.55	1532.6	2674.5*
17:04	5.4	21.05	1.43	1467.4	2547.7*

COMMENTS: STOP SAMPLING TO CLEAN OUT PARTICULATE
FILTER

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: ABORT

DATE : 07-20-1993 TIME: 17:04 - 17:15

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
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ENTROPY

US BUREAU OF MINE ALBANY-OREGON

07-20-1993

TIME	CHAN12 TECO8 ppmNOx	CHAN10 TELE12 % O2	CHAN14 FUJIA % CO2	CHAN13 TECOA ppm CO	CHAN11 WESTR4 ppmSO2
17:19	8.8	20.88	1.78	3215.8	3074.1*
17:20	8.5	20.91	1.71	3438.7	2895.4*
17:21	7.7	20.93	1.66	3462.9	2632.5*
17:22	7.3	20.94	1.63	3324.9	2450.8*
17:23	7.7	20.91	1.67	3263.2	2705.5*
17:24	7.5	20.91	1.58	3145.0	2657.8*
17:25	6.4	20.93	1.51	2800.1	2438.0*
17:26	7.3	20.95	1.45	2794.3	2326.6
17:27	8.1	20.97	1.48	3137.3	2371.0
17:28	7.7	20.91	1.61	3730.4	2437.0*
17:29	7.1	20.94	1.53	3614.3	2192.1
17:30	7.6	20.95	1.50	3623.2	2243.1
17:31	6.9	20.98	1.49	3451.9	2096.8
17:32	6.5	20.99	1.47	3251.3	2046.6
17:33	5.7	20.99	1.48	3189.9	1874.9
17:34	5.5	21.00	1.48	3003.7	1783.7
17:35	5.7	21.00	1.42	2964.4	1849.2
17:36	5.9	21.00	1.44	2917.7	1855.1
17:37	5.5	21.00	1.38	2954.4	1844.4
17:38	4.7	21.07	1.23	2442.7	1718.8
17:39	5.6	21.06	1.44	2401.9	1866.2*
17:40	7.0	20.88	1.71	4127.4	2626.5*
17:41	4.4	20.88	1.66	3435.2	2056.1
17:42	3.9	20.90	1.55	2841.5	2005.1
17:43	3.2	20.96	1.23	2010.6	1701.1
17:44	4.1	21.09	1.05	1261.2	1693.0
17:45	3.0	21.14	0.95	965.3	1681.7
17:46	2.3	21.19	0.87	774.4	1442.9
17:47	11.0	21.00	1.74	2735.7	2771.2*
17:48	5.9	21.02	1.48	3263.3	1958.5

AVERAGE VALUES FOR THE LAST 30 MINUTES

17:48	6.3	20.98	1.47	2918.1	2176.5
17:49	3.8	21.12	1.13	2205.5	1289.7
17:50	3.4	21.21	0.84	1460.6	1001.2
17:51	3.0	21.33	0.55	845.3	730.0
17:52	3.0	21.33	0.54	798.6	702.1
17:53	2.0	21.34	0.51	726.8	549.9
17:54	2.1	21.33	0.50	702.6	578.8
17:55	1.9	21.33	0.49	714.4	541.9
17:56	1.9	21.34	0.49	667.6	555.6
17:57	1.8	21.33	0.47	713.7	575.4
17:58	1.4	21.32	0.48	630.8	489.2
17:59	1.7	21.31	0.45	717.1	535.0
18:00	1.4	21.31	0.45	622.4	481.7
18:01	1.2	21.30	0.47	597.1	478.9
18:02	1.5	21.32	0.46	633.8	500.2
18:03	0.9	21.31	0.45	562.1	472.3
18:04	1.1	21.31	0.47	543.3	457.1
18:05	1.2	21.29	0.48	666.4	478.0
18:06	1.3	21.27	0.48	656.5	438.1
18:07	1.1	21.26	0.47	636.8	465.0
18:08	0.9	21.26	0.45	561.0	385.2
18:09	0.8	21.25	0.43	560.8	384.4

ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-20-1993

	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
18:10	0.7	21.25	0.42	545.0	359.5
18:11	0.7	21.25	0.41	499.9	332.2
18:12	0.6	21.25	0.41	493.4	370.0
18:13	0.7	21.25	0.40	464.9	317.7
18:14	0.7	21.23	0.39	470.4	312.5
18:15	0.6	21.24	0.39	448.0	288.8
18:16	0.5	21.25	0.37	383.5	299.4
18:17	0.4	21.25	0.37	359.7	282.6
18:18	0.3	21.26	0.36	343.5	291.7

AVERAGE VALUES FOR THE LAST 30 MINUTES

18:18	1.4	21.28	0.49	674.4	498.1
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

18:18	3.9	21.13	0.98	1796.2	1337.3
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18:19	0.2	21.25	0.35	307.1	291.4
18:20	0.2	21.25	0.34	303.6	289.4
18:21	0.2	21.25	0.33	321.0	259.7
18:22	0.1	21.24	0.33	296.7	290.4
18:23	0.1	21.23	0.33	271.9	336.4
18:24	0.1	21.24	0.34	230.3	356.0
18:25	0.2	21.17	0.49	320.7	562.8
18:26	0.2	21.16	0.50	288.4	632.6
18:27	0.3	21.13	0.51	241.6	764.3
18:28	0.2	21.12	0.50	224.7	810.7
18:29	0.5	21.05	0.58	262.7	1071.8
18:30	0.2	21.13	0.43	168.2	778.4
18:31	0.2	21.15	0.49	189.6	816.0
18:32	0.2	21.15	0.56	226.2	865.2
18:33	0.2	21.15	0.55	254.8	832.0
18:34	0.2	21.14	0.61	272.3	879.1
18:35	0.2	21.14	0.56	270.1	915.9
18:36	0.2	21.14	0.52	238.5	893.7
18:37	0.2	21.15	0.49	211.5	910.9
18:38	2.3	21.20	0.51	215.4	959.9
18:39	1.5	21.19	0.45	190.4	882.5
18:40	0.4	21.19	0.40	178.2	780.1
18:41	3.0	21.26	0.39	170.1	702.9
18:42	1.3	21.24	0.35	149.5	606.5
18:43	0.2	21.26	0.34	136.3	575.8
18:44	0.2	21.28	0.34	124.9	597.8
18:45	0.2	21.31	0.32	134.3	615.8
18:46	0.2	21.28	0.30	129.3	492.4
18:47	0.6	21.31	0.26	94.7	432.0
18:48	4.9	21.31	0.27	79.0	438.5

AVERAGE VALUES FOR THE LAST 30 MINUTES

18:48	0.6	21.20	0.42	216.7	654.7
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18:49	1.4	21.28	0.23	63.5	421.2
18:50	0.6	21.29	0.21	55.4	408.2
18:51	0.7	21.28	0.20	51.3	431.5
18:52	0.6	21.27	0.19	47.2	447.2

ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-20-1993

TIME	CHAN12 TEC08	CHAN10 TELE12	CHAN14 FUJIA	CHAN13 TEC0A	CHAN11 WESTR4
	PPMNOX	% O2	% CO2	PPM CO	PPMSO2
18:53	0.5	21.31	0.17	38.1	428.0
18:54	0.2	21.28	0.15	32.4	362.2
18:55	0.2	21.30	0.13	26.7	278.0
18:56	0.2	21.29	0.12	22.8	242.4
18:57	0.5	21.31	0.12	21.8	245.5
18:58	0.4	21.28	0.11	21.9	249.5
18:59	1.6	21.27	0.12	21.8	225.4
19:00	1.3	21.32	0.12	22.0	206.5
19:01	1.1	21.32	0.12	21.9	198.0
19:02	1.7	21.29	0.12	21.9	185.7
19:03	0.6	21.29	0.11	21.8	175.8
19:04	1.1	21.30	0.12	19.3	177.5
19:05	0.7	21.29	0.11	16.8	172.9
19:06	0.3	21.28	0.11	22.5	166.1
19:07	0.1	21.28	0.12	27.6	154.1
19:08	0.1	21.28	0.12	31.7	142.7
19:09	0.1	21.27	0.12	34.7	136.3
19:10	1.1	21.27	0.12	37.9	133.4
19:11	1.7	21.24	0.17	61.1	259.4
19:12	1.3	21.28	0.13	34.2	344.8
19:13	0.2	21.28	0.12	31.7	209.3
19:14	0.1	21.27	0.12	35.9	174.4
19:15	0.1	21.28	0.12	30.8	215.9
19:16	0.1	21.28	0.12	23.6	234.4
19:17	0.1	21.29	0.12	33.0	145.0
19:18	0.1	21.32	0.11	37.1	113.1

AVERAGE VALUES FOR THE LAST 30 MINUTES
 19:18 0.6 21.29 0.13 32.3 242.8

AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA					
TIME	PPMNOX	% O2	% CO2	PPM CO	PPMSO2
19:19	0.1	21.33	0.11	37.9	107.9
19:20	0.1	21.33	0.11	39.8	102.1
19:21	0.1	21.33	0.12	39.6	108.8

COMMENTS: END OF TEST RUN 2

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: POST TEST SYSTEM BIAS

DATE : 07-20-1993 TIME: 19:21 - 19:31

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	-0.1
12	TECO8	ppmNOx	25.0	23.8
10	TELE12	% O2	0.00	0.09
10	TELE12	% O2	19.12	19.10
14	FUJIA	% CO2	0.00	0.09
14	FUJIA	% CO2	5.01	5.01
13	TECOA	ppm CO	0.0	1.8
13	TECOA	ppm CO	895.0	832.7
11	WESTR4	ppmSO2	0.0	31.5
11	WESTR4	ppmSO2	90.6	121.6

ENTROPY

Appendix D-3

CEMS Data 21 July 1993, N80 and N80-MOD Melts

CONTINUOUS EMISSIONS MONITORING SET-UP

SOURCE: US BUREAU OF MINE ALBANY-OREGON

DATE: 07-21-1993 TIME: 07:26

A/D CHAN	DESCRIP	UNITS	SPAN	INPUT VOLTAGE	ZERO OFFSET
12	TECO8	ppmNOx	100	10.00 V	0%
10	TELE12	% O2	25	1.00 V	0%
14	FUJIA	% CO2	20	1.00 V	0%
13	TECOA	ppm CO	10000	10.00 V	0%
11	WESTR4	ppmSO2	250	1.00 V	0%

AVERAGING PERIODS: 30 MINUTES, ONE HOUR,
NO EMISSION RATE CALCULATIONS

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: INITIAL DIRECT CALIBRATION

DATE : 07-21-1993 TIME: 07:32 - 07:54

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	-0.2
12	TECO8	ppmNOx	25.0	24.3
12	TECO8	ppmNOx	48.5	48.5
10	TELE12	% O2	0.00	0.09
10	TELE12	% O2	9.02	9.14
10	TELE12	% O2	19.12	19.14
14	FUJIA	% CO2	0.00	0.00
14	FUJIA	% CO2	5.01	5.06
14	FUJIA	% CO2	10.56	10.53
13	TECOA	ppm CO	0.0	3.1
13	TECOA	ppm CO	506.0	478.6
13	TECOA	ppm CO	895.0	888.9
11	WESTR4	ppmSO2	0.0	1.4
11	WESTR4	ppmSO2	23.7	25.5
11	WESTR4	ppmSO2	90.6	90.2

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: INITIAL SYSTEM BIAS

DATE : 07-21-1993 TIME: 08:17 - 08:33

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	0.1
12	TECO8	ppmNOx	25.0	23.8
10	TELE12	% O2	0.00	0.09
10	TELE12	% O2	19.12	19.09
14	FUJIA	% CO2	0.00	0.03
14	FUJIA	% CO2	5.01	5.03
13	TECOA	ppm CO	0.0	4.7
13	TECOA	ppm CO	895.0	898.9
11	WESTR4	ppmSO2	0.0	1.0
11	WESTR4	ppmSO2	90.6	89.0

ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-21-1993

TIME	CHAN12 TECOB ppmNOx	CHAN10 TELE12 % O2	CHAN14 FUJIA % CO2	CHAN13 TECOA ppm CO	CHAN11 WESTR4 ppmSO2
09:00	0.7	20.44	1.01	4322.0	15.7
09:01	0.6	20.38	1.08	5907.4	13.8
09:02	1.6	20.37	1.10	6136.0	14.7
09:03	1.7	20.36	1.12	4640.9	11.6
09:04	3.0	20.30	1.33	5239.8	28.2
09:05	1.6	20.39	0.93	2674.7	16.1
09:06	1.9	20.32	1.09	3623.3	12.4
09:07	3.0	20.32	1.16	4065.7	21.6
09:08	1.7	20.39	0.91	2423.0	14.4
09:09	1.8	20.35	0.98	2705.8	13.5
09:10	1.5	20.38	0.93	2449.0	10.7
09:11	1.9	20.36	0.98	2503.1	13.7
09:12	1.8	20.35	1.01	2236.1	12.7
09:13	1.9	20.33	1.05	2267.9	11.7
09:14	2.1	20.31	1.13	2367.1	13.7
09:15	2.6	20.33	1.10	2378.6	16.3
09:16	2.3	20.31	1.08	2350.0	14.8
09:17	2.6	20.28	1.17	2783.5	19.3
09:18	1.9	20.31	1.05	2532.6	18.6
09:19	1.9	20.31	1.07	2500.4	20.7
09:20	2.3	20.32	1.11	2512.7	25.9
09:21	2.7	20.32	1.19	2600.6	32.3
09:22	2.9	20.31	1.23	2518.5	40.6
09:23	2.6	20.34	1.13	2480.7	43.7
09:24	2.6	20.35	1.17	2498.6	50.0
09:25	2.9	20.35	1.20	2476.6	59.8
09:26	3.0	20.35	1.23	2338.2	62.2
09:27	4.3	20.32	1.37	2662.4	76.3
09:28	2.8	20.39	1.07	1986.6	64.4
09:29	2.5	20.36	1.12	2252.8	55.6

-sample pnt #

AVERAGE VALUES FOR THE LAST 30 MINUTES

09:29	2.2	20.34	1.10	3014.5	27.5
09:30	2.7	20.33	1.15	2479.4	70.3
09:31	2.0	20.39	1.00	1474.8	83.4
09:32	2.1	20.38	1.01	1489.5	65.6
09:33	2.1	20.33	1.11	1982.1	55.0
09:34	2.0	20.28	1.25	2455.4	50.3
09:35	1.6	20.18	1.58	3330.3	49.6
09:36	1.2	20.20	1.52	3062.8	55.5
09:37	1.2	20.18	1.50	3319.9	46.7
09:38	1.2	20.14	1.53	3577.2	50.1
09:39	1.1	20.13	1.52	3292.6	53.5
09:40	1.3	20.11	1.62	3205.9	60.2
09:41	1.2	20.09	1.63	3305.4	62.7
09:42	1.1	20.08	1.65	3171.6	80.2
09:43	1.4	20.05	1.72	3033.5	92.3
09:44	1.9	19.99	1.93	3742.9	124.7
09:45	2.0	19.97	1.89	3860.4	122.2
09:46	2.1	19.98	1.80	3942.7	116.8
09:47	1.3	20.03	1.59	3357.2	98.4
09:48	1.1	20.02	1.61	3275.9	102.0
09:49	1.2	20.01	1.68	3045.0	105.2
09:50	1.6	20.03	1.57	2891.3	103.4

ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-21-1993

TIME	CHAN12 TECO8 ppmNOx	CHAN10 TELE12 % O2	CHAN14 FUJIA % CO2	CHAN13 TECOA ppm CO	CHAN11 WESTR4 ppmSO2
09:51	1.3	20.05	1.49	2595.6	92.5
09:52	0.9	20.09	1.30	2375.7	77.2
09:53	0.8	20.10	1.23	2101.7	70.5
09:54	0.9	20.11	1.23	1946.9	64.4
09:55	0.8	20.13	1.16	1910.2	63.1
09:56	0.8	20.12	1.19	1922.8	60.8
09:57	0.7	20.14	1.15	1923.2	61.2
09:58	0.6	20.16	1.09	1499.7	65.5
09:59	0.6	20.16	1.11	1465.7	69.6

AVERAGE VALUES FOR THE LAST 30 MINUTES

09:59	1.4	20.13	1.43	2701.2	75.8
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

09:59	1.8	20.24	1.27	2857.9	51.6
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10:00	0.6	20.15	1.06	1514.0	66.8
10:01	0.6	20.14	1.06	1522.3	66.4
10:02	0.6	20.15	0.98	1490.4	62.6
10:03	0.6	20.17	1.04	1413.1	68.6
10:04	0.8	20.14	1.13	1722.8	69.3
10:05	0.5	20.14	1.10	1677.8	54.9
10:06	0.5	20.15	1.02	1730.0	47.9
10:07	0.6	20.15	1.06	1773.9	51.2
10:08	0.6	20.15	1.04	1558.5	51.8
10:09	0.5	20.14	0.99	1469.4	50.0
10:10	0.5	20.16	0.96	1308.1	50.5
10:11	0.7	20.13	1.11	1327.1	59.9
10:12	0.6	20.13	1.09	1489.5	50.5
10:13	0.5	20.13	1.04	1548.2	47.5
10:14	0.5	20.14	0.99	1312.9	46.9
10:15	0.5	20.14	0.95	1214.9	40.8
10:16	0.7	20.15	0.80	841.8	16.7
10:17	1.0	20.13	0.88	791.2	13.6
10:18	1.0	20.14	0.81	669.8	9.7
10:19	1.0	20.15	0.77	670.5	9.8
10:20	0.9	20.18	0.65	537.3	9.1
10:21	0.7	20.18	0.62	591.0	11.2
10:22	0.7	20.20	0.61	550.9	10.0
10:23	0.7	20.15	0.75	716.8	15.3
10:24	0.7	20.14	0.81	1003.5	22.2
10:25	0.6	20.15	0.76	961.3	17.5
10:26	0.6	20.15	0.71	911.9	16.0
10:27	0.5	20.16	0.66	798.0	12.1
10:28	0.4	20.14	0.65	773.7	11.7
10:29	0.4	20.13	0.69	847.5	12.2

AVERAGE VALUES FOR THE LAST 30 MINUTES

10:29	0.6	20.15	0.89	1157.9	35.8
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10:30	0.5	20.11	0.79	1046.2	14.5
10:31	0.4	20.11	0.73	1068.7	15.6
10:32	0.4	20.10	0.73	1045.1	14.2
10:33	0.3	20.10	0.68	1061.1	15.1

ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-21-1993

	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
10:34	0.3	20.10	0.69	958.5	18.3
10:35	0.3	20.10	0.69	1060.6	15.9
10:36	0.2	20.11	0.64	997.1	13.7
10:37	0.2	20.12	0.64	886.3	17.0
10:38	0.2	20.10	0.67	972.6	19.1
10:39	0.2	20.11	0.64	860.8	16.5
10:40	0.2	20.11	0.64	800.0	21.3
10:41	0.2	20.09	0.68	804.5	17.1
10:42	0.2	20.09	0.63	805.7	14.8
10:43	0.2	20.11	0.65	777.4	13.1
10:44	0.2	20.11	0.65	746.1	11.2
10:45	0.2	20.10	0.63	695.8	13.7
10:46	0.2	20.11	0.62	683.8	11.0
10:47	0.3	20.11	0.61	723.1	8.3
10:48	0.3	20.13	0.56	708.6	10.6
10:49	0.2	20.16	0.56	635.9	12.7
10:50	0.2	20.15	0.61	839.2	11.9
10:51	0.2	20.16	0.60	783.5	10.9
10:52	0.2	20.17	0.59	800.3	9.4
10:53	0.2	20.18	0.59	789.1	7.9
10:54	0.2	20.18	0.58	807.8	8.1
10:55	0.2	20.19	0.53	764.7	7.2
10:56	0.2	20.22	0.54	749.0	8.3
10:57	0.3	20.20	0.56	892.1	6.5
10:58	0.4	20.21	0.55	801.0	4.2
10:59	0.4	20.21	0.56	710.5	2.5

AVERAGE VALUES FOR THE LAST 30 MINUTES

10:59	0.3	20.13	0.63	842.5	12.4
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

10:59	0.4	20.14	0.76	1000.2	24.1
11:00	0.4	20.20	0.53	700.8	2.6
11:01	0.5	20.22	0.49	605.6	0.6
11:02	0.5	20.21	0.48	600.4	0.6
11:03	0.5	20.22	0.51	651.6	0.9
11:04	0.5	20.21	0.52	715.9	1.5
11:05	0.5	20.21	0.52	780.1	1.6
11:06	0.5	20.22	0.50	747.3	1.1
11:07	0.5	20.22	0.54	846.5	1.8
11:08	0.5	20.21	0.51	866.7	2.0
11:09	0.6	20.21	0.56	892.4	1.2
11:10	0.7	20.20	0.52	833.9	0.6
11:11	0.6	20.19	0.52	746.7	0.6
11:12	0.7	20.20	0.49	730.6	0.2
11:13	0.7	20.21	0.48	690.3	0.2
11:14	0.8	20.20	0.50	703.1	0.1
11:15	0.7	20.19	0.50	744.8	0.2
11:16	0.7	20.19	0.50	712.9	-0.0
11:17	0.6	20.17	0.49	683.6	0.2
11:18	0.6	20.19	0.45	644.1	-0.3
11:19	0.6	20.19	0.44	626.9	-0.4
11:20	0.6	20.19	0.46	627.2	-0.2

ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-21-1993

	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TEC08	TELE12	FUJ14	TEC04	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
11:21	0.7	20.18	0.47	652.0	-0.1
11:22	0.6	20.18	0.46	628.5	-0.1
11:23	0.7	20.18	0.49	669.6	-0.0
11:24	0.6	20.19	0.47	646.3	0.1
11:25	0.6	20.17	0.53	767.7	0.8
11:26	0.7	20.17	0.52	746.8	0.4
11:27	0.8	20.17	0.55	806.8	0.5
11:28	0.8	20.17	0.55	826.5	0.3
11:29	0.7	20.17	0.57	821.9	0.4

AVERAGE VALUES FOR THE LAST 30 MINUTES
 11:29 0.6 20.19 0.50 723.9 0.6

11:30	0.8	20.15	0.61	978.3	1.0
11:31	0.8	20.16	0.57	937.6	0.5
11:32	0.8	20.15	0.60	930.2	0.7
11:33	0.7	20.17	0.53	851.8	1.5
11:34	0.8	20.16	0.53	760.8	1.0
11:35	0.7	20.17	0.54	902.3	4.6
11:36	0.6	20.15	0.59	1142.9	4.4
11:37	0.7	20.15	0.59	1212.6	3.1
11:38	0.8	20.15	0.58	1188.3	1.9
11:39	0.7	20.16	0.58	1158.8	1.9
11:40	0.8	20.15	0.61	1268.6	2.5
11:41	0.9	20.14	0.65	1292.8	2.8
11:42	0.9	20.14	0.63	1315.3	3.0
11:43	1.0	20.14	0.64	1313.4	3.2
11:44	1.1	20.14	0.64	1259.5	3.0
11:45	1.1	20.14	0.64	1286.9	2.7
11:46	1.1	20.13	0.63	1290.8	2.6
11:47	1.2	20.13	0.64	1251.9	2.4
11:48	1.2	20.11	0.68	1381.0	3.3
11:49	1.2	20.10	0.73	1595.4	4.7
11:50	1.2	20.08	0.73	1552.5	4.8
11:51	1.2	20.09	0.67	1462.5	3.4
11:52	1.2	20.06	0.69	1440.2	3.4
11:53	1.3	20.07	0.69	1407.8	3.2
11:54	1.4	20.08	0.69	1428.6	3.9
11:55	1.3	20.08	0.70	1325.8	3.2
11:56	1.2	20.07	0.70	1370.5	2.7
11:57	1.3	20.06	0.71	1325.7	2.2
11:58	1.4	20.06	0.73	1394.1	2.6
11:59	1.6	20.06	0.72	1413.4	3.0

AVERAGE VALUES FOR THE LAST 30 MINUTES
 11:59 1.0 20.12 0.64 1248.0 2.8

AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA
 11:59 0.8 20.16 0.57 986.0 1.7

12:00	1.5	20.09	0.67	1373.1	2.3
12:01	1.5	20.08	0.69	1391.0	2.5
12:02	1.4	20.08	0.66	1427.1	2.2
12:03	1.3	20.06	0.68	1431.7	1.8

ENTROPY

US BUREAU OF MINE ALBANY-OREGON				07-21-1993	
	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJ1A	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
12:04	1.3	20.07	0.69	1467.9	1.9
12:05	1.4	20.08	0.71	1429.5	2.2
12:06	1.5	20.09	0.70	1450.6	2.2
12:07	1.5	20.10	0.68	1445.0	2.9
12:08	1.5	20.08	0.69	1461.6	3.0
12:09	1.6	20.08	0.68	1535.9	3.0
12:10	1.7	20.08	0.70	1570.5	3.3

COMMENTS: END TEST RUN AT PORT 11

ENTROPY

D-3.10

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: POST TEST SYSTEM BIAS FOR PORT 11 TEST

DATE : 07-21-1993 TIME: 12:11 - 12:31

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	0.1
12	TECO8	ppmNOx	25.0	23.5
10	TELE12	% O2	0.00	0.05
10	TELE12	% O2	19.12	18.42
14	FUJIA	% CO2	0.00	0.03
14	FUJIA	% CO2	5.01	5.01
13	TECOA	ppm CO	0.0	4.3
13	TECOA	ppm CO	895.0	888.9
11	WESTR4	ppmSO2	0.0	0.0
11	WESTR4	ppmSO2	90.6	87.2

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: DIRECT CALIBRATION FOR O2 AND SO2

DATE : 07-21-1993 TIME: 13:09 - 13:19

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
10	TELE12	% O2	0.00	0.07
10	TELE12	% O2	9.02	9.16
10	TELE12	% O2	19.12	19.18
11	WESTR4	ppmSO2	0.0	0.7
11	WESTR4	ppmSO2	23.7	24.3
11	WESTR4	ppmSO2	90.6	91.3

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: SYSTEM BIAS FOR O2 AND SO2

DATE : 07-21-1993 TIME: 13:19 - 13:41

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
10	TELE12	% O2	0.00	0.11
10	TELE12	% O2	19.12	19.03
11	WESTR4	ppmSO2	0.0	0.5
11	WESTR4	ppmSO2	90.6	89.7

ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-21-1993

	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
14:04	4.4	20.11	2.39	5713.6	13.2
14:05	4.6	20.14	2.35	5232.4	11.7
14:06	4.6	20.10	2.50	5456.1	13.5
14:07	4.7	20.10	2.55	5331.5	12.8
14:08	4.7	20.10	2.63	6135.4	13.4
14:09	4.3	20.09	2.71	6549.7	12.5
14:10	4.0	20.05	2.88	6921.0	13.4
14:11	4.1	20.02	3.00	7286.2	16.0
14:12	4.4	20.00	3.15	6752.3	18.3
14:13	4.9	20.06	3.00	7504.4	21.4
14:14	4.5	20.16	2.67	6775.1	16.6
14:15	4.5	20.15	2.69	6789.0	15.2
14:16	4.7	20.12	2.83	7154.5	16.6
14:17	5.1	20.05	3.12	7640.0	20.6
14:18	5.5	20.08	3.00	7547.0	19.8
14:19	5.9	20.02	3.17	7395.9	22.7
14:20	5.1	20.15	2.88	7617.2	25.5
14:21	5.3	20.11	2.95	7493.3	23.2
14:22	5.6	20.08	3.04	8008.4	24.7
14:23	6.8	19.96	3.56	8461.4	32.4
14:24	6.7	20.01	3.20	9138.2	36.5
14:25	5.8	20.08	3.06	7556.2	25.8
14:26	7.8	19.89	3.72	9415.8	31.7
14:27	7.6	19.97	3.50	9335.6	29.7
14:28	8.2	19.92	3.66	8771.2	27.0
14:29	11.5	19.62	5.13	9340.5	51.8
14:30	10.2	19.83	4.06	9433.9	54.3
14:31	9.3	19.95	3.50	9051.0	36.6
14:32	8.9	19.94	3.64	9066.1	31.6
14:33	8.6	19.83	3.92	9250.9	25.9

- Sample port #

AVERAGE VALUES FOR THE LAST 30 MINUTES

14:33	6.1	20.02	3.15	7604.1	23.8
14:34	8.5	19.60	4.74	8638.0	25.6
14:35	10.8	19.47	5.09	8425.0	21.4
14:36	7.2	20.04	3.21	7986.7	18.7
14:37	8.1	20.01	3.37	6845.2	21.2
14:38	7.5	20.04	3.28	7161.2	22.8
14:39	7.1	20.04	3.22	7412.9	19.3
14:40	13.1	19.36	6.34	8675.3	64.7
14:41	9.8	19.86	3.98	7920.1	49.2
14:42	8.0	20.06	3.23	8199.9	25.0
14:43	7.6	20.16	2.91	8072.7	20.5
14:44	6.0	20.29	2.50	5802.4	15.9
14:45	6.3	20.18	2.96	6275.7	15.2
14:46	6.5	20.11	3.12	6673.5	15.5
14:47	7.1	20.06	3.61	6951.4	19.2
14:48	10.1	19.83	3.77	8147.3	18.7
14:49	14.5	19.58	4.87*	8133.3	18.9
14:50	4.7	20.32	2.46	5720.2	13.9
14:51	5.5	20.29	2.50	4430.4	13.4
14:52	5.7	20.32	2.38	5456.4	14.5
14:53	6.0	20.24	2.66	5984.8	15.9
14:54	4.2	20.31	2.49	5438.6	17.3

ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-21-1993

TIME	CHAN12 TECO8 ppmDOx	CHAN10 TELE12 % O2	CHAN14 FUJIA % CO2	CHAN13 TECOA ppm CO	CHAN11 WESTR4 ppmSD2
14:55	3.7	20.46	1.94	2767.0	12.7
14:56	4.0	20.44	2.08	2143.6	9.6
14:57	4.8	20.34	2.34	4487.7	10.9
14:58	4.4	20.29	2.49	5556.3	13.9
14:59	3.9	20.24	2.75	6471.1	20.0
15:00	4.3	20.19	2.85	6666.7	16.1
15:01	4.7	20.21	2.67	6872.5	13.5
15:02	4.8	20.23	2.59	7016.9	13.5
15:03	20.0	18.23	12.18*	6467.2	119.8*

AVERAGE VALUES FOR THE LAST 30 MINUTES

15:03	7.3	20.03	3.49	6560.0	23.2
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

15:03	6.7	20.02	3.32	7082.1	23.5
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15:04	14.5	19.33	5.39	4133.4	91.8*
15:05	8.7	20.06	3.31	5250.9	23.9
15:06	9.5	20.11	2.90	6808.6	18.2
15:07	7.1	20.24	2.43	7731.9	16.4
15:08	5.9	20.24	2.44	7653.9	15.7
15:09	5.0	20.26	2.47	7048.7	13.5
15:10	4.4	20.22	2.57	6771.7	11.3
15:11	4.0	20.26	2.49	6242.8	10.2
15:12	4.0	20.24	2.62	5826.9	13.9
15:13	4.2	20.24	2.65	5892.6	12.0
15:14	4.0	20.27	2.52	5563.9	9.9
15:15	3.5	20.31	2.54	4702.1	10.0
15:16	3.4	20.29	2.56	5494.8	10.0
15:17	3.4	20.29	2.54	4864.5	8.7
15:18	3.3	20.31	2.52	4695.9	7.8
15:19	3.2	20.39	2.24	4505.6	8.1
15:20	3.1	20.39	2.38	3884.1	9.9
15:21	3.2	20.26	2.69	5814.7	8.8
15:22	3.1	20.33	2.34	4736.7	7.2
15:23	3.2	20.35	2.32	4138.1	6.7
15:24	3.3	20.28	2.52	4514.6	7.8
15:25	3.2	20.29	2.47	4379.5	6.4
15:26	3.4	20.29	2.45	4236.2	6.8
15:27	3.0	20.31	2.35	3974.2	6.5
15:28	2.8	20.28	2.39	4179.9	7.7
15:29	2.7	20.33	2.22	4114.0	6.4
15:30	2.9	20.30	2.24	3796.9	6.2
15:31	2.9	20.32	2.19	3659.0	5.5
15:32	2.9	20.25	2.61	3928.0	7.6
15:33	3.3	19.96	3.36	6040.6	8.6

AVERAGE VALUES FOR THE LAST 30 MINUTES

15:33	4.4	20.23	2.62	5152.8	12.8
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15:34	6.5	19.66	4.91	6479.3	47.2
15:35	6.8	19.87	3.85	8125.9	39.9
15:36	3.8	19.94	3.59	6774.2	14.4
15:37	3.6	20.00	3.00	6882.4	11.5

ENTROPY

US BUREAU OF MINE ALBANY-OREGON			07-21-1993		
	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
15:38	3.3	20.08	2.80	4703.8	8.3
15:39	2.5	20.16	2.71	4371.1	10.5
15:40	2.5	19.98	3.27	5213.1	11.1
15:41	3.0	19.96	3.30	6423.4	8.7
15:42	1.9	20.07	2.96	5146.4	6.7
15:43	3.0	20.08	2.89	4823.9	9.0
15:44	4.3	20.06	2.93	5181.2	7.0
15:45	6.2	20.05	2.94	5190.7	6.0
15:46	4.2	20.09	2.92	4934.4	6.3
15:47	5.4	20.10	2.87	5253.1	6.5
15:48	4.9	20.06	3.04	5322.9	7.4
15:49	5.0	20.03	3.07	5453.2	6.8
15:50	4.6	20.03	3.02	5164.9	6.7
15:51	6.1	20.06	2.92	5138.9	6.9
15:52	4.3	20.02	3.11	5446.0	8.0
15:53	3.7	20.06	3.02	5652.4	8.1
15:54	4.2	20.03	3.14	5932.9	9.9
15:55	4.0	20.04	3.18	5907.0	11.6
15:56	4.0	19.96	3.36	6558.0	17.8
15:57	3.5	20.05	3.11	5838.7	10.9
15:58	3.7	19.97	3.34	6522.6	11.3
15:59	4.0	19.93	3.50	6571.5	11.2
16:00	4.5	19.97	3.35	6277.6	11.0
16:01	4.6	19.94	3.48	6252.0	10.0
16:02	4.7	19.91	3.61	6280.3	11.0
16:03	4.9	19.90	3.62	6224.5	11.6

AVERAGE VALUES FOR THE LAST 30 MINUTES

16:03	4.3	20.00	3.23	5801.5	11.8
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

16:03	4.3	20.12	2.93	5477.2	12.3

16:04	4.5	19.89	3.75	7072.5	12.7
16:05	5.1	19.87	3.80	6786.0	10.8
16:06	5.0	19.93	3.65	6694.9	11.6
16:07	5.2	19.98	3.57	6673.1	11.7
16:08	5.2	19.95	3.66	6194.0	12.2
16:09	5.4	19.94	3.66	6569.8	12.3
16:10	5.0	19.96	3.66	6434.1	11.8
16:11	5.1	19.94	3.67	6748.8	12.7
16:12	6.2	19.92	3.72	6548.0	12.9
16:13	5.2	19.94	3.73	6917.5	15.9
16:14	5.0	19.92	3.76	6852.3	13.0
16:15	5.7	19.79	4.25	6499.2	10.9
16:16	7.7	19.55	4.98	8630.0	12.0
16:17	8.1	20.04	3.14	5416.2	6.6
16:18	5.6	20.01	3.35	5334.1	9.2
16:19	7.0	20.02	3.34	5044.9	7.4
16:20	5.2	19.93	3.60	6382.3	10.8
16:21	4.9	19.90	3.77	6749.1	12.9
16:22	5.7	19.97	3.53	6668.0	10.2
16:23	8.9	19.99	3.39	5775.7	8.2
16:24	11.5	20.02	3.26	4677.9	6.4

ENTROPY

US BUREAU OF MINE ALBANY-OREGON			07-21-1993		
	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECOB	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
16:25	6.8	19.98	3.46	4884.1	6.7
16:26	5.1	19.97	3.39	5861.8	8.6
16:27	3.4	19.97	3.42	6224.3	10.3
16:28	3.9	20.04	3.20	6341.2	9.8
16:29	2.6	19.92	3.59	5980.2	11.9
16:30	3.7	19.96	3.33	6064.6	8.6
16:31	7.0	20.00	3.20	5135.9	7.2
16:32	8.4	19.98	3.23	4754.8	6.0
16:33	8.1	19.97	3.29	4569.9	6.0

AVERAGE VALUES FOR THE LAST 30 MINUTES

16:33	5.9	19.94	3.58	6149.5	10.2
16:34	6.3	20.01	3.19	4081.7	5.5
16:35	11.2	20.00	3.23	3821.7	5.0
16:36	13.4	20.05	3.07	3429.7	4.1
16:37	9.8	20.04	3.16	3414.0	4.4
16:38	7.8	20.07	3.07	4291.3	5.0
16:39	8.3	20.09	3.08	4601.8	5.4
16:40	5.6	20.45	1.59	3606.0	3.9
16:41	0.5	20.94	0.11	73.5	3.0
16:42	0.7	20.85	0.54	233.1	2.9
16:43	0.4	20.85	0.41	431.4	3.3
16:44	0.4	20.91	0.23	186.4	2.7
16:45	0.8	20.86	0.50	195.4	3.3
16:46	1.5	20.82	0.70	552.3	4.0
16:47	1.5	20.81	0.70	505.0	4.3
16:48	1.2	20.83	0.69	524.2	4.1
16:49	1.3	20.83	0.66	501.3	3.7
16:50	2.3	20.82	0.75	481.6	3.8
16:51	2.1	20.84	0.66	429.5	4.0
16:52	1.8	20.84	0.69	452.7	4.5
16:53	1.5	20.83	0.67	511.2	5.0
16:54	1.7	20.84	0.66	538.0	5.1
16:55	2.0	20.84	0.74	568.5	5.5
16:56	2.3	20.86	0.68	597.3	5.7
16:57	2.8	20.88	0.69	557.3	6.0
16:58	3.3	20.81	0.75	583.3	5.4
16:59	3.6	20.80	0.75	511.6	5.1
17:00	11.2	19.86	4.14	3728.9	8.5
17:01	20.6	19.65	4.30	4358.1	6.3
17:02	3.8	19.75	4.18	5888.7	12.2
17:03	3.2	19.78	4.08	7018.9	14.0

- change to port #11

- move probe tip to touch the top wall
Check out stratification.

AVERAGE VALUES FOR THE LAST 30 MINUTES

17:03	4.4	20.53	1.62	1889.2	5.2
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

17:03	5.1	20.23	2.60	4019.3	7.7
17:04	2.9	19.81	3.85	6593.7	13.9
17:05	1.2	20.87	0.16	2176.7	5.9
17:06	2.0	20.93	0.10	5.2	6.1
17:07	3.4	20.93	0.10	3.9	6.5

ENTROPY

US BUREAU OF MINE ALBANY-OREGON

07-21-1993

TIME	CHAN12 TECOB ppmNOx	CHAN10 TELE12 % O2	CHAN14 FUJIA % CO2	CHAN13 TECOA ppm CO	CHAN11 WESTR4 ppmSO2
17:08	4.3	20.90	0.10	3.4	6.2
17:09	3.9	20.88	0.10	3.3	5.9
17:10	4.4	20.89	0.10	4.1	6.2
17:11	5.2	20.89	0.10	3.7	6.4
17:12	6.6	20.83	0.52	38.7	6.6
17:13	5.0	20.93	0.10	342.4	5.5
17:14	5.7	20.93	0.09	4.4	6.2
17:15	7.0	20.92	0.11	3.7	6.7
17:16	8.7	20.85	0.10	42.2	5.8
17:17	7.0	20.82	0.11	44.0	5.8
17:18	5.7	20.83	0.10	40.4	5.7
17:19	5.2	20.79	0.10	33.9	6.0
17:20	5.0	20.76	0.10	34.0	5.7
17:21	4.6	20.73	0.10	33.9	5.7
17:22	4.2	20.72	0.10	33.6	5.3
17:23	3.9	20.71	0.10	33.9	5.2
17:24	3.6	20.69	0.10	33.9	5.3
17:25	3.4	20.67	0.10	33.7	5.2
17:26	3.3	20.66	0.10	33.6	5.2
17:27	3.2	20.66	0.10	34.0	5.2
17:28	3.1	20.63	0.10	33.8	5.2
17:29	2.9	20.67	0.12	32.4	5.4
17:30	1.7	20.73	0.11	27.6	3.7
17:31	22.2	20.35	1.65	84.9	6.5
17:32	56.3	19.96	2.54	480.3	307.3*
17:33	86.6*	20.09	1.98	305.8	312.6*

- leak check s.

leak in
system, trouble
shooting- probe leakage
back into post

AVERAGE VALUES FOR THE LAST 30 MINUTES

17:33	9.4	20.70	0.44	352.6	26.3
17:34	83.8*	20.16	1.57	200.3	312.6*
17:35	70.1*	20.14	1.32	118.9	312.6*
17:36	98.9*	20.14	1.13	9.2	312.6*
17:37	98.6*	20.44	1.17	19.5	312.6*
17:38	93.2*	20.25	1.14	19.5	312.6*
17:39	91.5*	20.26	1.08	19.5	312.6*
17:40	97.8*	20.38	1.07	11.1	312.6*
17:41	94.7*	20.35	1.00	7.6	312.6*
17:42	66.4	20.35	0.99	7.5	312.6*
17:43	8.9	20.31	0.96	13.1	312.6*
17:44	9.1	20.41	0.84	9.4	303.8*
17:45	1.1	20.64	0.65	152.2	309.0*
17:46	0.3	20.60	0.70	269.8	312.6*
17:47	0.2	20.75	0.72	261.4	312.6*
17:48	2.2	20.68	0.73	260.1	312.6*
17:49	6.4	20.74	0.73	251.4	312.6*
17:50	4.9	20.52	0.71	199.8	312.6*
17:51	10.3	20.45	0.75	209.4	312.6*
17:52	2.1	20.45	0.69	116.7	312.6*
17:53	1.9	20.39	0.62	25.5	256.7*
17:54	1.8	20.38	0.56	14.5	197.9

COMMENTS: END OF TEST

(CONTINUED ON THE NEXT PAGE)

ENTROPY

US BUREAU OF MINE ALBANY-OREGON			07-21-1993		
	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
<u>TIME</u>	<u>ppmNOx</u>	<u>% O2</u>	<u>% CO2</u>	<u>ppm CO</u>	<u>ppmSO2</u>

ENTROPY

D-3.19

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: POST TEST SYSTEM BIAS

DATE : 07-21-1993 TIME: 17:55 - 18:10

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	-0.3
12	TECO8	ppmNOx	25.0	23.7
10	TELE12	% O2	0.00	0.10
10	TELE12	% O2	19.12	18.95
14	FUJIA	% CO2	0.00	0.06
14	FUJIA	% CO2	5.01	5.05
13	TECOA	ppm CO	0.0	4.6
13	TECOA	ppm CO	895.0	888.9
11	WESTR4	ppmSO2	0.0	6.9
11	WESTR4	ppmSO2	90.6	91.7

ENTROPY

Appendix D-4

CEMS Data

22 July 1993, N80-IV and N80-IV-MOD Melts

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: INITIAL DIRECT CALIBRATION

DATE : 07-22-1993 TIME: 07:31 - 07:44

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	-0.2
12	TECO8	ppmNOx	25.0	24.4
12	TECO8	ppmNOx	48.5	48.7
10	TELE12	% O2	0.00	0.05
10	TELE12	% O2	9.02	9.06
10	TELE12	% O2	19.12	19.17
14	FUJIA	% CO2	0.00	0.02
14	FUJIA	% CO2	5.01	5.09
14	FUJIA	% CO2	10.56	10.56
13	TECOA	ppm CO	0.0	4.4
13	TECOA	ppm CO	506.0	488.5
13	TECOA	ppm CO	895.0	898.8
11	WESTR4	ppmSO2	0.0	0.3
11	WESTR4	ppmSO2	23.7	24.4
11	WESTR4	ppmSO2	90.6	91.2

ENTROPY

	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
08:15	-0.1	20.81	0.10	4.7	11.7
08:16	-0.1	20.80	0.10	4.8	9.8
08:17	-0.1	20.84	0.10	4.7	8.8
08:18	-0.1	20.84	0.10	4.8	8.4
08:19	-0.1	20.86	0.10	4.9	8.0
08:20	-0.1	20.85	0.10	4.6	7.9
08:21	-0.1	20.86	0.10	4.7	7.6
08:22	-0.1	20.85	0.10	4.8	7.3
08:23	-0.1	20.85	0.10	4.6	7.1
08:24	-0.1	20.85	0.10	4.6	6.9
08:25	-0.1	20.85	0.10	4.6	6.6
08:26	-0.2	20.86	0.09	4.6	6.6
08:27	6.5	20.31	1.20	22.6	8.0
08:28	2.1	19.01	2.65	2681.2	38.5
08:29	2.5	20.16	1.26	1002.0	16.8
08:30	6.1	20.16	1.37	513.1	12.5
08:31	9.7	20.09	1.51	422.4	12.5
08:32	13.0	19.87	1.86	375.7	11.1
08:33	9.0	19.39	2.21	369.2	10.3
08:34	1.2	19.65	1.73	880.1	11.0
08:35	0.6	19.58	1.72	1312.9	10.7
08:36	0.5	19.45	2.05	2065.4	9.8
08:37	1.6	20.02	1.29	1054.3	11.1
08:38	2.0	19.66	1.89	1458.1	8.7
08:39	0.4	19.63	1.85	7234.9	9.5
08:40	0.6	19.83	1.57	6668.1	8.9
08:41	2.2	19.90	1.46	4526.0	10.2
08:42	3.5	19.95	1.41	3897.7	9.6
08:43	3.9	19.88	1.55	4313.1	9.7
08:44	1.9	19.80	1.62	4726.5	9.3

- Sample port.

AVERAGE VALUES FOR THE LAST 30 MINUTES

08:44	2.2	20.22	1.04	1452.7	10.5
08:45	2.2	19.80	1.65	4404.2	9.2
08:46	3.8	19.86	1.62	4398.0	9.3
08:47	4.6	19.87	1.64	4321.0	8.7
08:48	6.0	19.90	1.65	3504.0	8.4
08:49	8.0	19.93	1.68	3169.7	7.9
08:50	8.2	19.94	1.74	3142.2	8.2
08:51	7.9	19.93	1.80	3344.5	8.2
08:52	7.9	19.95	1.80	3360.1	8.6
08:53	8.7	19.95	1.90	3230.9	8.5
08:54	7.1	19.94	2.01	2859.7	8.2
08:55	6.0	20.02	1.95	2910.2	8.2
08:56	2.9	20.07	2.00	3268.7	9.6
08:57	0.9	20.04	2.12	4814.2	10.9
08:58	1.2	20.08	2.16	4316.0	11.5
08:59	1.1	20.10	2.16	4485.6	12.0
09:00	1.4	20.04	2.41	4312.7	15.5
09:01	1.0	20.08	2.26	4753.0	19.9
09:02	0.9	20.10	2.21	3956.8	16.8
09:03	1.6	20.07	2.38	4083.4	16.3
09:04	6.0	19.88	3.31	3978.6	48.9
09:05	7.3	19.93	3.40	4766.4	73.3

ENTROPY

TIME	CHAN12 TECOB ppmNOx	CHAN10 TELE12 % O2	CHAN14 FUJIA % CO2	CHAN13 TECOA ppm CO	CHAN11 WESTR4 ppmSO2
09:06	6.4	20.02	2.99	4478.7	49.1
09:07	5.2	20.08	2.68	4348.4	33.9
09:08	5.1	20.07	2.56	4344.1	27.0
09:09	4.3	20.10	2.42	4121.1	24.2
09:10	3.9	20.05	2.59	4368.9	25.1
09:11	3.4	20.02	2.62	4107.4	24.5
09:12	3.5	20.04	2.63	4114.2	25.0
09:13	1.6	20.77	0.27	1768.7	14.0
09:14	2.4	20.88	0.10	19.7	13.0

- Move probe mt
to do leak chk

AVERAGE VALUES FOR THE LAST 30 MINUTES

09:14	4.4	20.05	2.09	3768.4	18.8
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

09:14	3.3	20.13	1.57	2610.5	14.6
09:15	3.6	20.83	0.10	57.0	18.3
09:16	2.8	20.80	0.11	45.7	22.2
09:17	1.7	20.82	0.10	22.8	15.0
09:18	1.6	20.81	0.10	21.2	13.6
09:19	0.8	20.81	0.10	15.8	13.0
09:20	1.2	20.80	0.10	14.7	12.9
09:21	2.4	20.72	0.87	169.8	16.8
09:22	4.8	20.12	2.78	3179.7	44.4
09:23	8.1	19.78	4.23	5140.5	101.5
09:24	31.1	18.95	8.84*	6442.9	277.1*
09:25	23.0	19.02	4.78*	4712.3	158.3*
09:26	12.4	20.08	2.45	2544.4	52.3
09:27	11.2	20.02	2.51	3432.3	54.2
09:28	9.7	19.97	2.60	4213.1	48.7
09:29	8.7	19.93	2.83	5319.0	47.3
09:30	8.8	19.91	2.88	4745.3	48.4
09:31	8.2	19.92	2.86	4898.7	44.7
09:32	8.8	19.86	3.09	5684.4	49.3
09:33	9.9	19.89	3.00	4944.4	48.3
09:34	9.7	19.89	2.94	5012.0	49.7
09:35	10.2	19.87	3.02	4810.9	47.8
09:36	10.8	19.85	3.13	5996.3	54.0
09:37	10.4	19.85	3.20	5082.9	52.7
09:38	12.3	19.69	3.65	6372.5	55.4
09:39	12.9	19.59	3.93	6362.8	64.5
09:40	10.6	19.59	3.89	6743.9	69.6
09:41	10.4	19.47	4.27	8483.4	82.2
09:42	10.4	19.62	3.88	6592.3	79.4
09:43	9.7	19.58	3.96	8953.8	85.8
09:44	10.3	19.60	3.95	7653.8	89.2

- Sampling port #6

AVERAGE VALUES FOR THE LAST 30 MINUTES

09:44	9.2	19.99	2.80	4255.6	60.5
09:45	9.7	19.68	3.67	7174.7	78.7
09:46	10.4	19.68	3.76	7270.9	73.6
09:47	9.1	19.66	3.78	7211.6	73.2
09:48	9.3	19.61	3.93	7324.5	77.4

ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-22-1973

TIME	CHAN12 TECO8 ppmNOx	CHAN10 TELE12 % O2	CHAN14 FUJIA % CO2	CHAN13 TECOA ppm CO	CHAN11 WESTR4 ppmSO2
09:49	9.4	19.56	4.14	6961.0	74.9
09:50	10.1	19.46	4.38	8076.6	68.5
09:51	9.3	19.54	4.05	7180.5	49.5
09:52	9.5	19.60	4.07	6562.8	41.6
09:53	9.5	19.48	3.85	5634.9	48.2
09:54	8.3	19.89	3.01	4708.3	41.2
09:55	9.3	19.80	3.24	5137.5	41.2
09:56	9.8	19.78	3.32	6530.9	42.1
09:57	8.2	19.77	3.30	6738.2	39.6
09:58	9.4	19.71	3.45	7084.3	44.5
09:59	9.1	19.76	3.37	6905.6	44.5
10:00	9.4	19.71	3.50	6629.8	42.8
10:01	9.9	19.68	3.59	6381.1	41.9
10:02	9.5	19.67	3.62	7235.8	40.9
10:03	8.4	19.72	3.38	6595.1	35.8
10:04	8.6	19.75	3.35	6739.2	36.4
10:05	9.0	19.72	3.49	7640.4	37.1
10:06	8.7	19.75	3.43	6685.0	39.6
10:07	8.7	19.79	3.39	6793.0	38.3
10:08	9.4	19.76	3.51	6918.1	37.3
10:09	9.6	19.76	3.52	6089.6	38.1
10:10	9.4	19.80	3.41	6643.6	36.5
10:11	8.6	19.76	3.48	6158.8	34.6
10:12	8.7	19.71	3.56	5959.5	36.1
10:13	7.5	19.71	3.63	6573.2	40.4
10:14	7.0	19.71	3.61	7537.4	41.3

AVERAGE VALUES FOR THE LAST 30 MINUTES

10:14	9.1	19.70	3.59	6702.7	47.2
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

10:14	9.2	19.84	3.20	5479.2	53.9
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ENTROPY

10:15	6.5	19.76	3.56	7692.1	39.1
10:16	6.0	19.78	3.51	7572.5	40.1
10:17	5.7	19.80	3.52	7354.2	39.2
10:18	6.0	19.76	3.60	7887.9	42.6
10:19	5.4	19.75	3.69	6402.7	46.1
10:20	4.4	19.76	3.62	7596.7	47.1
10:21	7.5	19.74	3.65	6610.7	41.0
10:22	5.4	19.82	3.52	6270.3	41.7
10:23	4.6	19.83	3.50	5922.2	41.4
10:24	4.6	19.78	3.62	7041.4	44.4
10:25	4.0	19.73	3.66	7215.2	43.7
10:26	3.7	19.72	3.60	6317.1	43.8
10:27	4.4	19.72	3.56	5938.1	37.8
10:28	5.1	19.72	3.49	5271.9	34.3
10:29	5.1	19.72	3.53	6063.6	33.4
10:30	4.2	19.72	3.56	5723.8	36.6
10:31	4.3	19.72	3.51	5636.5	37.7
10:32	4.5	19.73	3.54	5394.9	36.0
10:33	4.2	19.73	3.56	5819.7	39.7
10:34	4.9	19.69	3.68	5814.7	40.1
10:35	5.0	19.70	3.55	4871.6	37.5

ENTROPY

US BUREAU OF MINE ALBANY-OREGON				07-22-1993	
	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
10:36	4.9	19.74	3.56	5042.1	40.1
10:37	5.6	19.73	3.51	5135.9	33.9
10:38	5.9	19.73	3.57	5004.9	35.1
10:39	6.3	19.74	3.50	5374.4	34.5
10:40	6.4	19.77	3.44	5507.5	35.0
10:41	6.8	19.80	3.38	4842.4	39.6
10:42	7.1	19.77	3.45	4487.5	40.3
10:43	7.4	19.79	3.44	5270.3	42.9
10:44	8.2	19.81	3.39	4836.1	42.5

AVERAGE VALUES FOR THE LAST 30 MINUTES

10:44	5.5	19.75	3.54	5997.3	39.6
10:45	9.8	19.78	3.46	5131.8	42.9
10:46	10.2	19.75	3.65	4999.3	45.8
10:47	10.4	19.75	3.69	5047.4	43.0
10:48	10.6	19.74	3.75	5057.3	44.2
10:49	12.9	19.76	3.52	4853.2	37.9
10:50	13.3	19.70	3.83	5007.1	41.6
10:51	12.6	19.75	3.70	6023.8	46.4
10:52	13.0	19.70	3.93	5371.4	52.4
10:53	14.2	19.54	4.43	5912.6	54.0
10:54	13.8	19.54	4.58	5554.5	50.7
10:55	14.7	19.59	4.18	4938.6	48.3
10:56	14.5	19.84	3.45	4180.7	45.8
10:57	15.6	19.98	3.03	4434.7	42.7
10:58	16.3	19.89	3.25	5089.7	42.2
10:59	17.0	19.91	3.26	5117.3	42.6
11:00	17.7	20.01	2.83	4837.9	41.8
11:01	18.8	20.01	3.20	4479.7	48.6
11:02	19.3	19.95	3.19	5557.1	47.1
11:03	19.5	19.94	3.13	5473.5	44.7
11:04	20.0	19.91	3.23	4902.9	44.8
11:05	20.3	19.91	3.25	5122.8	46.4
11:06	20.9	19.93	3.14	5192.4	47.2
11:07	21.6	19.87	3.28	4704.5	46.0
11:08	22.1	19.88	3.17	4591.0	43.4
11:09	22.1	19.89	3.10	5023.4	42.3
11:10	22.6	19.89	3.13	5150.3	46.0
11:11	22.7	19.83	3.18	4716.8	46.3
11:12	23.1	19.81	3.19	5720.7	49.1
11:13	23.8	19.78	3.25	5451.4	44.5
11:14	24.5	19.77	3.19	5175.4	41.1

AVERAGE VALUES FOR THE LAST 30 MINUTES

11:14	17.3	19.82	3.44	5094.0	45.3
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

11:14	11.4	19.79	3.49	5545.6	42.5
11:15	26.5	19.81	3.00	5156.4	39.9
11:16	27.7	19.82	2.99	5245.8	42.8
11:17	29.0	19.88	2.90	4431.7	47.8
11:18	30.1	19.86	2.99	5169.6	53.6

ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-22-1993

	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
11:19	31.4	19.80	3.24	5453.5	57.3
11:20	30.3	19.67	3.69	4848.6	48.6
11:21	29.2	19.66	3.70	4830.2	44.8
11:22	29.0	19.65	3.69	5178.8	43.9
11:23	29.3	19.57	3.70	6068.5	49.6
11:24	28.7	19.57	3.71	6612.2	58.5
11:25	27.4	19.65	3.36	6223.6	55.5
11:26	26.9	19.63	3.43	7471.9	56.0
11:27	26.6	19.59	3.41	6853.2	57.0
11:28	26.8	19.65	3.22	6417.1	57.1
11:29	26.3	19.61	3.34	5959.6	64.8
11:30	26.0	19.62	3.34	6861.6	64.9
11:31	25.6	19.57	3.50	7479.5	69.7
11:32	25.6	19.58	3.49	7362.5	71.0
11:33	26.1	19.61	3.34	6402.5	61.6
11:34	26.1	19.53	3.51	6791.9	68.6
11:35	26.1	19.61	3.11	7158.5	62.6
11:36	27.3	19.65	3.09	6606.8	60.4
11:37	28.3	19.58	3.04	6534.0	52.8
11:38	28.4	19.76	2.61	6200.7	50.4
11:39	27.3	19.59	3.10	6907.7	59.6
11:40	27.5	19.56	3.16	4897.8	55.9
11:41	26.6	19.49	3.23	7338.6	59.7
11:42	39.5	20.43	0.19	3034.6	44.5
11:43	65.1	20.57	0.11	15.5	50.1
11:44	80.9	20.54	0.13	18.2	53.2

AVERAGE VALUES FOR THE LAST 30 MINUTES

11:44	31.1	19.74	2.98	5651.0	55.4
11:45	50.8	20.49	0.14	72.1	48.7
11:46	28.0	20.44	0.16	54.0	46.8
11:47	21.8	20.41	0.17	53.2	44.9
11:48	17.8	20.40	0.18	49.2	43.4
11:49	15.3	20.39	0.13	41.8	42.2
11:50	13.4	20.38	0.12	38.7	41.0
11:51	11.6	20.40	0.12	32.2	36.6
11:52	12.6	20.42	0.10	32.4	21.5
11:53	21.7	20.41	0.12	47.5	27.6
11:54	21.0	20.40	0.12	39.1	32.5
11:55	12.2	20.41	0.11	32.1	27.7
11:56	35.0	20.52	0.09	5.9	28.3
11:57	51.4	20.55	0.08	0.9	34.7
11:58	52.4	20.56	0.08	1.1	34.6
11:59	51.0	20.55	0.08	1.6	33.7
12:00	41.4	20.60	0.08	1.2	29.0
12:01	35.9	20.61	0.08	1.5	26.4
12:02	33.1	20.60	0.08	1.5	25.0
12:03	30.7	20.62	0.08	1.5	23.7
12:04	28.4	20.62	0.08	1.3	22.5
12:05	29.6	20.51	0.66	5.1	22.9
12:06	37.5	19.46	3.56	1649.3	80.2
12:07	35.4	19.42	3.48	2669.4	81.3
12:08	31.9	19.39	3.49	2976.2	81.1
12:09	31.2	19.34	3.57	3517.1	92.5

change port, leak
check - good ✓

sample port 1
part 11

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: INITIAL SYSTEM BIAS

DATE : 07-22-1993 TIME: 07:44 - 07:55

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	-0.1
12	TECO8	ppmNOx	25.0	23.9
10	TELE12	% O2	0.00	0.09
10	TELE12	% O2	19.12	19.14
14	FUJIA	% CO2	0.00	0.04
14	FUJIA	% CO2	5.01	5.01
13	TECOA	ppm CO	0.0	4.6
13	TECOA	ppm CO	895.0	889.1
11	WESTR4	ppmSO2	0.0	1.2
11	WESTR4	ppmSO2	23.7	23.9

ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-22-1993

	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
12:10	26.2	19.38	3.54	3604.9	95.3
12:11	24.0	19.36	3.60	4080.4	103.1
12:12	22.3	19.34	3.86	4445.2	108.1
12:13	22.9	19.31	3.96	4206.8	93.1
12:14	20.5	19.33	4.05	4566.2	97.3

AVERAGE VALUES FOR THE LAST 30 MINUTES

12:14	28.9	20.15	1.20	1074.3	50.9
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

12:14	30.0	19.95	2.09	3362.7	53.1
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12:15	20.0	19.35	3.95	4796.4	93.3
12:16	18.5	19.32	4.15	5661.2	108.7
12:17	14.8	19.49	3.78	5358.6	100.6
12:18	14.0	19.37	4.17	6138.9	103.7
12:19	12.9	19.40	4.15	6575.7	96.9
12:20	11.2	19.40	4.13	5869.3	100.0
12:21	11.5	19.40	4.17	6655.5	94.2
12:22	11.3	19.39	4.20	6023.4	91.6
12:23	10.1	19.41	4.20	5985.2	90.0
12:24	9.8	19.41	4.21	6609.5	87.7
12:25	9.0	19.43	4.26	5953.4	85.8
12:26	8.1	19.45	4.14	6204.2	80.4
12:27	7.1	19.47	4.22	6388.4	80.0
12:28	5.9	19.47	4.26	5831.5	78.8
12:29	5.4	19.52	3.98	5492.7	77.0
12:30	4.0	19.61	3.86	5472.0	72.5
12:31	3.5	19.61	3.79	5169.8	64.3
12:32	3.5	19.57	3.87	4811.0	64.1
12:33	3.3	19.55	3.97	5925.8	63.9
12:34	3.0	19.55	3.99	5751.1	60.4
12:35	3.3	19.54	4.03	5884.4	58.8
12:36	3.5	19.54	4.04	5259.5	59.9
12:37	3.1	19.57	3.98	4983.5	58.0
12:38	3.2	19.61	3.88	1135.7	56.7
12:39	3.4	19.61	3.82	5937.7	54.3
12:40	3.4	19.62	3.73	5069.5	57.7
12:41	3.3	19.63	3.72	5560.6	58.2
12:42	3.5	19.60	3.77	5610.7	62.4
12:43	3.8	19.57	3.88	5256.2	61.8
12:44	3.3	19.55	4.04	6056.7	63.2

AVERAGE VALUES FOR THE LAST 30 MINUTES

12:44	7.4	19.50	4.01	5580.9	76.2
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12:45	3.1	19.52	4.18	6714.6	66.6
12:46	3.1	19.57	4.02	5797.8	66.6
12:47	3.1	19.55	4.20	6186.3	65.8
12:48	3.1	19.58	4.10	5474.2	72.2
12:49	3.3	19.60	4.05	6341.3	74.8
12:50	3.5	19.59	4.09	5908.7	74.3
12:51	3.7	19.57	4.14	5584.7	70.3
12:52	3.7	19.62	3.98	5645.5	65.6

ENTROPY

US BUREAU OF MINE ALBANY-OREGON

07-22-1993

	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
12:53	3.6	19.68	3.89	6192.0	67.1
12:54	3.7	19.66	3.84	5986.5	64.2
12:55	3.1	20.24	1.67	4102.5	44.0
12:56	3.0	20.94	0.10	62.2	21.5
12:57	6.9	20.96	0.09	3.5	22.3
12:58	17.3	20.88	0.12	19.7	24.3
12:59	15.7	20.83	0.12	60.6	23.7
13:00	10.4	20.82	0.13	44.0	24.9
13:01	8.2	20.79	0.14	43.9	26.2
13:02	6.9	20.78	0.16	42.4	26.8
13:03	6.0	20.78	0.13	33.8	26.9
13:04	5.6	20.77	0.11	34.0	26.9
13:05	5.3	20.76	0.11	33.3	26.9
13:06	5.2	20.75	0.11	33.5	26.8
13:07	5.2	20.73	0.11	36.9	26.9
13:08	4.4	20.53	1.45	238.9	33.6
13:09	2.3	19.61	4.08	4472.5	50.4
13:10	2.4	19.58	4.23	5825.0	49.1
13:11	3.5	19.56	4.09	5426.2	51.5
13:12	4.2	19.65	3.85	4619.9	50.3
13:13	5.3	19.66	3.81	5277.0	43.4
13:14	6.4	19.59	3.99	5181.4	48.4

- change part, let
check - good

sample long time!
13h
outlet

AVERAGE VALUES FOR THE LAST 30 MINUTES

13:14 5.4 20.14 2.30 3180.8 45.4

AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

13:14 6.4 19.82 3.16 4380.9 60.8

13:15	7.3	19.59	3.94	5245.2	44.5
13:16	8.0	19.64	3.79	4591.9	51.9
13:17	8.6	19.66	3.78	4401.3	57.8
13:18	9.2	19.68	3.74	4871.0	57.7
13:19	9.7	19.72	3.68	5291.8	56.2
13:20	10.1	19.71	3.75	5229.5	55.4
13:21	10.4	19.63	3.91	5492.9	54.7
13:22	11.2	19.71	3.61	4521.5	46.7
13:23	11.6	19.72	3.55	4457.1	46.5
13:24	12.0	19.76	3.48	4176.1	48.3
13:25	12.4	19.76	3.50	4609.3	51.0
13:26	13.0	19.77	3.53	5027.3	47.8
13:27	13.5	19.75	3.63	4500.4	53.6
13:28	14.1	19.76	3.57	4023.0	51.9
13:29	15.7	19.80	3.46	3990.9	54.5
13:30	17.7	19.82	3.34	3939.7	51.6
13:31	17.9	19.87	3.23	3580.1	52.9
13:32	18.1	19.88	3.26	3784.3	56.8
13:33	19.1	19.86	3.41	3743.6	57.7
13:34	22.1	19.89	3.09	2860.9	36.8
13:35	24.4	19.90	3.17	2644.4	50.7
13:36	22.0	19.93	3.22	2735.5	55.5
13:37	21.2	19.92	3.34	3480.6	60.2
13:38	20.1	19.95	3.29	3503.9	64.2
13:39	20.1	19.92	3.37	3824.0	65.9

ENTROPY

US BUREAU OF MINE ALBANY-OREGON

07-22-1993

	CHAN12 TECO8	CHAN10 TELE12	CHAN14 FUJIA	CHAN13 TECOA	CHAN11 WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
13:40	19.6	19.94	3.36	3430.3	74.6
13:41	20.5	19.95	3.26	3684.2	71.5
13:42	21.3	19.98	3.14	3419.5	62.0
13:43	19.3	20.15	2.59	2678.0	55.1
13:44	22.1	20.61	1.11	875.9	28.6

AVERAGE VALUES FOR THE LAST 30 MINUTES

13:44	15.7	19.84	3.37	3953.8	54.1
13:45	36.3	20.93	0.21	68.1	31.9
13:46	46.0	20.79	0.52	9.3	34.3
13:47	43.1	20.77	0.36	7.4	32.2
13:48	43.8	20.46	0.55	12.3	31.6
13:49	43.5	20.73	0.31	13.0	31.7
13:50	46.4	20.89	0.17	3.7	33.1
13:51	48.0	20.94	0.14	3.5	33.6
13:52	46.3	20.92	0.15	4.0	32.4
13:53	44.9	20.97	0.09	4.2	31.8
13:54	42.9	20.98	0.11	3.6	30.8
13:55	35.9	20.69	0.59	25.8	27.5
13:56	31.4	20.92	0.17	20.2	25.6
13:57	32.0	20.97	0.12	3.7	26.0
13:58	29.7	20.73	0.66	7.0	24.6
13:59	22.6	20.40	1.11	14.7	21.6
14:00	20.1	20.31	1.12	14.6	20.5
14:01	19.1	20.26	1.07	4.1	20.0
14:02	18.6	20.22	0.99	3.3	19.8
14:03	18.3	20.43	0.59	2.6	19.9
14:04	19.8	20.76	0.16	4.0	20.9
14:05	21.5	20.78	0.12	3.2	21.4
14:06	21.6	20.78	0.11	3.3	21.4
14:07	20.7	20.63	0.28	2.5	20.8
14:08	18.3	20.25	0.69	3.1	19.2
14:09	16.1	20.11	0.78	2.5	18.0
14:10	15.1	20.32	0.48	2.8	17.7
14:11	26.5*	20.47	0.38	2.4	18.1
14:12	100.0*	20.34	0.62	2.9	19.3
14:13	81.2*	20.17	1.26	4.9	17.5
14:14	63.9	19.98	1.99	128.6	17.3

AVERAGE VALUES FOR THE LAST 30 MINUTES

14:14	35.8	20.60	0.53	12.8	24.7
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

14:14	25.8	20.22	1.95	1983.3	39.4
14:15	30.8	19.89	2.43	704.9	42.9
14:16	15.7	19.86	2.52	888.7	73.0
14:17	9.6	19.87	2.45	810.7	85.0
14:18	8.0	19.83	2.63	1050.7	88.5
14:19	7.2	19.84	2.65	1298.7	93.1
14:20	6.9	19.84	2.69	1859.4	77.5
14:21	6.5	19.83	2.71	2189.7	66.9
14:22	6.2	19.78	2.82	2690.1	60.8

ENTROPY

US BUREAU OF MINE ALBANY-OREGON

07-22-1993

TIME	CHAN12 TECO8 ppmNOx	CHAN10 TELE12 % O2	CHAN14 FUJIA % CO2	CHAN13 TECOA ppm CO	CHAN11 WESTR4 ppmSO2
14:23	5.7	19.74	2.90	3703.8	52.0
14:24	5.4	19.76	2.79	4126.9	45.6
14:25	5.2	19.78	2.66	3803.3	41.4
14:26	5.0	19.76	2.71	3901.7	39.6
14:27	5.0	19.72	2.82	3620.8	41.9
14:28	4.8	19.72	2.87	3667.6	40.3
14:29	4.7	19.72	2.82	3785.8	38.9
14:30	4.6	19.76	2.71	3725.2	36.9
14:31	4.5	19.75	2.76	3360.7	36.3
14:32	4.5	19.75	2.73	3444.1	36.4
14:33	4.5	19.77	2.65	3861.6	33.9
14:34	4.5	19.76	2.71	3856.8	32.9
14:35	4.6	19.77	2.71	3443.2	32.2
14:36	4.6	19.77	2.77	3625.6	32.2
14:37	4.8	19.75	2.88	4119.7	33.4
14:38	5.0	19.77	2.78	3744.6	32.4
14:39	5.3	19.73	2.89	3631.6	32.3
14:40	5.7	19.72	2.87	3127.6	31.2
14:41	6.1	19.71	2.89	3093.5	30.0
14:42	6.4	19.73	2.85	3312.6	29.9
14:43	6.9	19.77	2.74	2800.7	27.3
14:44	7.3	19.77	2.86	2867.8	29.0

AVERAGE VALUES FOR THE LAST 30 MINUTES

14:44	6.9	19.77	2.74	3003.9	45.8
14:45	7.6	19.76	2.96	2825.1	30.1
14:46	7.8	19.74	3.00	3248.7	29.3
14:47	7.7	19.79	2.89	3124.6	31.2
14:48	7.8	19.77	2.92	2967.8	35.9
14:49	8.0	19.75	3.07	3529.3	34.7
14:50	8.0	19.74	3.18	4120.8	35.3
14:51	8.2	19.73	3.23	4035.7	36.2
14:52	8.5	19.72	3.22	3824.1	35.8
14:53	8.7	19.73	3.22	3870.8	37.3
14:54	9.9	19.78	2.99	3172.2	31.9
14:55	9.5	19.80	2.96	2586.1	33.1
14:56	9.4	19.78	3.12	3025.2	36.3
14:57	9.7	19.82	3.11	3068.4	36.9
14:58	9.8	19.78	3.25	3279.1	36.6
14:59	9.7	19.82	3.21	3395.8	35.1
15:00	9.9	19.86	3.05	3292.3	35.0
15:01	10.5	19.86	3.03	3204.0	36.2
15:02	10.4	19.86	3.02	3341.4	35.4
15:03	10.6	19.91	2.89	3028.4	33.5
15:04	10.8	19.92	2.90	2923.3	32.3
15:05	11.0	19.92	2.93	3239.1	31.7
15:06	11.2	19.92	2.90	3173.2	31.3
15:07	11.4	19.94	2.87	3529.1	31.2
15:08	11.6	19.91	2.90	3572.3	31.5
15:09	11.8	19.90	2.91	3213.3	31.4
15:10	11.1	2.34	4.94	1168.2	18.9

COMMENTS: END TEST AT THE BAG HOUSE OUTLET
(CONTINUED ON THE NEXT PAGE)

ENTROPY

US BUREAU OF MINE ALBANY-OREGON				07-22-1993	
	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: SYSTEM BIAS

DATE : 07-22-1993 TIME: 15:10 - 16:27

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	0.5
12	TECO8	ppmNOx	25.0	23.6
10	TELE12	% O2	0.00	0.09
10	TELE12	% O2	19.12	18.95
14	FUJIA	% CO2	0.00	0.06
14	FUJIA	% CO2	5.01	5.05
13	TECOA	ppm CO	0.0	3.9
13	TECOA	ppm CO	895.0	698.4
11	WESTR4	ppmSO2	0.0	11.0
11	WESTR4	ppmSO2	23.7	29.3

ENTROPY

US BUREAU OF MINE ALBANY-OREGON

07-22-1993

TIME	CHAN12 TECO8 ppmNOx	CHAN10 TELE12 % O2	CHAN14 FUJIA % CO2	CHAN13 TECOA ppm CO	CHAN11 WESTR4 ppmSO2
16:31	0.6	19.83	3.15	4904.3	36.8
16:32	0.7	19.87	3.12	4390.1	36.6
16:33	0.8	19.87	3.14	4127.0	37.0
16:34	0.9	19.86	3.14	4093.1	36.6
16:35	1.0	19.87	3.12	4521.4	35.1
16:36	1.1	19.86	3.14	4082.4	34.0
16:37	1.2	19.86	3.11	3915.3	33.2
16:38	1.3	19.87	3.09	3767.4	32.6
16:39	1.5	19.87	3.11	3806.2	32.5
16:40	2.0	19.85	3.14	4049.0	33.0
16:41	2.0	19.90	3.05	4000.2	32.1
16:42	2.2	19.88	3.09	4197.0	32.5
16:43	2.6	19.88	3.06	3820.8	33.6
16:44	2.4	19.90	2.97	3839.2	32.1
16:45	2.4	19.95	2.87	3766.3	32.2
16:46	1.5	19.97	2.81	3558.8	33.0
16:47	1.6	19.99	2.71	3862.2	33.2
16:48	1.3	20.01	2.59	4127.6	35.8
16:49	0.9	20.03	2.51	4031.7	44.3
16:50	1.3	20.00	2.56	3854.9	48.7
16:51	1.7	19.96	2.73	4059.5	51.8
16:52	1.8	19.88	3.05	5100.6	44.7
16:53	1.6	19.86	3.22	4771.5	40.0
16:54	1.8	19.85	3.27	5156.0	40.1
16:55	2.1	19.83	3.39	5885.5	40.0
16:56	2.7	19.83	3.45	5901.1	39.9
16:57	2.8	19.81	3.54	5851.3	40.9
16:58	3.0	19.84	3.49	6023.5	41.7
16:59	2.7	19.83	3.57	5504.3	43.4
17:00	2.8	19.84	3.57	5772.4	42.8

- Sample @
bag house Outlet

AVERAGE VALUES FOR THE LAST 30 MINUTES

17:00	1.7	19.89	3.09	4491.3	37.7
17:01	1.9	19.91	3.37	5282.6	41.5
17:02	1.8	19.84	3.57	6313.4	42.9
17:03	1.7	19.83	3.50	6078.6	43.7
17:04	1.3	19.85	3.49	5461.6	42.6
17:05	1.1	19.86	3.42	5366.0	41.6
17:06	0.9	19.84	3.45	5716.4	40.2
17:07	0.8	19.85	3.40	5039.2	39.4
17:08	0.7	19.84	3.39	5668.0	37.7
17:09	0.6	19.85	3.34	4786.7	36.2
17:10	0.5	19.85	3.27	4944.1	35.1
17:11	0.5	19.86	3.26	5080.7	34.0
17:12	0.4	19.86	3.25	4733.3	33.2
17:13	0.4	19.87	3.21	4705.4	32.1
17:14	0.3	19.86	3.26	3759.8	32.0
17:15	0.3	19.88	3.20	4508.9	35.8
17:16	0.3	19.85	3.34	4319.0	39.1
17:17	0.5	19.82	3.41	4769.9	38.0
17:18	0.7	19.82	3.41	4182.6	37.0
17:19	0.8	19.81	3.45	4411.7	36.9
17:20	1.4	19.78	3.55	4762.1	38.8
17:21	2.0	19.75	3.61	4847.5	40.2

ENTROPY

US BUREAU OF MINE ALBANY-OREGON			07-22-1993		
	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
17:22	2.3	19.74	3.64	4435.4	42.0
17:23	2.5	19.73	3.70	4870.5	42.3
17:24	2.0	19.76	3.65	4345.8	40.5
17:25	2.2	19.77	3.64	4409.2	38.0
17:26	2.8	19.79	3.63	4882.9	38.9
17:27	3.4	19.78	3.64	4471.6	39.1
17:28	4.0	19.80	3.58	4621.1	38.4
17:29	3.6	19.88	3.22	3821.2	32.5
17:30	4.1	19.94	3.02	2613.1	30.0

AVERAGE VALUES FOR THE LAST 30 MINUTES

17:30	1.5	19.83	3.43	4773.6	38.0
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

17:30	1.6	19.86	3.26	4632.5	37.8
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17:31	4.3	19.91	3.22	2197.7	30.1
17:32	1.8	19.88	3.43	3350.4	36.0
17:33	1.7	19.86	3.51	4019.5	36.8
17:34	1.9	19.84	3.50	4307.3	36.2
17:35	2.1	19.81	3.56	4425.4	36.6
17:36	2.1	19.86	3.49	4422.5	35.8
17:37	2.6	19.87	3.46	4213.3	34.9
17:38	2.4	19.88	3.48	4302.2	35.1
17:39	2.2	19.90	3.45	4548.6	34.5
17:40	2.5	19.91	3.44	4534.0	34.0
17:41	2.4	19.93	3.39	4840.9	32.5
17:42	2.6	19.93	3.35	4453.2	33.0
17:43	2.8	19.94	3.33	4422.1	33.0
17:44	3.2	19.92	3.36	4802.7	34.0
17:45	3.1	19.93	3.32	4525.0	33.0
17:46	3.0	19.90	3.31	4443.3	33.1
17:47	2.9	19.94	3.26	4623.9	32.8
17:48	3.2	19.94	3.28	4456.7	34.3
17:49	3.3	19.94	3.29	4699.7	34.1
17:50	3.6	19.93	3.29	4851.4	34.0
17:51	4.3	19.91	3.25	4603.6	32.8
17:52	4.8	19.95	3.07	4173.0	32.5
17:53	5.3	19.98	2.87	3571.3	32.9
17:54	4.7	20.14	2.44	3356.9	32.7
17:55	6.7	20.16	2.37	2297.8	30.6
17:56	9.2	20.30	1.91	1488.3	26.1
17:57	17.9	20.37	1.23	517.3	20.2
17:58	15.7	20.48	0.83	167.1	17.8
17:59	21.9	20.57	0.77	141.1	18.1
18:00	25.1	20.58	0.74	120.3	18.8

AVERAGE VALUES FOR THE LAST 30 MINUTES

18:00	5.6	20.02	2.91	3562.6	31.5
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18:01	19.7	20.67	0.62	112.7	19.3
18:02	21.7	20.80	0.62	159.0	20.1
18:03	17.0	20.72	0.60	201.8	20.3
18:04	17.4	20.72	0.62	260.6	20.6

ENTROPY

US BUREAU OF MINE ALBANY-OREGON			07-22-1993		
	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
18:05	17.9	20.71	0.61	298.9	20.7
18:06	18.4	20.69	0.56	277.0	20.8
18:07	18.8	20.70	0.53	336.5	21.0
18:08	19.1	20.72	0.50	370.1	20.9

COMMENTS: END TEST RUN AT BAG HOUSE OUTLET

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: POST TEST SYSTEM BIAS

DATE : 07-22-1993 TIME: 18:08 - 18:34

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	2.9
12	TECO8	ppmNOx	25.0	24.6
10	TELE12	% O2	0.00	0.09
10	TELE12	% O2	19.12	19.03
14	FUJIA	% CO2	0.00	0.08
14	FUJIA	% CO2	5.01	5.07
13	TECOA	ppm CO	0.0	4.8
13	TECOA	ppm CO	895.0	747.3
11	WESTR4	ppmSO2	0.0	10.3
11	WESTR4	ppmSO2	23.7	23.2

ENTROPY

Appendix D-5

CEMS Data

23 July 1993, M60 and N80-IV-MOD Melts

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: INITIAL DIRECT CALIBRATION

DATE : 07-23-1993 TIME: 07:33 - 07:54

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	-0.1
12	TECO8	ppmNOx	25.0	24.5
12	TECO8.	ppmNOx	48.5	48.6
10	TELE12	% O2	0.00	0.10
10	TELE12	% O2	9.02	9.04
10	TELE12	% O2	19.12	19.17
14	FUJIA	% CO2	0.00	0.01
14	FUJIA	% CO2	5.01	5.06
14	FUJIA	% CO2	10.56	10.54
13	TECOA	ppm CO	0.0	0.3
13	TECOA	ppm CO	506.0	448.7
13	TECOA	ppm CO	895.0	874.3
11	WESTR4	ppmSO2	0.0	-0.4
11	WESTR4	ppmSO2	23.7	24.7
11	WESTR4	ppmSO2	90.6	90.6

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: SYSTEM BIAS

DATE : 07-23-1993 TIME: 07:54 - 08:08

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	0.1
12	TECO8	ppmNOx	25.0	24.1
10	TELE12	% O2	0.00	0.19
10	TELE12	% O2	19.12	19.26
14	FUJIA	% CO2	0.00	0.01
14	FUJIA	% CO2	5.01	5.01
13	TECOA	ppm CO	0.0	2.2
13	TECOA	ppm CO	895.0	908.2
11	WESTR4	ppmSO2	0.0	2.0
11	WESTR4	ppmSO2	23.7	25.0

ENTROPY

US BUREAU OF MINE ALBANY-OREGON

07-23-1993

TIME	CHAN12 TECO8 ppmNOx	CHAN10 TELE12 % O2	CHAN14 FUJIA % CO2	CHAN13 TECOA ppm CO	CHAN11 WESTR4 ppmSO2
08:13	0.1	21.16	0.06	2.9	3.9
08:14	0.1	21.18	0.07	16.1	3.5
08:15	0.0	21.18	0.06	8.3	3.5
08:16	-0.0	21.19	0.06	1.8	3.3
08:17	-0.0	21.19	0.06	2.5	3.3
08:18	-0.0	21.20	0.06	2.6	3.1
08:19	-0.0	21.19	0.06	2.4	3.1
08:20	-0.0	21.18	0.06	2.7	2.9
08:21	-0.1	21.18	0.06	2.8	2.8
08:22	-0.1	21.17	0.06	2.8	2.6
08:23	-0.0	21.16	0.07	2.8	2.5
08:24	13.7	19.81	1.90	4626.6	4.7
08:25	16.5	19.43	2.31	4868.9	3.2
08:26	19.5	19.38	2.45	489.9	2.8
08:27	22.1	19.26	2.57	350.3	2.8
08:28	23.0	19.19	2.64	353.1	2.9
08:29	21.3	19.34	2.45	286.5	2.7
08:30	20.6	19.29	2.54	253.4	2.3
08:31	22.9	19.11	2.71	230.6	2.5
08:32	24.5	19.03	2.79	242.4	2.5
08:33	42.8	18.98	2.86	434.7	3.2
08:34	29.2	19.61	2.16	1184.5	2.1
08:35	21.4	19.50	2.22	1377.6	1.4
08:36	17.2	19.59	1.96	3115.3	1.3
08:37	13.8	19.74	1.64	7039.3	1.4
08:38	7.2	20.06	1.12	9015.9	1.5
08:39	5.3	20.24	0.95	9933.1	0.9
08:40	5.3	20.33	0.87	8976.2	0.7
08:41	5.0	20.37	0.87	7971.9	0.6
08:42	4.8	20.39	0.88	6126.8	0.4

AVERAGE VALUES FOR THE LAST 30 MINUTES

08:42	11.2	20.19	1.29	2230.8	2.5
08:43	2.9	20.43	0.83	4956.0	0.1
08:44	1.5	20.53	0.72	4366.7	-0.0
08:45	1.1	20.53	0.71	4699.9	-0.1
08:46	1.7	20.51	0.75	4432.9	0.0
08:47	2.9	20.50	0.78	4204.4	0.1
08:48	2.7	20.56	0.74	4639.5	0.6
08:49	1.0	20.55	0.78	4207.8	0.2
08:50	1.2	20.54	0.80	4848.5	0.4
08:51	0.8	20.53	0.82	5838.3	0.2
08:52	0.6	20.78	0.49	4292.8	0.1
08:53	2.0	20.82	0.68	1738.4	2.4
08:54	4.5	20.26	1.44	7352.8	40.5
08:55	2.8	20.68	0.86	6383.1	15.9
08:56	2.5	20.66	0.85	5382.0	7.6
08:57	2.3	20.61	0.87	6133.0	5.6
08:58	1.7	20.59	0.90	6030.8	5.5
08:59	1.5	20.54	0.94	8003.7	6.0
09:00	1.3	20.60	0.90	8165.6	5.9
09:01	1.2	20.59	0.96	8743.3	7.0
09:02	1.2	20.58	1.04	9062.9	7.1
09:03	1.2	20.56	1.11	9658.7	8.5

ENTROPY

US BUREAU OF MINE ALBANY-OREGON

07-23-1993

TIME	CHAN12 TECO8 ppmNOx	CHAN10 TELE12 % O2	CHAN14 FUJIA % CO2	CHAN13 TECOA ppm CO	CHAN11 WESTR4 ppmSO2
09:04	2.3	20.37	1.63	6558.5	29.9
09:05	3.4	20.43	1.50	7241.3	31.4
09:06	4.3	20.43	1.44	8514.6	23.3
09:07	7.0	20.06	2.53	6875.1	71.3
09:08	12.2	20.24	2.07	6042.5	97.1
09:09	11.7	20.53	1.37	8918.9	38.1
09:10	9.0	20.59	1.15	8785.4	27.1
09:11	7.0	20.59	1.07	8945.2	18.4
09:12	5.6	20.59	1.10	8614.8	14.5

AVERAGE VALUES FOR THE LAST 30 MINUTES

09:12	3.4	20.53	1.06	6454.6	15.5
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

09:12	7.3	20.36	1.17	4342.7	9.0
09:13	5.1	20.52	1.28	9020.1	23.3
09:14	4.5	20.55	1.24	9372.6	20.6
09:15	4.2	20.56	1.20	9493.0	17.2
09:16	4.1	20.57	1.22	9530.2	16.8
09:17	4.9	20.29	1.92	8145.9	52.2
09:18	12.3	20.44	1.55	7506.7	25.1
09:19	5.2	20.56	1.30	9293.4	21.1
09:20	4.0	20.59	1.27	8821.6	19.3
09:21	3.7	20.56	1.31	9719.9	19.3
09:22	3.6	20.54	1.31	9587.4	17.8
09:23	3.4	20.55	1.27	9803.0	14.2
09:24	3.6	20.54	1.33	9776.2	17.5
09:25	3.6	20.55	1.32	9761.8	18.3
09:26	3.9	20.56	1.30	9708.4	17.2
09:27	4.0	20.54	1.34	9801.6	17.9
09:28	4.9	20.57	1.30	9508.4	16.2
09:29	5.1	20.59	1.21	8799.4	13.7

ENTROPY

US BUREAU OF MINE ALBANY-OREGON			07-23-1993		
	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
09:31	3.1	20.58	1.23	9163.1	11.7
09:32	3.6	20.59	1.24	8676.4	11.2
09:33	17.6	20.36	1.61	6417.3	8.0
09:34	24.6	20.28	1.71	4307.0	6.2
09:35	32.5	20.12	1.90	3777.7	5.2
09:36	32.2	20.10	1.87	3354.6	4.0
09:37	31.4	20.18	1.83	2671.3	3.2
09:38	36.6	20.02	2.00	2426.8	2.9
09:39	32.1	20.12	1.89	2103.2	2.1
09:40	31.3	20.12	1.87	1794.8	1.8
09:41	30.4	20.17	1.87	1769.7	1.5
09:42	30.5	20.10	1.92	1687.7	1.5
09:43	36.2	20.06	2.02	1669.6	1.5
09:44	35.1	19.98	2.06	1314.1	1.3
09:45	33.6	19.97	2.04	1474.8	1.2
09:46	40.1	19.90	2.17	1931.7	1.4
09:47	40.3	19.87	2.15	1855.4	1.4
09:48	36.5	19.93	2.07	1846.1	1.2
09:49	33.9	19.95	2.03	1735.1	1.1
09:50	36.6	19.89	2.14	2013.6	1.4
09:51	41.9	19.83	2.24	2057.0	1.4
09:52	39.7	19.84	2.21	2011.7	1.3
09:53	39.1	19.85	2.21	1921.6	1.3
09:54	37.4	19.86	2.17	2048.1	1.3
09:55	38.3	19.88	2.14	2584.6	1.7
09:56	29.0	20.07	1.86	2277.2	1.3
09:57	10.6	20.42	1.07	7221.4	4.1
09:58	9.6	20.60	1.15	1663.2	2.0
09:59	16.0	20.26	1.46	859.7	1.7
10:00	29.5	20.03	1.82	416.8	1.0

AVERAGE VALUES FOR THE LAST 30 MINUTES

10:00	29.6	20.10	1.87	2835.0	2.9
10:01	73.4	20.00	1.74	103.8	1.2
10:02	19.5	20.45	1.16	188.8	0.5
10:03	7.5	20.55	1.15	1919.7	1.4
10:04	8.2	20.79	0.82	2659.1	2.7
10:05	23.6	20.40	1.54	3060.8	3.3
10:06	27.6	20.24	1.70	3699.7	2.9
10:07	28.1	20.23	1.72	3659.3	2.9
10:08	28.7	20.22	1.75	3684.9	2.9
10:09	28.0	20.22	1.74	3993.2	3.1
10:10	24.1	20.27	1.64	4021.2	3.4
10:11	22.7	20.27	1.62	4770.9	4.0
10:12	24.6	20.25	1.67	4820.9	3.9
10:13	27.1	20.23	1.73	4465.6	3.6
10:14	28.2	20.22	1.75	3627.8	3.1
10:15	30.5	20.15	1.81	3028.7	2.7
10:16	30.0	20.16	1.77	2393.3	2.0
10:17	27.9	20.29	1.58	2222.7	1.9
10:18	35.1	20.15	1.90	1692.3	1.8
10:19	38.8	20.05	2.03	1661.5	2.0
10:20	39.4	20.02	2.07	1483.8	1.6
10:21	36.2	20.08	1.91	1390.0	1.5

ENTROPY

US BUREAU OF MINE ALBANY-OREGON			07-23-1993		
	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
10:22	35.6	20.09	1.97	1110.1	1.4
10:23	47.7	20.01	2.30	1966.9	3.2
10:24	76.7	19.55	2.63	4026.3	6.9
10:25	50.1	19.86	2.24	1617.7	2.6
10:26	46.3	19.87	2.22	1116.7	1.9
10:27	43.4	19.91	2.16	1099.3	1.8
10:28	41.6	19.88	2.20	1070.5	1.7
10:29	42.1	19.83	2.29	1148.6	1.4
10:30	53.7	19.73	2.41	1289.0	1.6

AVERAGE VALUES FOR THE LAST 30 MINUTES					
10:30	34.9	20.13	1.84	2433.1	2.5

AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA					
10:30	32.3	20.12	1.85	2634.1	2.7

10:31	56.2	19.67	2.53	1317.4	1.8
10:32	62.5	19.58	2.65	1363.3	2.0
10:33	58.5	19.66	2.53	1527.2	1.8
10:34	50.9	19.74	2.40	1237.8	1.6
10:35	45.1	19.79	2.27	1100.4	1.5
10:36	38.0	19.86	2.07	1711.8	2.0
10:37	31.8	20.21	1.69	1497.4	1.6
10:38	40.3	19.97	2.07	1679.1	1.6
10:39	43.7	19.88	2.14	1601.2	1.5
10:40	45.0	19.85	2.15	1879.8	1.5
10:41	46.6	19.86	2.16	1937.5	1.6
10:42	40.2	19.91	2.02	1822.2	1.6
10:43	60.3	19.75	2.34	2232.4	3.5
10:44	45.3	19.92	2.04	2257.8	2.3
10:45	39.8	19.91	2.07	1451.1	1.6
10:46	47.5	19.81	2.21	1672.2	1.6
10:47	60.8	19.64	2.38	2103.8	1.9
10:48	47.9	19.80	2.22	1386.7	1.4
10:49	52.4	19.76	2.30	1148.4	1.4
10:50	54.2	19.71	2.33	1072.4	1.4
10:51	49.9	19.70	2.31	1249.8	1.3
10:52	57.5	19.64	2.44	1258.2	1.5
10:53	56.4	19.67	2.38	1360.0	1.5
10:54	50.0	19.77	2.23	1141.7	1.4
10:55	41.1	20.00	1.93	928.9	1.8
10:56	57.1	19.74	2.29	1043.8	2.1
10:57	53.2	19.77	2.29	1085.5	1.7
10:58	56.6	19.75	2.34	1365.3	1.8
10:59	60.6	19.68	2.47	1458.7	1.9
11:00	59.8	19.70	2.44	1153.4	1.8

AVERAGE VALUES FOR THE LAST 30 MINUTES					
11:00	50.3	19.79	2.26	1468.2	1.7

11:01	50.6	19.87	2.25	1007.8	2.2
11:02	34.0	19.83	2.00	2925.2	4.0
11:03	32.4	20.14	1.72	3510.8	2.3
11:04	37.4	20.15	1.71	2029.8	2.3

ENTROPY

US BUREAU OF MINE ALBANY-OREGON			07-23-1993		
	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
11:05	34.7	20.13	1.74	2886.0	2.9
11:06	68.8	19.50	2.43	2755.8	3.3
11:07	38.4	20.14	1.79	2659.3	3.3
11:08	38.2	20.13	1.72	2140.8	2.6
11:09	40.9	20.08	1.85	2006.2	2.4
11:10	42.3	20.01	1.93	865.4	2.1
11:11	43.5	19.99	1.99	598.6	1.7
11:12	43.8	19.99	1.99	516.1	1.7
11:13	40.8	20.06	1.94	482.4	1.5
11:14	42.1	20.03	2.01	547.1	1.5
11:15	43.0	19.97	2.04	509.1	1.9
11:16	42.1	19.88	2.12	476.9	2.3
11:17	44.3	19.96	2.05	664.9	8.8
11:18	43.4	19.88	2.10	693.9	16.9
11:19	47.9	19.86	2.21	671.1	11.5
11:20	49.2	19.76	2.30	559.2	7.5
11:21	48.5	19.77	2.30	475.6	6.4
11:22	44.0	19.85	2.18	399.4	3.7
11:23	45.3	19.71	2.37	437.5	2.4
11:24	46.5	19.82	2.16	630.6	2.3
11:25	46.8	19.79	2.21	442.5	2.2
11:26	45.5	19.81	2.23	400.2	3.2
11:27	48.3	19.75	2.32	412.2	2.2
11:28	46.9	19.75	2.27	426.1	1.7
11:29	44.5	19.80	2.18	374.7	1.7
11:30	28.8	20.23	1.53	373.2	1.1

AVERAGE VALUES FOR THE LAST 30 MINUTES

11:30	43.4	19.92	2.06	1096.0	3.7
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

11:30	46.9	19.86	2.16	1282.1	2.7
11:31	21.8	20.47	1.25	480.5	1.2
11:32	14.6	20.73	0.79	446.5	1.3
11:33	10.7	20.93	0.55	235.2	0.7
11:34	8.4	21.05	0.33	174.2	0.5
11:35	6.5	21.13	0.19	58.6	0.4

COMMENTS: END TEST FOR BAGHOUSE OUTLET

ENTROPY

TIME	CHAN02	TELE12	FUJIA	TECOA	WESTR4
11:30	46.9	19.86	2.16	1282.1	2.7

12:01	1.2	21.13	0.10	4.3	3.4
12:02	1.0	21.14	0.10	4.2	3.3
12:03	1.0	21.15	0.10	4.1	3.2
12:04	0.8	21.16	0.10	4.2	3.0
12:05	0.8	21.17	0.10	4.2	2.8
12:06	0.7	21.18	0.10	4.3	2.5
12:07	0.7	21.18	0.10	4.4	2.3
12:08	0.8	21.16	0.10	4.0	2.3

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: POST TEST SYSTEM BIAS

DATE : 07-23-1993 TIME: 11:36 - 11:55

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	2.0
12	TECO8	ppmNOx	25.0	26.0
10	TELE12	% O2	0.00	0.05
10	TELE12	% O2	19.12	19.32
14	FUJIA	% CO2	0.00	0.05
14	FUJIA	% CO2	5.01	5.08
13	TECOA	ppm CO	0.0	4.4
13	TECOA	ppm CO	895.0	875.8
11	WESTR4	ppmSO2	0.0	-1.7
11	WESTR4	ppmSO2	23.7	18.8

ENTROPY

US BUREAU OF MINE ALBANY-OREGON

07-23-1993

TIME	CHAN12 TECO8 ppmNOx	CHAN10 TELE12 % O2	CHAN14 FUJIA % CO2	CHAN13 TECOA ppm CO	CHAN11 WESTR4 ppmSO2
12:11	0.7	21.11	0.12	4.2	1.4
12:12	0.9	21.07	0.12	4.3	0.7
12:13	0.8	21.07	0.12	4.2	0.7
12:14	0.7	21.08	0.12	4.6	0.6
12:15	0.6	21.09	0.12	3.7	0.5
12:16	0.6	21.10	0.12	4.0	0.4
12:17	0.6	21.09	0.12	3.9	0.0
12:18	0.6	21.08	0.13	4.2	-0.0
12:19	0.6	21.08	0.13	4.2	-0.2
12:20	0.5	21.09	0.12	3.9	-0.4
12:21	0.5	21.09	0.13	3.8	-0.6
12:22	0.4	21.09	0.13	4.0	-0.6
12:23	0.4	21.11	0.13	4.3	-0.7
12:24	0.4	21.12	0.12	4.3	-1.0
12:25	0.4	21.10	0.12	4.2	-1.0
12:26	0.4	21.13	0.12	4.6	-1.2
12:27	0.4	21.12	0.12	4.1	-1.3
12:28	0.3	21.14	0.12	3.7	-1.3
12:29	0.3	21.17	0.12	4.1	-1.7
12:30	0.3	21.17	0.11	3.8	-1.7
12:31	0.3	21.14	0.12	4.4	-1.7
12:32	0.3	21.14	0.11	3.8	-1.8
12:33	0.3	21.17	0.11	4.0	-2.0
12:34	0.3	21.17	0.11	4.2	-2.0
12:35	0.3	21.15	0.11	4.1	-2.1
12:36	0.3	21.17	0.11	4.2	-2.1
12:37	0.2	21.18	0.11	3.8	-2.3
12:38	0.3	21.14	0.12	4.0	-2.3
12:39	0.2	21.16	0.12	4.4	-2.4
12:40	0.2	21.14	0.12	4.0	-2.5

AVERAGE VALUES FOR THE LAST 30 MINUTES

12:40	0.4	21.12	0.12	4.1	-1.0
12:41	0.2	21.14	0.12	4.1	-2.6
12:42	0.2	21.14	0.12	4.2	-2.8
12:43	0.2	21.11	0.13	4.3	-2.7
12:44	0.2	21.13	0.13	4.4	-2.9
12:45	0.2	21.10	0.14	4.2	-2.7
12:46	0.2	21.12	0.15	3.7	-3.1
12:47	0.1	21.10	0.15	4.1	-2.9
12:48	0.2	21.08	0.16	4.1	-3.0
12:49	0.1	21.09	0.16	4.3	-3.1
12:50	0.1	21.09	0.17	4.2	-3.3
12:51	0.1	21.07	0.18	4.3	-3.3
12:52	0.1	21.05	0.19	4.0	-3.2
12:53	0.1	21.04	0.19	4.3	-3.3
12:54	0.2	20.99	0.20	3.7	-3.3
12:55	0.2	20.97	0.21	3.1	-3.3
12:56	0.1	20.97	0.21	4.4	-3.4
12:57	0.1	20.96	0.22	3.3	-3.4
12:58	0.2	20.91	0.22	3.6	-3.4
12:59	0.1	20.91	0.23	2.8	-3.4
13:00	0.1	20.90	0.23	2.9	-3.6
13:01	0.1	20.88	0.24	2.8	-3.8

ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-23-1993

TIME	CHAN12 TECO8 ppmNOx	CHAN10 TELE12 % O2	CHAN14 FUJIA % CO2	CHAN13 TECOA ppm CO	CHAN11 WESTR4 ppmSO2
13:02	0.1	20.86	0.25	3.5	-3.7
13:03	0.2	20.81	0.25	2.4	-3.8
13:04	0.1	20.79	0.25	2.8	-3.7
13:05	0.1	20.80	0.26	2.3	-4.0
13:06	0.1	20.79	0.26	2.4	-3.9
13:07	0.1	20.76	0.27	2.6	-4.0
13:08	0.1	20.75	0.27	2.3	-4.2
13:09	0.1	20.74	0.28	2.1	-4.0
13:10	0.1	20.73	0.28	2.6	-4.2

AVERAGE VALUES FOR THE LAST 30 MINUTES

13:10	0.1	20.96	0.20	3.5	-3.4
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

13:10	0.3	21.04	0.16	3.8	-2.2
13:11	0.1	20.73	0.29	2.1	-4.3
13:12	0.1	20.69	0.29	1.9	-4.3
13:13	0.1	20.71	0.29	1.8	-4.4
13:14	0.1	20.72	0.30	2.1	-4.5
13:15	0.1	20.72	0.30	1.7	-4.5
13:16	0.1	20.73	0.29	2.2	-4.5
13:17	0.1	20.75	0.26	1.8	-4.7
13:18	0.1	20.76	0.25	1.9	-4.6
13:19	0.1	20.75	0.25	2.0	-4.5
13:20	0.1	20.79	0.25	2.0	-4.7
13:21	0.1	20.84	0.17	1.7	-4.6
13:22	35.4	19.77	2.46	875.1	-3.9

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: ABORT

DATE : 07-23-1993 TIME: 13:22 - 13:22

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
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ENTROPY

US BUREAU OF MINE ALBANY-OREGON

07-23-1993

TIME	CHAN12 TECO8 ppmNOx	CHAN10 TELE12 % O2	CHAN14 FUJIA % CO2	CHAN13 TECOA ppm CO	CHAN11 WESTR4 ppmSO2
13:24	39.3	19.66	2.58	1751.3	-3.8
13:25	37.1	19.68	2.52	1873.0	-3.8
13:26	37.1	19.66	2.55	1613.4	-3.9
13:27	35.4	19.70	2.52	1668.7	-4.0
13:28	35.0	19.73	2.60	1928.8	-4.1
13:29	35.1	19.69	2.72	1989.1	-4.2
13:30	34.4	19.68	2.72	2716.5	-4.2
13:31	32.5	19.71	2.61	3100.4	-4.3
13:32	30.8	19.73	2.52	3463.0	-4.2
13:33	29.4	19.77	2.44	3522.2	-4.2
13:34	28.2	19.81	2.46	3923.2	-4.1
13:35	17.8	19.89	2.61	7191.3	-0.7
13:36	3.5	20.06	2.42	9456.5	1.7
13:37	2.2	20.08	2.41	8197.6	3.0
13:38	2.6	20.04	2.47	9444.1	3.0
13:39	2.6	20.11	2.19	8247.1	0.5
13:40	2.1	20.20	1.91	6438.4	-1.4
13:41	1.8	20.27	1.66	5196.6	-3.1
13:42	2.5	20.26	1.74	2176.6	-4.0
13:43	7.2	20.20	1.85	942.9	-4.6
13:44	20.8	20.22	1.60	255.7	-4.8
13:45	18.2	20.19	1.51	106.3	-4.8
13:46	21.8	20.22	1.40	50.0	-5.0
13:47	55.1	20.30	1.23	20.0	-4.8
13:48	44.7	20.33	1.03	24.9	-5.0
13:49	27.6	20.30	1.13	92.0	-5.4
13:50	42.9	20.33	1.17	71.1	-5.2
13:51	57.1	20.32	0.97	4.2	-5.0
13:52	60.6	20.35	0.86	1.5	-5.0
13:53	65.7	20.36	0.82	11.5	20.3

AVERAGE VALUES FOR THE LAST 30 MINUTES

13:53	27.7	20.03	1.97	2849.3	-2.5
13:54	76.8	20.37	0.78	8.4	136.3
13:55	95.8*	20.38	0.74	1.3	171.2
13:56	68.0*	20.22	1.32	96.8	211.6*
13:57	11.8	20.03	2.22	803.7	291.5*
13:58	8.3	20.05	2.41	1239.2	215.1*
13:59	11.4	20.07	2.45	1336.5	155.3
14:00	12.2	20.09	2.48	1511.2	123.0
14:01	10.1	20.06	2.61	1702.6	97.4
14:02	9.6	20.05	2.61	2162.7	73.8
14:03	10.9	20.09	2.59	1961.8	52.1
14:04	14.7	20.09	2.60	1208.8	33.7
14:05	17.4	20.10	2.58	602.4	20.8
14:06	15.6	20.07	2.55	420.9	12.8
14:07	16.3	20.16	2.39	351.0	6.9
14:08	13.9	20.13	2.56	756.5	3.4
14:09	17.3	20.18	2.44	645.3	1.9
14:10	12.0	20.33	2.25	1318.9	2.6
14:11	11.1	20.25	2.47	2505.2	3.1
14:12	3.3	20.46	1.73	2085.6	2.2
14:13	2.2	20.50	1.97	2363.0	6.4
14:14	7.2	20.27	2.59	4501.5	6.9

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ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-23-1993

	CHAN12 TECO8	CHAN10 TELE12	CHAN14 FUJIA	CHAN13 TECOA	CHAN11 WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
14:15	16.5	20.18	2.68	3340.3	2.2
14:16	17.6	20.20	2.54	1815.7	-0.1
14:17	18.9	20.17	2.50	1229.6	-0.8
14:18	21.5	20.19	2.41	1158.1	-1.4
14:19	26.1	20.31	1.93	712.2	-2.6
14:20	16.3	20.37	1.62	524.1	-3.4
14:21	7.9	20.36	1.56	808.4	-3.7
14:22	7.2	20.26	1.93	1297.9	-3.3
14:23	8.9	20.16	2.26	2102.6	-2.5

AVERAGE VALUES FOR THE LAST 30 MINUTES

14:23	19.6	20.21	2.19	1352.4	53.8
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

14:23	23.6	20.12	2.08	2100.8	25.6
14:24	5.2	20.15	2.57	2815.6	-0.8
14:25	6.9	20.10	2.88	3744.5	-0.4
14:26	8.6	20.10	2.91	3392.8	-1.3
14:27	9.7	20.08	3.03	3532.8	-1.1
14:28	10.7	20.03	3.14	3272.9	-1.3
14:29	12.2	20.03	3.07	3003.8	-1.4
14:30	8.9	20.06	3.02	2651.8	-2.0
14:31	15.7	20.10	2.73	1240.9	-3.2
14:32	10.9	20.26	2.44	227.9	-4.4
14:33	15.9	20.14	2.69	299.3	-4.5
14:34	15.6	20.07	2.88	515.0	-4.6
14:35	13.2	20.07	3.02	1247.5	-4.9
14:36	20.3	20.02	3.08	1527.1	-4.4
14:37	17.5	20.02	3.01	1531.1	-4.5
14:38	12.5	20.10	2.80	1748.3	-4.3
14:39	21.5	20.11	2.85	785.1	-5.0
14:40	22.4	20.04	3.05	1203.2	-4.7
14:41	12.8	20.02	3.01	1697.3	-4.7
14:42	18.5	20.01	3.07	1523.2	-5.0
14:43	22.1	20.03	3.05	1170.9	-4.9
14:44	18.7	20.04	3.04	1272.9	-5.2
14:45	19.6	20.06	2.95	1080.3	-5.0
14:46	19.3	20.09	2.88	1178.0	-4.6
14:47	26.6	19.99	2.99	1028.2	-4.9
14:48	31.5	20.02	2.97	612.1	-5.0
14:49	28.1	20.04	2.93	523.2	-5.3
14:50	25.5	20.05	2.91	574.0	-5.3
14:51	22.0	20.05	2.85	710.2	-5.5
14:52	10.2	20.27	2.22	716.7	-4.4
14:53	1.1	20.42	2.07	2492.7	-1.3

AVERAGE VALUES FOR THE LAST 30 MINUTES

14:53	16.1	20.08	2.87	1577.3	-3.8
14:54	0.3	20.36	2.46	3972.9	1.6
14:55	3.6	20.10	3.04	5314.6	0.1
14:56	11.9	20.06	2.84	3238.4	-2.4
14:57	10.3	20.06	2.89	2492.6	-3.0

ENTROPY

US BUREAU OF MINE ALBANY-OREGON 07-23-1993

TIME	CHAN12 TECO8 ppmNOx	CHAN10 TELE12 % O2	CHAN14 FUJIA % CO2	CHAN13 TECOA ppm CO	CHAN11 WESTR4 ppmSO2
14:58	7.9	20.08	2.87	2394.1	-3.5
14:59	13.9	20.06	2.92	1998.3	-3.9
15:00	12.6	20.08	2.88	2035.4	-3.7
15:01	11.2	20.03	2.99	2682.1	-3.3
15:02	11.7	20.00	2.97	2521.5	-3.7
15:03	13.1	20.03	3.02	2485.5	-3.3
15:04	15.7	20.03	3.04	2467.6	-3.6
15:05	15.0	20.04	2.99	2302.9	-3.2
15:06	17.9	19.99	3.00	2024.4	-3.6
15:07	11.6	20.08	2.85	1981.6	-3.0
15:08	3.6	20.14	2.87	3430.6	-2.1
15:09	1.9	20.14	2.95	3932.8	-0.9
15:10	0.9	20.12	2.94	4396.6	-0.4
15:11	0.8	20.12	2.93	4353.0	-0.5
15:12	1.0	20.13	2.94	4726.4	0.1
15:13	1.0	20.12	3.04	4999.8	0.1
15:14	1.2	20.13	3.02	5525.0	-0.6
15:15	1.6	20.11	3.05	5019.8	0.3
15:16	1.7	20.05	3.19	4963.9	1.7
15:17	1.5	20.08	3.16	5293.8	1.4
15:18	1.2	20.11	3.12	5042.7	0.9
15:19	1.6	20.09	3.21	5279.0	1.6
15:20	1.4	20.06	3.23	5150.8	1.2
15:21	1.2	20.08	3.12	4733.0	0.9
15:22	0.9	20.13	3.03	4851.2	0.3
15:23	1.5	20.14	2.99	5628.3	-0.3

AVERAGE VALUES FOR THE LAST 30 MINUTES

15:23	6.0	20.09	2.98	3841.3	-1.2
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

15:23	11.1	20.09	2.93	2709.3	-2.5
15:24	2.1	20.10	2.97	4138.1	0.0
15:25	2.6	20.11	2.92	4042.2	-0.5
15:26	1.7	20.11	2.97	4028.0	-0.7
15:27	2.4	20.10	2.94	3893.7	-1.7
15:28	2.9	20.09	2.77	3386.7	-1.7
15:29	3.0	20.13	2.78	3436.8	-1.7
15:30	3.7	20.09	2.89	3332.9	-1.6
15:31	4.5	20.07	2.94	3387.1	-2.0
15:32	3.8	20.07	2.93	3379.4	-2.4
15:33	1.2	20.07	2.83	4098.1	-1.5
15:34	0.5	20.25	2.51	4630.2	-2.3
15:35	0.2	20.31	2.42	6608.0	-4.8
15:36	1.5	20.34	2.24	4935.2	-3.8
15:37	3.3	20.18	2.50	6342.0	-2.8
15:38	4.1	20.18	2.54	7125.3	-2.8
15:39	5.0	20.17	2.56	7442.2	-2.7
15:40	4.7	20.15	2.62	7383.5	-2.8
15:41	4.4	20.14	2.62	6182.7	-2.8
15:42	3.5	20.17	2.57	5907.4	-2.9
15:43	2.4	20.21	2.47	7051.1	-3.5
15:44	1.1	20.17	2.33	6456.9	-3.5

ENTROPY

US BUREAU OF MINE ALBANY-OREGON

07-23-1993

	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
15:45	0.6	20.22	2.23	6448.9	-4.4
15:46	1.0	20.28	2.10	5296.0	-5.0
15:47	1.2	20.34	1.84	3147.9	-5.2
15:48	0.7	20.32	1.89	2984.0	-5.6
15:49	0.7	20.38	1.65	3124.5	-6.1
15:50	0.7	20.39	1.48	2596.7	-6.2
15:51	0.8	20.37	1.36	2284.1	-6.3
15:52	1.0	20.40	1.25	2272.8	-6.5
15:53	1.6	20.39	1.20	2273.5	-6.5

AVERAGE VALUES FOR THE LAST 30 MINUTES

15:53	2.2	20.21	2.38	4587.2	-3.3
15:54	2.9	20.36	1.18	1953.4	-6.5
15:55	3.4	20.36	1.18	1684.7	-6.4
15:56	4.2	20.46	0.97	1208.3	-6.1
15:57	6.4	20.47	0.88	475.5	-5.9
15:58	5.5	20.55	0.73	298.6	-5.6
15:59	5.8	20.53	0.78	422.0	-5.3
16:00	7.6	20.47	0.87	267.6	-4.9
16:01	7.0	20.49	0.80	395.3	-4.7
16:02	6.5	20.52	0.75	610.0	-4.6
16:03	6.9	20.53	0.72	384.5	-4.4
16:04	8.3	20.53	0.69	236.6	-4.0
16:05	7.4	20.54	0.73	89.3	-4.4
16:06	7.3	20.52	0.79	143.6	-4.3
16:07	7.1	20.49	0.77	645.7	-4.3
16:08	8.7	20.51	0.73	247.3	-4.1
16:09	8.6	20.47	0.76	233.5	-4.2
16:10	9.5	20.48	0.78	212.3	-4.2
16:11	9.8	20.46	0.79	151.7	-4.6
16:12	6.3	20.48	0.73	387.3	-5.6
16:13	6.0	20.45	0.77	252.1	-6.0
16:14	6.5	20.42	0.82	155.1	25.8
16:15	5.3	20.42	0.79	218.2	68.0
16:16	4.1	20.44	0.75	456.9	59.3
16:17	4.1	20.40	0.78	171.3	53.3
16:18	4.4	20.36	0.81	65.9	54.9
16:19	4.1	20.40	0.82	54.4	58.1
16:20	3.9	20.39	0.85	64.7	78.4
16:21	4.1	20.39	0.83	73.7	100.6
16:22	3.6	20.38	0.81	57.1	86.4
16:23	4.5	20.37	0.84	56.2	90.0

AVERAGE VALUES FOR THE LAST 30 MINUTES

16:23	6.0	20.46	0.82	389.1	19.2
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AVERAGE VALUES FOR THE LAST HOUR: 60 MINUTES OF VALID DATA

16:23	4.1	20.33	1.60	2488.1	7.9
16:24	4.6	20.44	0.85	45.6	84.6
16:25	3.1	20.45	0.84	141.6	107.9
16:26	2.7	20.42	0.76	239.6	83.8
16:27	3.2	20.45	0.65	626.0	67.0

ENTROPY

US BUREAU OF MINE ALBANY-OREGON			07-23-1993		
	CHAN12	CHAN10	CHAN14	CHAN13	CHAN11
	TECO8	TELE12	FUJIA	TECOA	WESTR4
TIME	ppmNOx	% O2	% CO2	ppm CO	ppmSO2
16:28	1.6	20.37	0.61	812.2	72.2
16:29	3.8	20.38	0.55	404.2	69.9
16:30	6.3	20.32	0.59	319.3	82.1
16:31	8.0	20.36	0.56	244.9	82.0
16:32	4.5	20.40	0.54	173.0	78.7
16:33	1.2	20.39	0.52	75.5	77.7
16:34	0.8	20.44	0.45	32.7	81.6
16:35	0.7	20.49	0.23	19.3	76.1

COMMENTS: END OF TEST AT THE BAGHOUSE OUTLET

ENTROPY

CALIBRATION SUMMARY

SOURCE: US BUREAU OF MINE ALBANY-OREGON

REASON: POST TEST SYSTEM BIAS

DATE : 07-23-1993 TIME: 16:35 - 16:44

A/D CHAN	MONITOR DESCRIPTION	UNITS	GAS VALUE	MONITOR RESPONSE
12	TECO8	ppmNOx	0.0	0.2
12	TECO8	ppmNOx	25.0	23.5
10	TELE12	% O2	0.00	0.09
10	TELE12	% O2	19.12	18.92
14	FUJIA	% CO2	0.00	0.05
14	FUJIA	% CO2	5.01	5.03
13	TECOA	ppm CO	0.0	0.6
13	TECOA	ppm CO	895.0	917.3
11	WESTR4	ppmSO2	0.0	-6.7
11	WESTR4	ppmSO2	23.7	16.9

ENTROPY

Appendix E

Multiple Metals Train Control Chart

The Multiple Metals Train Control Chart was used each day during the field tests to record key parameters that pertain to the particulate/metals sample collection. This chart was also referred to in order to track the variations in selected offgas and furnace operating parameters.

MMT CONTROL CHART (CONTINUED)										7/2
Stack		Stack		Stack		Bn Outlet		Crunch Air		Temp
AP (H ₂ O)		Velocity		Fluxrate (discuss)		Fluxrate		Temp		
Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	calc
Test	Test	Test	Test	Test	Test	Test	Test	Test	Test	of up
154	176	0.63	0.55	457	424	446	463	730	619	498
172	162	0.63	0.68	446	463	(495)	776	776	776	238
174	174	0.66	N/A	450	450	450	450	450	450	450
172	194	0.65	0.69	462	462	462	462	462	462	462
200	186	0.87	0.80	511	485	511	485	511	485	511
154	217	0.74	0.86	474	495	474	495	474	495	474
214	—	0.74	—	491	—	491	—	491	—	491
226	242	0.68	0.68	457	451	457	451	457	451	457

$$T_2 = (Q_3 T_2 - Q_1 T_1) / (Q_2 - Q_1)$$

Appendix F

Manual Sample Collection and Measurement Data Sheets

Offgas measurement activities categorized as manual sample collection and measurement procedures included the Multiple Metals Train sampling, pretest and post-test velocity, temperature and flowrate measurements, wet/dry bulb measurements, and swirl angle measurements. Data recorded during these activities is provided in the following pages.

Sampling and Velocity Traverse Point Determination EPA Method 1

PLANT NAME USBm

CITY, STATE Albany, Oregon.

SAMPLING LOCATION Are Melter

NO. OF PORTS AVAILABLE 4

NO. OF PORTS USED 2

PORT INSIDE DIAMETER 3"

DISTANCE FROM FAR WALL TO OUTSIDE OF PORT 8 1/2"

NIPPLE LENGTH AND/OR WALL THICKNESS 3"

DEPTH OF STACK OR DUCT 5 1/2"

STACK OR DUCT WIDTH (IF RECTANGULAR) NA

EQUIVALENT DIAMETER:

$$D_E = \frac{2 \times \text{DEPTH} \times \text{WIDTH}}{\text{DEPTH} + \text{WIDTH}} = \frac{2 () ()}{() + ()} = \underline{NA}$$

	UPSTREAM	DOWNSTREAM
DISTANCE FROM PORTS TO FLOW DISTURBANCES	<u>46"</u>	<u>19"</u>
DIAMETERS	<u> </u>	<u> </u>

STACK/DUCT AREA = = IN²

[illegible][illegible]

DRAW HORIZONTAL LINE THROUGH DIAMETERS

If more than 8 and 2 diameters and if duct dia. is less than 24", use 8 or 9 points.

<u>VELOCITY</u>	<u>PARTICULATE</u>
12	12
16	16
	20
	24 or 25

DIAMETERS UP DOWN

8 — 2.0

7 — 1.75

6 — 1.5

5 — 1.25

2 — 0.5

PITOT USED (✓) TYPE "S" _____ STANDARD _____

POINT	% OF DUCT DEPTH	DISTANCE FROM INSIDE WALL	DISTANCE FROM OUTSIDE OF PORT
1	4.4	0.242	3 1/4 "
2	14.6	0.803	3 3/4
3	29.6	1.63	4 5/8
4	70.4	3.87	6 3/8
5	85.4	4.7	7 3/4
6	95.6	5 1/4	8 1/2
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			

F-0016 rev. 5-92

SEE REVERSE FOR FIELD USE CHECKLIST

ENTROPY

Appendix F-1

Manual Sample Collection and Measurements 19 July 1993, S60 Melt

AIR FLOW RATE DETERMINATIONS

Plant Name BUREAU OF MINES

Run No. M2
MMF-560-1

City/State ALBANY OREGON

Date 7-19-93

Test Location ARC MELTER

Personnel in the C

Barometric Pres. (Pbar) 29.9 In. Hg

Static Pres. (Pg) -1.6 In. H₂O

Pitot/Orifice ID SP24-5

Pitot Coef. (C_p) .99

Pres. Gauge Set ID 2107

Thermocouple ID — WB/DB

Duct Length/Diameter 5.5" Width

--Specify inches (") or feet (')--

[illegible]

ORSAT DATA					
Sampling Time	Analysis Time	CO ₂ (A) Reading	O ₂ (B) Reading	%O ₂ (B-A)	%CO+N ₂ (100-B)
Average					
Bag No. _____		Pump _____			

FYRITE DATA, % CO ₂				
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MOISTURE DATA (WET BULB/DRY BULB)					
Port	Time	Dry Bulb °F	Wet Bulb °F	Diff.	% H ₂ O

MOISTURE DATA (STOICHIOMETRIC)		
Free Water in Fuel, %		
Water from Fuel Combustion, %		
Ambient Water, %		
Relative Humidity, %		
Ambient Temperature, °F		
Total %		

VOLUMETRIC AIR FLOW RATES	
Dry at Standard Conditions, Q _{sd} =	SCFM
Wet at Stack Conditions, Q _{aw} =	ACFM

ADDITIONAL DATA

• ΔP average is square of average square root. See page 2 for field flow rate calculations.

AIR FLOW RATE DETERMINATIONS

Plant Name USBm Run No. 4495-560-2
City/State Albany, Oregon Date 7/19/92
Test Location Arc/Melter Personnel SCG/mc
Barometric Pres. (Pbar) 29.9 In. Hg Static Pres. (Pg) -1.6 In. H₂O
Pitot/Orifice ID SP24-S Pitot Coef. (Cp) 0.99 Pres. Gauge Set ID 2187
Thermocouple ID —WB/OB Duct Length/Diameter 5.5" Width
--Specify inches (") or feet (')--

VELOCITY TRAVERSES		
Start-Finish Times:		
	10 1135 -	1140
Point No.	ΔP In. H ₂ O	Temp. °F
4-1	0.49	176 154
2	0.73	
3	0.67	
4	0.59	
5	0.49	
6	0.45	
5-1	0.56	
2	0.47	
3	0.59	
4	0.49	
5	0.54	
6	0.52	
Avg.*	0.55	176

ORSAT DATA					
Sampling Time	Analysis Time	CO ₂ (A) Reading	O ₂ (B) Reading	%O ₂ (B-A)	%CO+N ₂ (100-B)
Average					
Bag No. _____		Pump _____			

FYRITE DATA, % CO ₂				
--------------------------------	--	--	--	--

MOISTURE DATA (WET BULB/DRY BULB)					
Port	Time	Dry Bulb °F	Wet Bulb °F	Diff.	% H ₂ O

MOISTURE DATA (STOICHIOMETRIC)		
Free Water in Fuel, %		
Water from Fuel Combustion, %		
Ambient Water, %		
Relative Humidity, %		
Ambient Temperature, °F		
Total %		

VOLUMETRIC AIR FLOW RATES	
Dry at Standard Conditions, Q_{sd} =	SCFM
Wet at Stack Conditions, Q_{aw} =	ACFM

ADDITIONAL DATA

* ΔP average is square of average square root. See page 2 for field flow rate calculations.

SAMPLING DATA - METHOD(S) EPA 29

CLIENT EG & G Idaho Inc. MMT-500-1
 PLANT Bureau of Mines RUN NO. #M29-1inc
 CITY/STATE Albany Oregon JOB NO. 11895 DATE 7-19-93
 SAMPLING LOC. ARC METER TIME START 1256
 BAROMETRIC PRESSURE, IN. HG 29.88 STATIC PRESSURE, IN. H₂O -16 TIME FINISH 1421
 LEAK CHECK, VACUUM IN. HG 15 19 15 19 OPERATOR inher
 LEAK RATE, CUBIC FEET/MIN. .004 .009 .004 .008 ASST(S) _____

EQUIPMENT CHECKS*		EQUIPMENT I.D. NUMBERS				LEAK CHECKS	
<u>N/A</u> PITOT, PRETEST	REAGENT BOX <u>C12</u>	METER BOX <u>2107</u>	Y <u>1000</u>	B <u>204.765</u>	B _____		
<u>N/A</u> PITOT, POSTTEST	PITOT <u>SP24-5</u>	Cp <u>99</u>	NOZ'L <u>GN2</u>	DIA. <u>.259</u>	E <u>204.918</u>		
<u>✓</u> NOZZLE, PRE/POST	TC READOUT <u>N/A</u>	TC PROBE <u>N/A</u>	UMBILICAL <u>C22</u>	B <u>204.918</u>	B _____		
<u>N/A</u> TC _____ °F PRE	SAMPL'G BOX <u>50</u>	ORSAT PUMP <u>N/A</u>	TEDLAR BAG <u>N/A</u>	E <u>205.060</u>	E _____		
<u>N/A</u> TC _____ °F POST	NOMOGRAPH DATA Hot Box #15				B <u>228.391</u>	B _____	
<u>N/A</u> ORSAT SYSTEM	DELTA H ₂ <u>1.861</u>			E <u>228.460</u>	E _____		
FILTER/XAD TARE WT.	METER TEMP <u>90</u>			FYRITES			
<u>Q074</u> <u>.3322</u>	EST. %H ₂ O <u>0</u>			<u>N/A</u>			
<u>Q076</u> <u>.3317</u>	C FACTOR <u>1.375</u>						
	STACK TEMP <u>276</u>						
	REF DELTA P <u>.505</u>						
	K FACTOR <u>3.440</u>						

* PITOT: VISUAL INSPECTION/LEAK CHECK; NOZZLE: VISUAL INSPECTION; TC: AMBIENT TEMPS.; ORSAT SYSTEM: LEAK CHECK

L I N E	SAMPLE POINT	CLOCK TIME MINUTES	DRY GAS METER READING CUBIC FEET	PITOT READING IN. H ₂ O	GAS METER TEMP. °F	STACK TEMP. °F	ORIFICE SETTING IN. H ₂ O		GAUGE VACUUM IN. HG	GAS TEMPERATURES °F			
							ACTUAL	IDEAL		FILTER BOX	IMPING EXIT	PROBE	COND. EXIT
		0	181.156										
1	5-5	5	186.06	.65	66	154	3.5	3.509	4	250	38		N/A
2	5	10	190.5	.65	64		3.5	3.475	9	250	38		
3	4	15	195.05	.7	65		3.0	3.749	15	250	38		
4	3	20	198.92	.78	66		3.8	3.754	18	250	40		
5	2	25	202.14	.63	67		3.3	3.385	19	250	40		
6	2	30	204.765	.63	68		1.0	3.394	19	250	40		
7	4-5	35	209.90	.67	68		3.6	3.610	6	250	40		
8	5	40	214.50	.67	68		3.4	3.608	12	250	40		
9	4	45	218.43	.68	69		2.8	3.669	15	250	40		
10	3	50	222.05	.65	70		1.9	3.513	17	250	46		
11	2	55	225.33	.50	70		1.4	2.703	19	250	40		
12	2	60	228.391	.50	70		1.4	2.709	19	250	40		
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													

Min. (θ) Vm $(\sqrt{\Delta P})^2$ tm ts ΔH

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AIR FLOW RATE DETERMINATIONS

Plant Name USBM Run No. M2-S6-3
City/State Albany, Oregon Date 7/19/93
Test Location Arc Melter Personnel MC/SC6
Barometric Pres. (Pbar) 29.9 In. Hg Static Pres. (Pg) -1.6 In. H₂O
Pitot/Orifice ID SP24-5 Pitot Coef. (Cp) 0.99 Pres. Gauge Set ID 2107
Thermocouple ID — WB/OB Duct Length/Diameter 565' Width —
--Specify inches (") or feet (')--

VELOCITY TRAVERSES		
Start-Finish Times:		
	<u>1345</u>	- <u>1350</u>
Point No.	ΔP In. H ₂ O	Temp. °F
4-1	0.55	172
2	0.72	
3	0.69	
4	0.65	
5	0.62	
6	0.49	
5-1	0.64	
2	0.67	
3	0.72	
4	0.69	
5	0.49	
6	0.42	
Avg.*	0.63	172

ORSAT DATA					
Sampling Time	Analysis Time	CO ₂ (A) Reading	O ₂ (B) Reading	%O ₂ (B-A)	%CO+N ₂ (100-B)
Average					
Bag No. _____		Pump _____			

FYRITE DATA, % CO ₂				
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MOISTURE DATA (WET BULB/DRY BULB)					
Port	Time	Dry Bulb °F	Wet Bulb °F	Diff.	% H ₂ O

MOISTURE DATA (STOICHIOMETRIC)		
Free Water in Fuel, %		
Water from Fuel Combustion, %		
Ambient Water, %		
Relative Humidity, %		
Ambient Temperature, °F		
Total %		

VOLUMETRIC AIR FLOW RATES	
Dry at Standard Conditions, Q _{sd} =	SCFM
Wet at Stack Conditions, Q _{aw} =	ACFM

ADDITIONAL DATA

• ΔP average is square of average square root. See page 2 for field flow rate calculations.

CLIENT EG&G Idaho Inc.

PLANT Bureau of Mines

CITY/STATE ALBANY OREGON

SAMPLING LOC. ARC MELTER

BAROMETRIC PRESSURE, IN. HG 29.88

LEAK CHECK, VACUUM IN. HG 15

LEAK RATE, CUBIC FEET/MIN. 0.04

RUN NO. MMT-S60-2.

JOB NO. 11885

DATE 7/19/93

TIME START 1406

TIME FINISH 1522

OPERATOR Whe C.

ASST(S)

EQUIPMENT CHECKS*		EQUIPMENT I.D. NUMBERS				LEAK CHECKS	
<u>N/A</u>	PITOT, PRETEST	REAGENT BOX <u>C12</u>	METER BOX <u>2107</u>	Y <u>1.006</u>	B <u>229.370</u>	B _____	
<u>N/A</u>	PITOT, POSTTEST	PITOT <u>SP-24-5</u>	CP <u>.99</u>	NOZ'L <u>GN</u>	DIA. <u>.215</u>	E <u>230.030</u>	
<u>✓</u>	NOZZLE, PRE/POST	TC READOUT <u>N/A</u>	TC PROBE <u>N/A</u>	UMBILICAL <u>CU-2</u>	B <u>251.485</u>	B _____	
<u>N/A</u>	TC _____ °F PRE	SAMPL'G BOX <u>29</u>	ORSAT PUMP <u>N/A</u>	TEDLAR BAG <u>N/A</u>	E <u>251.485</u>	E _____	
<u>N/A</u>	TC _____ °F POST	NOMOGRAPH DATA				B <u>269.268</u>	B _____
<u>N/A</u>	ORSAT SYSTEM					DELTA H ₂ <u>1.861</u>	_____
FILTER/XAD	TARE WT.	METER TEMP	_____	_____	_____	_____	
<u>DOTS</u>	<u>13266</u>	EST. %H ₂ O	<u>6</u>	_____	_____	_____	
_____	_____	C FACTOR	<u>1369</u>	_____	_____	_____	
_____	_____	STACK TEMP	<u>166</u>	_____	_____	_____	
_____	_____	REF DELTA P	<u>.722</u>	_____	_____	_____	
_____	_____	K FACTOR	<u>2.546</u>	_____	_____	_____	
						FYRITES	
						<u>N/A</u>	

* PITOT: VISUAL INSPECTION/LEAK CHECK; NOZZLE: VISUAL INSPECTION; TC: AMBIENT TEMPS.; ORSAT SYSTEM: LEAK CHECK

[illegible]

Min. (θ)

Ym

$$(\sqrt{\Delta p})^2$$

tm

15

 ΔH

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AIR FLOW RATE DETERMINATIONS

Plant Name USBm Run No. MZ-S60-4
City/State Albany, Oregon Date 7/19/93
Test Location Arc Melter Personnel SCG/mk
Barometric Pres. (Pbar) 29.9 In. Hg Static Pres. (Pg) -116 In. H₂O
Pitot/Orifice ID SP24-S Pitot Coef. (Cp) 0.99 Pres. Gauge Set ID Z107
Thermocouple ID -WB/DB Duct Length/Diameter 5.5' Width
--Specify inches (") or feet (')--

VELOCITY TRAVERSES		
Start-Finish Times: <u>1526 - 1531</u>		
Point No.	ΔP In. H₂O	Temp. °F
5-1	0.56	162
-2	0.71	
3	0.80	
4	0.70	
5	0.62	
6	0.45	
4-1	0.87	
2	0.85	
3	0.84	
4	0.65	
5	0.59	
b	0.54	
Avg.*	0.68	162

ORSAT DATA					
Sampling Time	Analysis Time	CO ₂ (A) Reading	O ₂ (B) Reading	%O ₂ (B-A)	%CO+N ₂ (100-B)
Average					
Bag No. _____		Pump _____			

FYRITE DATA, % CO ₂				
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MOISTURE DATA (WET BULB/DRY BULB)					
Port	Time	Dry Bulb °F	Wet Bulb °F	Diff.	% H ₂ O

MOISTURE DATA (STOICHIOMETRIC)		
Free Water in Fuel, %		
Water from Fuel Combustion, %		
Ambient Water, %		
Relative Humidity, %		
Ambient Temperature, °F		
Total %		

VOLUMETRIC AIR FLOW RATES	
Dry at Standard Conditions, Q _{sd} =	SCFM
Wet at Stack Conditions, Q _{aw} =	ACFM

ADDITIONAL DATA

* ΔP average is square of average square root. See page 2 for field flow rate calculations.

FIELD TEST LOG

Plant Name BUREAU OF MINES Job No. 17935

Sampling Location ARC MELTER

Start	Stop	Comments/Problems*	Run No.
<u>1256</u>	<u>1326</u>	<u>Filter Got Very Black Swin into Run Vac. Date 7/19/93</u>	<u>MMT-560-1</u>
<u>1346</u>	<u>1401</u>	<u>Kept Going up to 19" CHANGED Filter.</u>	
<u>1406</u>	<u>1421</u>	<u>STOPED TO CLEAN Filter, try to Lower Vac.</u>	
		<u>End of TEST.</u>	

Sampling Team Initials W.C. (Team Leader) Shawn C. Graham (Others)

Posttest Leak Rate ✓ Sample Appearance A lot of Particulate

Good Run (check)? YES NO (if NO, explain in "Comments/Problems")

Start	Stop	Comments/Problems*	Run No.
<u>1405</u>	<u>1406</u>	<u>Vacume shot up Stated to repair. Date 7/17/93</u>	<u>MMT-500-2</u>
<u>1415</u>	<u>1445</u>	<u>Power Flicker During Port change.</u>	
<u>1450</u>	<u>1522</u>	<u>End of Run</u>	
		<u>(1530) Feed line Plugged on Melter.</u>	

Sampling Team Initials W.C. (Team Leader) Shawn C. Graham (Others)

Posttest Leak Rate ✓ Sample Appearance Grayish, A lot of Particulate

Good Run (check)? YES NO (if NO, explain in "Comments/Problems")

Start	Stop	Comments/Problems*	Run No.

Sampling Team Initials _____ (Team Leader) _____ (Others)

Posttest Leak Rate _____ Sample Appearance _____

Good Run (check)? YES NO (if NO, explain in "Comments/Problems")

* USE REVERSE SIDE IF MORE SPACE REQUIRED.

Appendix F-2

Manual Sample Collection and Measurements 20 July 1993, S60-IV Melt

AIR FLOW RATE DETERMINATIONS

Plant Name BUREAU OF MINES Run No. M2
City/State ALBANY, OREGON Date 7/20/93
Test Location ARC MELTER Personnel WHE C
Barometric Pres. (Pbar) 29.9 In. Hg Static Pres. (Pg) -1.6 In. H₂O
Pitot/Orifice ID SP-245 Pitot Coef. (Cp) .99 Pres. Gauge Set ID 2107
Thermocouple ID N/A Duct Length/Diameter 5.5' Width
--Specify inches (") or feet (')--

VELOCITY TRAVERSES		
Start-Finish Times: <u>1115</u> - <u>1120</u>		
Point No.	ΔP In. H₂O	Temp. °F
5-81	0.73	162
52	0.78	164
49	0.79	172
34	0.70	173
25	0.55	176
26	0.50	177
4-15	0.47	94-157
25	0.55	164
34	0.70	169
43	0.73	173
52	0.65	174
64	0.54	174
Avg.*	0.64	169

ORSAT DATA					
Sampling Time	Analysis Time	CO ₂ (A) Reading	O ₂ (B) Reading	%O ₂ (B-A)	%CO+N ₂ (100-B)
Average					
Bag No. _____		Pump _____			

FYRITE DATA, % CO ₂				
--------------------------------	--	--	--	--

Port 1 Temp = 425 F

MOISTURE DATA (WET BULB/DRY BULB)					
Port	Time	Dry Bulb °F	Wet Bulb °F	Diff.	% H ₂ O

MOISTURE DATA (STOICHIOMETRIC)		
Free Water in Fuel, %		
Water from Fuel Combustion, %		
Ambient Water, %		
Relative Humidity, %		
Ambient Temperature, °F		
Total %		

VOLUMETRIC AIR FLOW RATES	
Dry at Standard Conditions, Q_{sd} =	SCFM
Wet at Stack Conditions, Q_{aw} =	ACFM

ADDITIONAL DATA

* ΔP average is square of average square root. See page 2 for field flow rate calculations.

SAMPLING DATA - METHOD(S) M-29

CLIENT EG&G Idaho Inc.
 PLANT BUREAU OF MINES RUN NO. MMT-560-2
 CITY/STATE ALBANY, OREGON JOB NO. 11885 DATE 7/20/96
 SAMPLING LOC. ARC MELTER TIME START 1214
 BAROMETRIC PRESSURE, IN. HG 29.9 STATIC PRESSURE, IN. H₂O -1.6 TIME FINISH 1340
 LEAK CHECK, VACUUM IN. HG 15 17 17 17 OPERATOR ushe C
 LEAK RATE, CUBIC FEET/MIN. .008 .008 .016 .008 ASST(S)

EQUIPMENT CHECKS*		EQUIPMENT I.D. NUMBERS				LEAK CHECKS	
N/A PITOT, PRETEST	REAGENT BOX <u>C-</u>	METER BOX <u>2107</u>	Y <u>1.006</u>	B <u>286.525</u>	B <u></u>		
N/A PITOT, POSTTEST	PITOT <u>4158-245p</u>	NOZ'L <u>GN</u>	DIA. <u>.215</u>	E <u>286.640</u>	E <u></u>		
// NOZZLE, PRE/POST	TC READOUT <u>N/A</u>	TC PROBE <u>N/A</u>	UMBILICAL <u>20-2</u>	B <u>286.640</u>	B <u></u>		
N/A TC <u></u> °F PRE	SAMPL'G BOX <u>76</u>	ORSAT PUMP <u>N/A</u>	TEDLAR BAG <u>N/A</u>	E <u>287.680</u>	E <u></u>		
N/A TC <u></u> °F POST				B <u>304.080</u>	B <u></u>		
N/A ORSAT SYSTEM				E <u>304.240</u>	E <u></u>		
FILTER/BOX <u>Q079</u> <u>.3272</u> <u>Q078</u> <u>.3700</u>		NOHOGRAPH DATA DELTA Hg <u>1.861</u> METER TEMP <u>830</u> EST. %H ₂ O <u>6</u> C FACTOR <u>1.369</u> STACK TEMP <u>170</u> REF DELTA P <u>1.086</u> K FACTOR <u>1.695</u>				FYRITES <u>N/A</u>	

* PITOT: VISUAL INSPECTION/LEAK CHECK; NOZZLE: VISUAL INSPECTION; TC: AMBIENT TEMPS.; ORSAT SYSTEM: LEAK CHECK

LINE	SAMPLE POINT	CLOCK TIME MINUTES	DRY GAS METER READING CUBIC FEET	PITOT READING IN. H ₂ O	GAS METER TEMP. °F	STACK TEMP. °F	ORIFICE SETTING IN. H ₂ O		GAUGE VACUUM IN. HG	GAS TEMPERATURES °F			
							ACTUAL	IDEAL		FILTER BOX	IMPING EXIT	PROBE	CC EX
		0	269.525										
1	5-5	5	272.04	.55	71	190	.9	.887	1	225	54	N/A	A
2	5	10	274.63	.55	72	185	.9	.896	4	235	54		
3	4	15	277.48	.70	73	183	1.1	1.140	5	235	54		
4	3	20	280.37	.79	73	172	1.3	1.315	9	235	52		
5	2	25	283.48	.78	74	164	1.3	1.317	11	240	52		
6	2	30	286.525	.78	75	164	1.3	1.320	13	245	52		
7	4-5	35	290.24	.65	75	175	1.0	1.081	3	235	58		
8	5	40	293.04	.65	76	186	1.0	1.065	4	235	58		
9	4	45	295.86	.73	76	173	1.2	1.221	7	240	58		
10	3	50	298.82	.70	77	169	1.2	1.180	12	250	58		
11	2	55	301.46	.55	78	164	.9	.936	14	250	58		
12	2	60	304.080	.55	78	164	.9	.937	15	250	58		
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													

60 33.24 0.66 75 174 1.08
 Min. (θ) Vm (ΔP)² tm ts ΔH

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AIR FLOW RATE DETERMINATIONS

Plant Name BUREAU OF MINES Run No. M2-S60-IV-2
City/State ALBANY, OREGON Date 7/20/93
Test Location ARC MELTER Personnel mtc c
Barometric Pres. (Pbar) 29.9 In. Hg Static Pres. (Pg) 1.6 In. H₂O
Pitot/Orifice ID SP-24-5 Pitot Coef. (Cp) .99 Pres. Gauge Set ID 2107
Thermocouple ID N/A Duct Length/Diameter 55" Width _____
--Specify inches (") or feet (')--

VELOCITY TRAVERSES		
Start-Finish Times:		
	<u>1510</u>	- <u>1515</u>
Point No.	ΔP In. H ₂ O	Temp. °F
5-1	0.87	141
2	0.71	150
3	0.76	171
4	0.62	178
5	0.75	182
6	0.76	182
4-1	0.72	165
2	0.74	172
3	0.73	176
4	0.53	180
5	0.53	183
6	0.47	184
Avg.*	0.65	172

ORSAT DATA					
Sampling Time	Analysis Time	CO ₂ (A) Reading	O ₂ (B) Reading	%O ₂ (B-A)	%CO+N ₂ (100-B)
Average					
Bag No. _____		Pump _____			

FYRITE DATA, % CO ₂				
--------------------------------	--	--	--	--

Point 1 Temp = 395°F

MOISTURE DATA (WET BULB/DRY BULB)					
Port	Time	Dry Bulb °F	Wet Bulb °F	Diff.	% H ₂ O

MOISTURE DATA (STOICHIOMETRIC)		
Free Water in Fuel, %		
Water from Fuel Combustion, %		
Ambient Water, %		
Relative Humidity, %		
Ambient Temperature, °F		
Total %		

VOLUMETRIC AIR FLOW RATES	
Dry at Standard Conditions, Q _{sd} =	SCFM
Wet at Stack Conditions, Q _{aw} =	ACFM

ADDITIONAL DATA

• ΔP average is square of average square root. See page 2 for field flow rate calculations.

SAMPLING DATA - METHOD(S) M-29

CLIENT EG&G Idaho Inc
 PLANT BUREAU OF MINES RUN NO. MMT-560-IV
 CITY/STATE ALBANY OREGON JOB NO. 11885 DATE 7/20/93
 SAMPLING LOC. ARC MELTER TIME START 1522
 BAROMETRIC PRESSURE, IN. HG 29.9 STATIC PRESSURE, IN. H₂O -1.0 TIME FINISH 1645
 LEAK CHECK, VACUUM IN. HG 15 10 15 16 OPERATOR mlh/c
 LEAK RATE, CUBIC FEET/MIN. .008 .004 .008 .006 ASST(S) _____

EQUIPMENT CHECKS*		EQUIPMENT I.D. NUMBERS		LEAK CHECKS	
N/A	PITOT, PRETEST	REAGENT BOX <u>C-17</u>	METER BOX <u>2107</u> Y <u>1.006</u>	B	<u>323.470</u>
N/A	PITOT, POSTTEST	PITOT <u>SP-24-5</u> CP <u>.99</u>	NOZ'L GA <u>1.94</u>	E	<u>328.530</u>
	NOZZLE, PRE/POST	TC READOUT <u>N/A</u>	TC PROBE <u>N/A</u> UMBILICAL <u>C-2</u>	B	<u>323.530</u>
N/A	TC _____ °F PRE	SAMPL'G BOX <u>50</u>	ORSAT PUMP <u>N/A</u> TEDLAR BAG <u>N/A</u>	E	<u>323.625</u>
N/A	TC _____ °F POST	NOMOGRAPH DATA Hot Box 15		B	<u>340.01</u>
N/A	ORSAT SYSTEM	DELTA Hg <u>1.861</u>		E	<u>340.045</u>
	FILTER/NOZ	METER TEMP <u>80</u>		FYRITES	
	TARE WT.	EST. %H ₂ O <u>6</u>		N/A	
		C FACTOR <u>1.374</u>			
		STACK TEMP <u>166</u>			
		REF DELTA P <u>1.075</u>			
		K FACTOR <u>1.712</u>			

* PITOT: VISUAL INSPECTION/LEAK CHECK; NOZZLE: VISUAL INSPECTION; TC: AMBIENT TEMPS.; ORSAT SYSTEM: LEAK CHECK

LINE	SAMPLE POINT	CLOCK TIME MINUTES	DRY GAS METER READING CUBIC FEET	PITOT READING IN. H ₂ O	GAS METER TEMP. °F	STACK TEMP. °F	ORIFICE SETTING IN. H ₂ O		GAUGE VACUUM IN. HG	GAS TEMPERATURES °F		
							ACTUAL	IDEAL		FILTER BOX	IMPING EXIT	CON EXI
		0	305.675									
1	5-5	5	308.64	.75	78	182	1.2	1.241	3	245	50	N/A W/
2	5	10	311.63	.75	78	182	1.2	1.241	4	245	50	
3	4	15	314.38	.62	78	178	1.0	1.032	5	250	50	
4	3	20	317.43	.76	78	171	1.2	1.280	7	250	50	
5	2	25	320.42	.71	79	162	1.2	1.214	8	250	50	
6	2	30	323.440	.71	78	155	1.2	1.226	10	250	50	
7	4-5	35	325.96	.53	78	183	.9	.875	2	255	50	
8	5	40	328.48	.53	78	183	.9	.876	4	250	50	
9	4	45	331.82	.53	78	180	.9	.880	4	250	50	
10	3	50	334.00	.73	78	176	1.2	1.220	5	250	50	
11	2	55	337.02	.74	78	172	1.2	1.243	5	250	50	
12	2	60	340.01	.74	75	172	1.2	1.236	9	250	50	
13												
14												
15												
16												
17												
18												
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21												
22												
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25												

Min. (θ) Vm $(\sqrt{\Delta P})^2$ tm ts ΔH

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AIR FLOW RATE DETERMINATIONS

Plant Name BUREAU OF MINES Run No. M2-S60-IV-3
City/State ALBANY, OREGON Date 7/20/93
Test Location ARC METER Personnel WHE C
Barometric Pres. (Pbar) 29.9 In. Hg Static Pres. (Pg) -1.6 In. H₂O
Pitot/Orifice ID SP-24-5 Pitot Coef. (Cp) .99 Pres. Gauge Set ID 2107
Thermocouple ID N/A Duct Length/Diameter 5.5" Width
--Specify inches (") or feet (')--

VELOCITY TRAVERSES Start-Finish Times: 1650 - 1655		
Point No.	ΔP In. H₂O	Temp. °F
5-1	0.59	185
2	0.66	199
3	0.70	199
4	0.74	198
5	0.76	196
6	0.72	190
4-1	0.51	189
2	0.68	189
3	0.80	190
4	0.70	190
5	0.74	199
6	0.73	199
Avg. *	0.83	194

ORSAT DATA					
Sampling Time	Analysis Time	CO ₂ (A) Reading	O ₂ (B) Reading	%O ₂ (B-A)	%CO+N ₂ (100-B)
Average					
Bag No. _____		Pump _____			

FYRITE DATA, % CO ₂				
--------------------------------	--	--	--	--

MOISTURE DATA (WET BULB/DRY BULB)					
Port	Time	Dry Bulb °F	Wet Bulb °F	Diff.	% H ₂ O

Point 1 Temp = 530 °F

MOISTURE DATA (STOICHIOMETRIC)		
Free Water in Fuel, %		
Water from Fuel Combustion, %		
Ambient Water, %		
Relative Humidity, %		
Ambient Temperature, °F		
Total %		

VOLUMETRIC AIR FLOW RATES	
Dry at Standard Conditions, Q _{sd} =	SCFM
Wet at Stack Conditions, Q _{aw} =	ACFM

ADDITIONAL DATA

• ΔP average is square of average square root. See page 2 for field flow rate calculations.

FIELD TEST LOG

Plant Name BUREAU OF MINES Job No. 11885

Sampling Location ARC MELTER

Start	Stop	Comments/Problems*	Run No.	Date
<u>1214</u>	<u>1244</u>	<u>Port change. Found leak in train Had A</u>	<u>MMT-S60-IV</u>	<u>7/20/93</u>
		<u>little delay in Correcting Problem.</u>		
<u>1310</u>	<u>1340</u>	<u>End of Run.</u>		

Sampling Team Initials who (Team Leader) Sham C. Gubler (Others)
 Posttest Leak Rate ☒ Sample Appearance Powdery, Gray
 Good Run (check)? ☒ YES ☐ NO (if NO, explain in "Comments/Problems")

Start	Stop	Comments/Problems*	Run No.	Date
<u>1523</u>	<u>1553</u>	<u>To change Bits, And Filters.</u>	<u>MMT-S60-VI</u>	<u>7/20/93</u>
<u>1605</u>	<u>1627</u>	<u>the Feed tubes stopped and Stopped Feeding. was Sampl</u>		
		<u>For 10 min. with Cloged feed tubes.</u>		
<u>1636</u>	<u>1645</u>	<u>End of Test.</u>		

Sampling Team Initials who (Team Leader) Sham C. Gubler (Others)
 Posttest Leak Rate ☒ Sample Appearance Powdery, Gray
 Good Run (check)? ☒ YES ☐ NO (if NO, explain in "Comments/Problems")

Start	Stop	Comments/Problems*	Run No.	Date

Sampling Team Initials _____ (Team Leader) _____ (Others)
 Posttest Leak Rate _____ Sample Appearance _____
 Good Run (check)? ☐ YES ☐ NO (if NO, explain in "Comments/Problems")

* USE REVERSE SIDE IF MORE SPACE REQUIRED.

Appendix F-3

Manual Sample Collection and Measurements 21 July 1993, N80 and N80-MOD Melts

ABORT

Run No. 42-1480-1

Date 7/24/93

Personnel *into c*

Static Pres. (Pg) -1.8 In. H₂O

Pres. Gauge Set ID 2107

--Specify inches (") or feet (')--

ADDITIONAL DATA

F-3.3

Page 1 of 1

Job No. 11885

Date 7/20/93

Personnel who C

Pitot/Orifice ID SP-24-5 Pitot Coef. (Cp) .99 Pres. Gauge Set ID 2107

Thermocouple ID N/A Duct Length/Diameter 5.5 Width

Horizontal Duct Flyash/Dust Buildup > 1" Depth (✓)? Yes ☐ No ☐ (If Yes, see Page 2 for Instructions.)

[illegible]

F-3.4

AIR FLOW RATE DETERMINATIONS

Plant Name BUREAU OF MINES Run No. HM2-N80-4
City/State ALBANY Oregon Date 7/21/43
Test Location ARC MELTER Personnel W. C.
Barometric Pres. (Pbar) 29.8 In. Hg Static Pres. (Pg) -1.8 In. H₂O
Pitot/Orifice ID SP-24-5 Pitot Coef. (Cp) .99 Pres. Gauge Set ID 2107
Thermocouple ID TC 5 Duct Length/Diameter 5.5" Width _____
--Specify inches (") or feet (')--

VELOCITY TRAVERSES		
Start-Finish Times:		
<u>1030 - 1035</u>		
Point No.	ΔP In. H ₂ O	Temp. °F
5-1	0.87	189
2	0.89	197
3	0.87	197
4	0.83	197
5	0.90	197
6	0.86	197
A. 1	0.86 ^{0.75}	186
2	0.83 ^{0.75}	189 ²⁰⁰
3	0.86 ^{0.77}	192 ²⁰²
4	0.88	192 ²¹¹
5	0.87 ^{0.82}	192
6	0.83 ^{0.62}	192
/		
Avg.*	0.87	200

ORSAT DATA					
Sampling Time	Analysis Time	CO ₂ (A) Reading	O ₂ (B) Reading	%O ₂ (B-A)	%CO+N ₂ (100-B)
Average					
Bag No. _____		Pump _____			

FYRITE DATA, % CO ₂				
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Point 1 = 932°F @ 1115; 805°F @ 1200

MOISTURE DATA (WET BULB/DRY BULB)					
Port	Time	Dry Bulb °F	Wet Bulb °F	Diff.	% H ₂ O
2	1110	210	138	72	

MOISTURE DATA (STOICHIOMETRIC)		
Free Water in Fuel, %		
Water from Fuel Combustion, %		
Ambient Water, %		
Relative Humidity, %		
Ambient Temperature, °F		
Total %		

VOLUMETRIC AIR FLOW RATES	
Dry at Standard Conditions, Q_{sd} =	SCFM
Wet at Stack Conditions, Q_{aw} =	ACFM

ADDITIONAL DATA

* ΔP average is square of average square root. See page 2 for field flow rate calculations.

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ENTROPY

F-3.5

SAMPLING DATA - METHOD(S) M29

CLIENT EG & G Idaho Inc
 PLANT BUREAU OF MINES RUN NO. MMT-N80-1
 CITY/STATE ALBANY OREGON JOB NO. 11825 DATE 7/21/93
 SAMPLING LOC. ARC MELTER TIME START 1050
 BAROMETRIC PRESSURE, IN. HG 29.8 STATIC PRESSURE, IN. H2O 18-1.8 TIME FINISH 1208
 LEAK CHECK, VACUUM IN. HG 15 15 19 OPERATOR Wheeler
 LEAK RATE, CUBIC FEET/MIN. .010 .009 .012 ASST(S) _____

EQUIPMENT CHECKS*		EQUIPMENT I.D. NUMBERS				LEAK CHECKS	
N/A	PITOT, PRETEST	REAGENT BOX	METER BOX	Y	1.006	B	355.310
N/A	PITOT, POSTTEST	PITOT, SP-24-5	CP	.99	NOZ'L GN	DIA.	.194
✓	NOZZLE, PRE/POST	TC READOUT	F39	TC PROBE	TC 5	UMBILICAL	CU-2
✓	TC 60 °F PRE	SAMPL'G BOX	716	ORSAT PUMP	N/A	TEDLAR BAG	N/A
✓	TC 60 °F POST					B	359.310
N/A	ORSAT SYSTEM					E	359.498
		MONOGRAPH DATA				B	378.180
FILTER/NO.	TARE WT.	DELTA H2	1861			E	378.280
0092	0.3230	METER TEMP	80				
0033	0.3125	EST. XH2O	6				
		C FACTOR	1.367				
		STACK TEMP	200				
		REF DELTA P	1.138				
		K FACTOR	1.617				

* PITOT: VISUAL INSPECTION/LEAK CHECK; NOZZLE: VISUAL INSPECTION; TC: AMBIENT TEMPS.; ORSAT SYSTEM: LEAK CHECK

LINE	SAMPLE POINT	CLOCK TIME MINUTES	DRY GAS METER READING CUBIC FEET	PITOT READING IN. H2O	GAS METER TEMP. °F	STACK TEMP. °F	ORIFICE SETTING IN. H2O		GAUGE VACUUM IN. HG	GAS TEMPERATURES °F			
							ACTUAL	IDEAL		FILTER BOX	IMPING EXIT	PROBE	CO EX
		0	340.540										
1	5-5	5	343.61	.90	70	190	1.4	1.449	2	245	52	N/A	N/A
2	5	10	346.86	.90	70	167	1.5	1.500	5	250	52	N/A	N/A
3	4	15	349.91	.83	71	166	1.4	1.488	7	250	52	1	
4	3	20	352.84	.87	72	162	1.4	1.462	10	250	52		
5	2	25	356.13	.89	73	165	1.5	1.497	13	250	52		
6	2	30	359.31	.89	73	165	1.5	1.496	15	250	52		
7	4-5	35	362.41	.89	73	165	1.3	1.3016	247	240	56		
8	5	40	365.49	.82	74	206	1.3	1.297	4	245	52		
9	4	45	368.40	.88	75	207	1.4	1.392	7	250	56		
10	3	50	371.83	.97	76	200	1.5	1.554	10	250	56		
11	2	55	374.97	.95	77	202	1.5	1.519	13	250	56		
12	2	60	378.180	.95	77	202	1.5	1.519	17	250	56		
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													

60 37.352 .8885 73.4 186.0 14333
 Min. (θ) Vm (ΔP)² tm ts ΔH

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AIR FLOW RATE DETERMINATIONS

Plant Name BUREAU OF MINES Run No. MZ-N80-12
City/State ALBANY Oregon Date 7/21/93
Test Location Arc. Moller Personnel Mike C
Barometric Pres. (Pbar) 29.8 In. Hg Static Pres. (Pg) -1.8 In. H₂O
Pitot/Orifice ID SP-24-5 Pitot Coef. (Cp) .99 Pres. Gauge Set ID 2107
Thermocouple ID Plant TC Duct Length/Diameter 5.5" Width _____
--Specify inches (") or feet (')--

VELOCITY TRAVERSES		
Start-Finish Times:		
	<u>1112</u>	- <u>1117</u>
Point No.	ΔP In. H ₂ O	Temp. °F
5-2	0.79	181
2	0.90	185
3	0.80	186
4	0.84	189
5	0.75	189
6	0.76	190
4-1	0.88	174
2	0.82	185
3	0.89	189
4	0.86	189
5	0.75	190
6	0.60	190
Avg. *	0.80	186

ORSAT DATA					
Sampling Time	Analysis Time	CO ₂ (A) Reading	O ₂ (B) Reading	%O ₂ (B-A)	%CO+N ₂ (100-B)
Average					
Bag No. _____		Pump _____			

FYRITE DATA, % CO ₂				
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Port

MOISTURE DATA (WET BULB/DRY BULB)					
Port	Time	Dry Bulb °F	Wet Bulb °F	Diff.	% H ₂ O

MOISTURE DATA (STOICHIOMETRIC)		
Free Water in Fuel, %		
Water from Fuel Combustion, %		
Ambient Water, %		
Relative Humidity, %		
Ambient Temperature, °F		
Total %		

VOLUMETRIC AIR FLOW RATES	
Dry at Standard Conditions, Q _{sd} =	SCFM
Wet at Stack Conditions, Q _{aw} =	ACFM

ADDITIONAL DATA

* ΔP average is square of average square root. See page 2 for field flow rate calculations.

AIR FLOW RATE DETERMINATIONS

Plant Name BUREAU OF MINES

Run No. 142560 IV

City/State ALBANY OREGON

Date 7/24/93

Test Location ARC MELTER

Personnel Mike C

Barometric Pres. (Pbar) 29.8 In. Hg Static Pres. (Pgr) 1.8 In. H₂O

Pitot/Orifice ID SP-24-5 Pitot Coef. (Cp) .99 Pres. Gauge Set ID 2107

Thermocouple ID 11A TC 5 Duct Length/Diameter 5.5 Width
--Specify inches (") or feet (')--

[illegible]

ORSAT DATA					
Sampling Time	Analysis Time	CO ₂ (A) Reading	O ₂ (B) Reading	%O ₂ (B-A)	%CO+N ₂ (100-B)
Average					
Bag No. _____		Pump _____			

FYRITE DATA, % CO ₂				
--------------------------------	--	--	--	--

Point 1: $T = 468^\circ\text{F} @ 140\text{ psia}$

MOISTURE DATA (WET BULB/DRY BULB)					
Port	Time	Dry Bulb °F	Wet Bulb °F	Diff.	% H ₂ O
4	1425	20.5	14.8	5.7	
2	1530	17.5	12.5	5.0	

Port 1 $T = 905^\circ\text{F}$ @ 1530 - 930°F @ 1547

MOISTURE DATA (STOICHIOMETRIC)		
Free Water in Fuel, %		
Water from Fuel Combustion, %		
Ambient Water, %		
Relative Humidity, %		
Ambient Temperature, °F		
Total %		

VOLUMETRIC AIR FLOW RATES	
Dry at Standard Conditions, Q _{sd} =	SCFM
Wet at Stack Conditions, Q _{aw} =	ACFM

ADDITIONAL DATA

• ΔP average is square of average square root. See page 2 for field flow rate calculations.

SAMPLING DATA - METHOD(S) M29

CLIENT EG&G Idaho Inc.
 PLANT BUREAU OF MINES RUN NO. MMT-N80-2
 CITY/STATE ALBANY, OREGON JOB NO. 11885 DATE 7/21/93
 SAMPLING LOC. ARC MELTER TIME START 1520
 BAROMETRIC PRESSURE, IN. HG 29.8 STATIC PRESSURE, IN. H₂O -1.8 TIME FINISH 1625
 LEAK CHECK, VACUUM IN. HG .15 15 OPERATOR MLC
 LEAK RATE, CUBIC FEET/MIN. .010 .009 ASST(S) _____

EQUIPMENT CHECKS*		EQUIPMENT I.D. NUMBERS				LEAK CHECKS	
N/A	PITOT, PRETEST	REAGENT BOX	C.17	METER BOX	2107	Y	1.006
N/A	PITOT, POSTTEST	PITOT	SP24-5	Cp	.99	NOZ'L	GN DIA. .194
/	NOZZLE, PRE/POST	TC READOUT	F39	TC PROBE	5	UMBILICAL	CU-2
/	TC 78 °F PRE	SAMPL'G BOX	79	ORSAT PUMP	N/A	TEDLAR BAG	N/A
/	TC 70 °F POST						
N/A	ORSAT SYSTEM						
FILTER/AD TARE WT.		NOMOGRAPH DATA					
Q084	0.3230	DELTA HG	1.861				
		METER TEMP	80				
		EST. %H ₂ O	6				
		C FACTOR	1.368				
		STACK TEMP	200				
		REF DELTA P	1.138				
		K FACTOR	1.617				
		FYRITES					
		N/A					

* PITOT: VISUAL INSPECTION/LEAK CHECK; NOZZLE: VISUAL INSPECTION; TC: AMBIENT TEMPS.; ORSAT SYSTEM: LEAK CHECK

L I N E	SAMPLE POINT	CLOCK TIME MINUTES	DRY GAS METER READING CUBIC FEET	PITOT READING IN. H ₂ O	GAS METER TEMP. °F	STACK TEMP. °F	ORIFICE SETTING IN. H ₂ O		GAUGE VACUUM IN. HG	GAS TEMPERATURES °F			
							ACTUAL	IDEAL		FILTER BOX	IMPING EXIT	PROBE	COND. EXIT
		0	378.375										
1	5-5	5	381.67	.88	763	167	1.4	1.485	2	250	40	N/A	N/A
2	5	10	384.93	.88	73	170	1.4	1.468	3	250	40		
3	4	15	388.22	.89	74	168	1.4	1.492	4	250	40		
4	3	20	391.17	.76	74	206	1.2	1.201	5	250	40		
5	2	25	393.87	.62	75	201	1.0	.990	6	250	40		
6	2	30	396.57	.62	75	200	1.0	.992	6	250	40		
7	4-5	35	399.48	.72	75	198	1.1	1.156	7	250	40		
8	5	40	402.36	.72	75	216	1.1	1.124	9	250	40		
9	4	45	405.09	.76	75	221	1.2	1.178	10	250	40		
10	3	50	408.22	.87	76	222	1.3	1.349	12	250	40		
11	2	55	411.21	.80	76	225	1.2	1.235	15	250	40		
12	2	60	414.144	.86	76	226	1.2	1.233	17	250	40		
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													

Min. (θ) Vm $(\sqrt{\Delta P})^2$ tm ts ΔH

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AIR FLOW RATE DETERMINATIONS

Plant Name Bureau of Mines Run No. M2-W80-4
City/State Albany Oregon Date 7/2/93
Test Location ARC METER Personnel Wheeler
Barometric Pres. (Pbar) 29.8 In. Hg Static Pres. (Pg) -1.8 In. H₂O
Pitot/Orifice ID SP-24-5 Pitot Coef. (Cp) .99 Pres. Gauge Set ID 2107
Thermocouple ID TL5 Duct Length/Diameter 5.5 Width _____
--Specify inches (") or feet (')--

VELOCITY TRAVERSES		
Start-Finish Times:		
	<u>1638</u>	- <u>1643</u>
Point No.	ΔP In. H ₂ O	Temp. °F
5-1	0.82	211
2	0.90	212
3	0.94	216
4	0.95	223
5	0.85	218
6	0.88	227
4-1	0.92	197
2	0.94	206
3	0.94	213
4	0.85	227
5	0.70	227
6	0.71	228
Avg.*	0.86	217

ORSAT DATA					
Sampling Time	Analysis Time	CO ₂ (A) Reading	O ₂ (B) Reading	%O ₂ (B-A)	%CO+N ₂ (100-B)
Average					
Bag No. _____		Pump _____			

FYRITE DATA, % CO ₂				
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Port 1 $T = 940^\circ\text{F}$ @ 1635

MOISTURE DATA (WET BULB/DRY BULB)					
Port	Time	Dry Bulb °F	Wet Bulb °F	Diff.	% H ₂ O
2	1630	217	128	89	

MOISTURE DATA (STOICHIOMETRIC)		
Free Water in Fuel, %		
Water from Fuel Combustion, %		
Ambient Water, %		
Relative Humidity, %		
Ambient Temperature, °F		
Total %		

VOLUMETRIC AIR FLOW RATES	
Dry at Standard Conditions, Q_{sd} =	SCFM
Wet at Stack Conditions, Q_{aw} =	ACFM

ADDITIONAL DATA

• ΔP average is square of average square root. See page 2 for field flow rate calculations.

FIELD TEST LOG

Plant Name Bureau of Mines Job No. 11885

Sampling Location ARC Melter

Start	Stop	Comments/Problems*	Run No.
<u>1650</u>	<u>1120</u>	<u>to change Ports and Filters.</u>	<u>MMT-N80-1</u>
<u>1137</u>	<u>1208</u>	<u>End of Run. During test feed was increased then decreased.</u>	<u>Date 7/21/93</u>

Sampling Team Initials WUC (Team Leader) Shane C. Graham (Others)

Posttest Leak Rate Sample Appearance Powdery Light Gray less Particulate -

Good Run (check)? YES NO (if NO, explain in "Comments/Problems") than previous tests.

Start	Stop	Comments/Problems*	Run No.
<u>1520</u>	<u>1550</u>	<u>At 1533 temp went from 165 to 207</u>	<u>MMT-N8-2</u>
<u>1555</u>		<u>Reason Being that the Cold top went away. stopped to change</u>	<u>Date 7/21/93</u>
		<u>Ports at 1550.</u>	
<u>1555</u>	<u>1525</u>	<u>End of Run.</u>	

Sampling Team Initials WUC (Team Leader) Shane C. Graham (Others)

Posttest Leak Rate Sample Appearance Good

Good Run (check)? YES NO (if NO, explain in "Comments/Problems")

Start	Stop	Comments/Problems*	Run No.

Sampling Team Initials (Team Leader) (Others)

Posttest Leak Rate Sample Appearance

Good Run (check)? YES NO (if NO, explain in "Comments/Problems")

* USE REVERSE SIDE IF MORE SPACE REQUIRED.

Appendix F-4

Manual Sample Collection and Measurements 22 July 1993, N80-IV and N80-IV-MOD Melts

AIR FLOW RATE DETERMINATIONS

Plant Name Bureau of Mines Run No. M44-NP0-IV-1
City/State ALBANY OREGON Date 7/22/93
Test Location Arc Melter Personnel who Chavez
Barometric Pres. (Pbar) 29.8 In. Hg Static Pres. (Pg) 1.9 In. H₂O
Pitot/Orifice ID SP-24-5 Pitot Coef. (Cp) .95 Pres. Gauge Set ID 2107
Thermocouple ID TC-5 Duct Length/Diameter 5-5" Width _____
--Specify inches (") or feet (')--

VELOCITY TRAVERSES		
Start-Finish Times:		
	<u>1050</u>	- <u>1055</u>
Point No.	AP In. H ₂ O	Temp. °F
5-1	0.64	191
2	0.73	202
3	0.80	206
4	0.93	213
5	0.81	210
6	0.74	210
4-1	0.82	214
2	0.90	223
3	0.89	219
4	0.69	219
5	0.59	232
6	0.54	229
Avg.*	0.75	214

ORSAT DATA					
Sampling Time	Analysis Time	CO ₂ (A) Reading	O ₂ (B) Reading	%O ₂ (B-A)	%CO+N ₂ (100-B)
Average					
Bag No. _____		Pump _____			

FYRITE DATA, % CO ₂				
--------------------------------	--	--	--	--

Port 1 940°F @ 1025 945°F @ 1125

MOISTURE DATA (WET BULB/DRY BULB)					
Port	Time	Dry Bulb °F	Wet Bulb °F	Diff.	% H ₂ O
5	1020	191	113	78	6
5	1115	180	110	70	7

MOISTURE DATA (STOICHIOMETRIC)		
Free Water in Fuel, %		
Water from Fuel Combustion, %		
Ambient Water, %		
Relative Humidity, %		
Ambient Temperature, °F		
Total %		

VOLUMETRIC AIR FLOW RATES	
Dry at Standard Conditions, Q_{sd} =	SCFM
Wet at Stack Conditions, Q_{aw} =	ACFM

ADDITIONAL DATA

* ΔP average is square of average square root. See page 2 for field flow rate calculations.

SAMPLING DATA - METHOD(S) M 29

CLIENT Bureau of Mines EG & G Idaho Inc. RUN NO. MMT-W80-II
 PLANT Bureau of Mines DATE 7/22/95
 CITY/STATE Alhambra Oregon JOB NO. 17885 TIME START 1102
 SAMPLING LOC. Acc. meter TIME FINISH 1148
 BAROMETRIC PRESSURE, IN. HG 29.8 STATIC PRESSURE, IN. H₂O 1.9 OPERATOR Whe C
 LEAK CHECK, VACUUM IN. HG 15 ASST(S) _____
 LEAK RATE, CUBIC FEET/MIN. .012

EQUIPMENT CHECKS*		EQUIPMENT I.D. NUMBERS				LEAK CHECKS	
☒ N/A	PITOT, PRETEST	REAGENT BOX	METER BOX	Y		B	438.050
☒ N/A	PITOT, POSTTEST	PITOT SP24-5	Cp .99	NOZ'L GN	DIA. .194	E	438.325
☒	NOZZLE, PRE/POST	TC READOUT	F39	TC PROBE	5		
☒	TC 70 °F PRE	SAMPL'G BOX	76	ORSAT PUMP	N/A		
☒	TC °F POST			UMBILICAL	CW-2		
☒ N/A	ORSAT SYSTEM			TEDLAR BAG	N/A		
		NOMOGRAPH DATA					
		DELTA H ₂	1.861	H ₂ BOX 17			
FILTER/MAG.	TARE WT.	METER TEMP	80				
0085	-3261	EST. %H ₂ O	6				
		C FACTOR	1.368				
		STACK TEMP	214				
		REF DELTA P	1.163				
		K FACTOR	1.583				

* PITOT: VISUAL INSPECTION/LEAK CHECK; NOZZLE: VISUAL INSPECTION; TC: AMBIENT TEMPS.; ORSAT SYSTEM: LEAK CHECK

L I N	S A M P L E P O I N T	C L O C K T I M E M I N U T E S	D R Y G A S M E T E R R E A D I N G C U B I C F E E T	P I T O T R E A D I N G I N. H ₂ O	G A S M E T E R T E M P. °F	S T A C K T E M P. °F	O R I F I C E S E T T I N G I N. H ₂ O		G A U G E V A C U U M I N. H G	G A S T E M P E R A T U R E S °F			
							A C T U A L	I D E A L		F I L T E R B O X	I M P I N G E X I T	P R O B E	E X
		0	415.450										
1	5-5	5	418.50	.81	66	157	1.3	1.363	2	290	56	N/A	N
2	5	10	421.50	.81	66	159	1.3	1.357	2	240	56		
3	4	15	424.70	.93	67	161	1.5	1.556	4	245	56		
4	3	20	427.25	0.81	67	160	1.4	1.4	5	250	58		
5	2	25	430.20	.73	68	202	1.1	1.148	5	250	58		
6	2	30	433.59	.73	69	202	1.1	1.151	4	250	58		
7	4-5	35	436.2	.59	70	232	.9	.891	4	250	58		
8	5	40		.59	70	232	.9	.892	4	250	58		
9	4	45											
10	3	50											
11	2	55											
12	2	60											
13													
14													
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22													
23													
24													
25													

Min. (θ) Vm (√ΔP)² tm ts ΔH

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2. 雄

* PITOT: VISUAL INSPECTION/LEAK CHECK; NOZZLE: VISUAL INSPECTION; TC: AMBIENT TEMPS.; ORSAT SYSTEM: LEAK CHECK

the AS temp is 20° less the recorded temp

AIR FLOW RATE DETERMINATIONS

Plant Name Bureau of Mines Run No. MMT-1180-II
City/State ALBANY Oregon Date 7/22/93
Test Location ARC Melter Personnel Whe Chavez/S
Barometric Pres. (Pbar) 29.8 In. Hg Static Pres. (Pg) 1.9 In. H₂O
Pitot/Orifice ID 50-24-5 Pitot Coef. (Cp) 99 Pres. Gauge Set ID 2107
Thermocouple ID Plant TC Duct Length/Diameter 5.5" Width ---
TC 5-50 --Specify inches (") or feet (')--

VELOCITY TRAVERSES		
Start-Finish Times:		
<u>1535 - 1540</u>		
Point No.	ΔP In. H ₂ O	Temp. °F
5-1	0.77	226
2	0.77	229
3	0.78	230
4	0.65	238
5	0.58	240
6	0.55	240
4-1	0.80	182
2	0.83	211
3	0.74	228
4	0.65	231
5	0.55	230
6	0.58	232
Avg. *	0.68	226

ORSAT DATA					
Sampling Time	Analysis Time	CO ₂ (A) Reading	O ₂ (B) Reading	%O ₂ (B-A)	%CO+N ₂ (100-B)
Average					
Bag No. _____		Pump _____			

FYRITE DATA, % CO ₂				
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Port 1 300°F @ 134z (Plant-down)

MOISTURE DATA (WET BULB/DRY BULB)					
Port	Time	Dry Bulb °F	Wet Bulb °F	Diff.	% H ₂ O
5	1325	236	118.3	113	7.5

Port 1 1154°F @ 1600

MOISTURE DATA (STOICHIOMETRIC)		
Free Water in Fuel, %		
Water from Fuel Combustion, %		
Ambient Water, %		
Relative Humidity, %		
Ambient Temperature, °F		
Total %		

VOLUMETRIC AIR FLOW RATES	
Dry at Standard Conditions, Q_{sd} =	SCFM
Wet at Stack Conditions, Q_{aw} =	ACFM

ADDITIONAL DATA

* ΔP average is square of average square root. See page 2 for field flow rate calculations.

SAMPLING DATA - METHOD(S) M29

CLIENT Egg & Idaho Inc. PLANT Bureau of Mines RUN NO. MMT-N80-IV-
 CITY/STATE ARANY OREGON JOB NO. 11885 DATE 7/22/98
 SAMPLING LOC. ARC MEISTER TIME START 1545
 BAROMETRIC PRESSURE, IN. HG 29.8 STATIC PRESSURE, IN. H₂O -1.9 TIME FINISH 1655
 LEAK CHECK, VACUUM IN. HG 15 16 17 OPERATOR mhc
 LEAK RATE, CUBIC FEET/MIN. .006 .016 .010 ASST(S) _____

EQUIPMENT CHECKS*		EQUIPMENT I.D. NUMBERS				LEAK CHECKS	
N/A	PITOT, PRETEST	REAGENT BOX	METER BOX	2107	Y	1.006	B 494.633
N/A	PITOT, POSTTEST	PITOT SP24-5	CP	99	NOZ'L	GN	E 494.930
/	NOZZLE, PRE/POST	TC READOUT	F39	TC PROBE	5	UMBILICAL	B 515.225
/	TC 84 °F PRE	SAMPL'G BOX	76	ORSAT PUMP	N/A	TEDLAR BAG	E 515.320
/	TC 84 °F POST						
N/A	ORSAT SYSTEM						
FILTER/NOZ		NOMOGRAPH DATA				FYRITES	
Q080	TARE WT.	DELTA H ₂	1.861			N/A	
Q090	.3052	METER TEMP	80				
	.3222	EST. %H ₂ O	6				
		C FACTOR	1.368				
		STACK TEMP	214				
		REF DELTA P	1.163				
		K FACTOR	1.583				

* PITOT: VISUAL INSPECTION/LEAK CHECK; NOZZLE: VISUAL INSPECTION; TC: AMBIENT TEMPS.; ORSAT SYSTEM: LEAK CHECK

L I H E	SAMPLE POINT	CLOCK TIME MINUTES	DRY GAS METER READING CUBIC FEET	PITOT READING IN. H ₂ O	GAS METER TEMP. °F	STACK TEMP. °F	ORIFICE SETTING IN. H ₂ O		GAUGE VACUUM IN. HG	GAS TEMPERATURES °F			
							ACTUAL	IDEAL		FILTER BOX	IMPING EXIT	PROBE	COND. EXIT
		0	474.735										
1	5-5	5	477.71	.58	72	240	1.3	1.312	3	256	60	N/A	N/A
2	5	10	480.74	.58	72	240	1.3	1.311	4	256	60		
3	4	15	483.95	.65	73	238	1.5	1.477	7	250	60		
4	3	20	487.66	.78	73	230	1.8	1.792	12	250	60		
5	2	25	491.09	.77	74	229	1.8	1.773	14	250	60		
6	2	30	494.633	.77	75	229	1.7	1.777	17	250	60		
7	4-5	35	497.96	.55	74	230	1.3	1.265	2	250	60		
8	5	40	501.00	.55	74	230	1.3	1.266	5	250	60		
9	4	45	504.28	.65	74	231	1.4	1.494	8	250	60		
10	3	50	507.86	.74	75	228	1.7	1.711	10	250	60		
11	2	55	511.59	.83	74	214	1.9	1.970	12	250	60		
12	2	60	515.225	.83	76	211	1.9	1.969	16	250	60		
13													
14													
15													
16													
17													
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23													
24													
25													

high iso because of tank check

Min. (θ) Vm ($\sqrt{\Delta P}$)² tm ts ΔH

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AIR FLOW RATE DETERMINATIONS

Plant Name Bureau of Mines Run No. 442
City/State Albany Oregon Date 7/22/93
Test Location Acc Melter Personnel Whe C
Barometric Pres. (Pbar) 29.8 In. Hg Static Pres. (Pg) -1.9 In. H₂O
Pitot/Orifice ID SP-24-5 Pitot Coef. (Cp) .99 Pres. Gauge Set ID 2107
Thermocouple ID TL5 Duct Length/Diameter 5.5" Width _____
--Specify inches (") or feet (')--

VELOCITY TRAVERSES		
Start-Finish Times:		
	<u>1655</u>	- <u>1700</u>
Point No.	ΔP In. H ₂ O	Temp. °F
5-1	0.72	238
2	0.74	246
3	0.70	245
4	0.63	250
5	0.61	257
6	0.46	252
4-1	0.71	214
2	0.85	230
3	0.83	237
4	0.70	247
5	0.62	246
6	0.64	241
Avg. *	0.68	242

ORSAT DATA					
Sampling Time	Analysis Time	CO ₂ (A) Reading	O ₂ (B) Reading	%O ₂ (B-A)	%CO+N ₂ (100-B)
Average					
Bag No. _____		Pump _____			

FYRITE DATA, % CO ₂					
Port 1 1140°F (730)h		Port 1 1120°F 1750			
MOISTURE DATA (WET BULB/DRY BULB)					
Port	Time	Dry Bulb °F	Wet Bulb °F	Diff.	% H ₂ O

MOISTURE DATA (STOICHIOMETRIC)		
Free Water in Fuel, %		
Water from Fuel Combustion, %		
Ambient Water, %		
Relative Humidity, %		
Ambient Temperature, °F		
Total %		

VOLUMETRIC AIR FLOW RATES	
Dry at Standard Conditions, Q _{sd} =	SCFM
Wet at Stack Conditions, Q _{aw} =	ACFM

ADDITIONAL DATA

* ΔP average is square of average square root. See page 2 for field flow rate calculations.

FIELD TEST LOG

Plant Name Bureau of Mines Job No. 11885

Sampling Location Arc Melter

Start	Stop	Comments/Problems*	Run No.
1102	1135	During the middle of the test noticed that Date <u>7/22/93</u> temp. Probe was 20° different than the w/Bulb temp.	MMT-N80-IV-1
1137	1148	to change Ports. 11 min. into Port & noticed Vac. was not going up during inspection of Filter noticed Crack; ended test and replaced Filter & Impingers. New run-	

Sampling Team Initials WKC (Team Leader) Shawn C Graham (Others)

Posttest Leak Rate Sample Appearance

Good Run (check)? YES NO (if NO, explain in "Comments/Problems")

Start	Stop	Comments/Problems*	Run No.
1220	1250	to change Ports and filters-	MMT-N80-IV-2 ^{1A}
1304	1334	End of Run.	Date <u>7/22/93</u>

Sampling Team Initials WKC (Team Leader) Shawn C Graham (Others)

Posttest Leak Rate ✓ Sample Appearance Powdery

Good Run (check)? YES NO (if NO, explain in "Comments/Problems")

Start	Stop	Comments/Problems*	Run No.
1545	1615	to change Ports and filters.	MMT-N80-IV-3
1625	1655		Date <u>7/22/93</u>

Sampling Team Initials WKC (Team Leader) Shawn C Graham (Others)

Posttest Leak Rate ✓ Sample Appearance Good

Good Run (check)? YES NO (if NO, explain in "Comments/Problems")

* USE REVERSE SIDE IF MORE SPACE REQUIRED.

Appendix F-5

Manual Sample Collection and Measurements 23 July 1993, M60 and N80-IV-MOD Melts

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AIR FLOW RATE DETERMINATIONS

Plant Name Bureau of Mines

Run No. MMF-M60-1

City/State ALBANY OREGON

Date 7/23/93

Test Location ARC METER

Personnel HoC

Barometric Pres. (Pbar) 29.9 In. Hg

Static Pres. (Pg) -1.7 In. H₂O

Pitot/Orifice ID SP-24-5 Pitot Coef. (Cp) .99

Pres. Gauge Set ID 2107

Thermocouple ID 5

Duct Length/Diameter 5.5" Width

--Specify inches (") or feet (')--

VELOCITY TRAVERSES		
Start-Finish Times:		
	<u>0925 - 0930</u>	
Point No.	AP In. H ₂ O	Temp. °F
5-1	0.56	145
2	0.77	210
3	0.84	240
4	0.82	255
5	0.79	255
6	0.83	270
4-1	0.50	98
2	0.55	126
3	0.64	137
4	0.65	146
5	0.67	150
6	0.66	156
Avg.*	0.77	29A

ORSAT DATA					
Sampling Time	Analysis Time	CO ₂ (A) Reading	O ₂ (B) Reading	%O ₂ (B-A)	%CO+N ₂ (100-B)
Average					
Bag No. _____		Pump _____			

FYRITE DATA, % CO ₂				
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MOISTURE DATA (WET BULB/DRY BULB)					
Port	Time	Dry Bulb °F	Wet Bulb °F	Diff.	% H ₂ O
73					
66					

MOISTURE DATA (STOICHIOMETRIC)		
Free Water in Fuel, %		
Water from Fuel Combustion, %		
Ambient Water, %		
Relative Humidity, %		
Ambient Temperature, °F		
Total %		

VOLUMETRIC AIR FLOW RATES	
Dry at Standard Conditions, Q _{sd} =	SCFM
Wet at Stack Conditions, Q _{aw} =	ACFM

ADDITIONAL DATA

* ΔP average is square of average square root. See page 2 for field flow rate calculations.

SAMPLING DATA - METHOD(S) M29

CLIENT E.G. & G. Idaho, Inc. RUN NO. MMT-M60-
 PLANT Dugan's of Mines JOB NO. 11885 DATE 7/23/93
 CITY/STATE Albany OREGON TIME START 1005
 SAMPLING LOC. ARC Melted TIME FINISH 1125
 BAROMETRIC PRESSURE, IN. HG 27.9 STATIC PRESSURE, IN. H₂O -1.7 OPERATOR Mike C
 LEAK CHECK, VACUUM IN. HG 15 15 20 ASST(S) _____
 LEAK RATE, CUBIC FEET/MIN. .008 .012 .020

EQUIPMENT CHECKS*		EQUIPMENT I.D. NUMBERS		LEAK CHECKS	
<u>N/A</u> PITOT, PRETEST	REAGENT BOX _____	METER BOX <u>2107</u>	Y <u>1.006</u>	B <u>534.120</u>	B _____
<u>N/A</u> PITOT, POSTTEST	PITOT <u>SP-24.5</u>	CP <u>99</u>	NOZ'L <u>EN</u>	DIA. <u>.215</u>	E <u>535.135</u>
<u>✓</u> NOZZLE, PRE/POST	TC READOUT <u>F-39</u>	TC PROBE <u>5</u>	UMBILICAL <u>J-2</u>		
<u>✓</u> TC <u>86</u> °F PRE	SAMPL'G BOX <u>50</u>	ORSAT PUMP <u>N/A</u>	TEDLAR BAG <u>N/A</u>	B <u>550.940</u>	B _____
<u>✓</u> TC <u>90</u> °F POST				E <u>551.140</u>	E _____
<u>N/A</u> ORSAT SYSTEM	NOMOGRAPH DATA (Hot box 15)				
FILTER/XAB	TARE WT.	DELTA H ₂	<u>1.861</u>	<u>1.861</u>	
<u>Q001</u>	<u>0.3165</u>	METER TEMP	<u>80</u>	<u>80</u>	
<u>Q092</u>	<u>0.3276</u>	EST. H ₂ O	<u>6</u>	<u>6</u>	
		C FACTOR	<u>1.368</u>	<u>1.368</u>	
		STACK TEMP	<u>214</u>	<u>500</u>	
		REF DELTA P	<u>.770</u>	<u>1.097</u>	
		K FACTOR	<u>2.389</u>	<u>1.677</u>	

* PITOT: VISUAL INSPECTION/LEAK CHECK; NOZZLE: VISUAL INSPECTION; TC: AMBIENT TEMPS.; ORSAT SYSTEM: LEAK CHECK

LINE	SAMPLE POINT	CLOCK TIME MINUTES	DRY GAS METER READING CUBIC FEET	PITOT READING IN. H ₂ O	GAS METER TEMP. °F	STACK TEMP. °F	ORIFICE SETTING IN. H ₂ O		GAUGE VACUUM IN. HG	GAS TEMPERATURES °F		
							ACTUAL	IDEAL		FILTER BOX	IMPING EXIT	PROBE
		0	515.730									
1	5-5	5	519.20	.79	67	304	1.5	1.622	2	250	38	N/A
2	5	10	522.40	.9	67	290	1.8	1.881	5	250	38	
3	4	15	526.30	1.1	67	330	2.1	2.181	10	250	38	
4	3	20	529.48	.8	68	403	1.4	1.954	12	250	38	
5	2	25	532.00	1.05	69	470	1.7	1.777	17	250	38	
6	2	30	534.120	1.2	69	520	.85	1.926	20	250	38	
7	4-5	35	538.65	1.1	71	460	1.8	1.887	5	250	38	
8	5	40	541.64	1.0	72	348	1.9	1.957	12	250	38	
9	4	45	544.50	1.0	73	413	1.5	1.814	15	250	38	
10	3	50	547.15	1.05	73	426	1.3	1.878	20	250	38	
11	2	55	549.21	1.0	74	453	.74	1.738	20	250	38	
12	2	60	550.940	.9	74	510	.43	1.473	20	250	38	
13												
14												
15												
16												
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22												
23												
24												
25												

see Reverse side for corrected ΔP calc's.

60 33.995 9812 70.3 4106 1.4267 17991
 Min. (θ) Vm (√ΔP)² tm ts ΔH

250 38

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	<u>ΔP measured</u> <u>@ Pt. 2-4</u>	<u>Correction</u> <u>Factor</u>	<u>Calculated</u> <u>ΔP</u>
5-5	0.79*	—	0.79
5-5	0.90	$\frac{0.9}{0.76} \cdot 0.79 =$	0.93
5-4	1.1	$0.82/0.76 = 1.08$	1.08 1.19
5-3	0.8	$0.84/0.76 = 1.11$	0.88
5-2	1.05	1.01	1.06
5-2	1.2	1.01	1.21
4-5	1.1	0.71	0.78
4-5	1.0	0.71	0.71 0.71
4-4	1.0	0.71 1	1.0
4-3	1.05	1.22	1.28
4-2	1.0	1.24	1.24
4-2	0.9	1.24	1.11

* From initial velocity traverse

AIR FLOW RATE DETERMINATIONS

Plant Name BUREAU OF MINES Run No. M2-M60-2
City/State ALBANY OREGON Date 7/23/93
Test Location ARC MELTER Personnel WHEC
Barometric Pres. (Pbar) 29.9 In. Hg Static Pres. (Pg) -1.7 In. H₂O
Pitot/Orifice ID SP-245 Pitot Coef. (Cp) .99 Pres. Gauge Set ID 2107
Thermocouple ID 5 Duct Length/Diameter 5.5" Width _____
--Specify inches (") or feet (')--

VELOCITY TRAVERSES Start-Finish Times:		
<u>1405 - 1410</u>		
Point No.	ΔP In. H₂O	Temp. °F
5-1	0.69	200
2	0.67	196
3	0.62	215
4	0.47	220
5	0.46	220
6	0.55	215
A-1	0.86	236
2	0.68	235
3	0.78	242
4	0.78	244
5	0.55	239
6	0.46	235
Avg. *	0.63	225

ORSAT DATA					
Sampling Time	Analysis Time	CO ₂ (A) Reading	O ₂ (B) Reading	%O ₂ (B-A)	%CO+N ₂ (100-B)
Average					
Bag No. _____		Pump _____			

FYRITE DATA, % CO ₂				
--------------------------------	--	--	--	--

Port 1 @ 1520 930°F (High temp TC)

MOISTURE DATA (WET BULB/DRY BULB)					
Port	Time	Dry Bulb °F	Wet Bulb °F	Diff.	% H ₂ O

P042 @ 1520 261°F (H Temp TC)

MOISTURE DATA (STOICHIOMETRIC)		
Free Water in Fuel, %		
Water from Fuel Combustion, %		
Ambient Water, %		
Relative Humidity, %		
Ambient Temperature, °F		
Total %		

VOLUMETRIC AIR FLOW RATES	
Dry at Standard Conditions, Q_{sd} =	SCFM
Wet at Stack Conditions, Q_{aw} =	ACFM

ADDITIONAL DATA

* ΔP average is square of average square root. See page 2 for field flow rate calculations.

SAMPLING DATA - METHOD(S) M 29

CLIENT EG & G Idaho Inc
 PLANT Bureau of Mines RUN NO. MMT-M68-2
 CITY/STATE Albany Oregon JOB NO. 11885 DATE 7/23/93
 SAMPLING LOC. Arc Meltzer TIME START 1412
 BAROMETRIC PRESSURE, IN. HG 29.9 STATIC PRESSURE, IN. H₂O -1.7 TIME FINISH 1522
 LEAK CHECK, VACUUM IN. HG 15 17 20 20 OPERATOR Whe C
 LEAK RATE, CUBIC FEET/MIN. .004 .010 0.030 0.020 ASST(S) _____

EQUIPMENT CHECKS*		EQUIPMENT I.D. NUMBERS		LEAK CHECKS	
<u>N/A</u> PITOT, PRETEST	REAGENT BOX	METER BOX <u>2107</u>	Y <u>1.006</u>	B <u>573.594</u>	B
<u>N/A</u> PITOT, POSTTEST	PITOT <u>SP24-5</u>	C _p <u>99</u>	WOZ'L <u>GN.</u>	DIA. <u>215</u>	E <u>573.842</u>
<u>/</u> NOZZLE, PRE/POST	TC READOUT <u>F39</u>	TC PROBE <u>5</u>	UMBILICAL <u>U-2</u>		
<u>/</u> TC <u>78</u> °F PRE	SAMPL'G BOX <u>29</u>	ORSAT PUMP <u>N/A</u>	TEDLAR BAG <u>N/A</u>	B <u>595.535</u>	B
<u>/</u> TC <u>78</u> °F POST				E <u>595.835</u>	E
<u>N/A</u> ORSAT SYSTEM	MONOGRAPH DATA				
	DELTA Hg	<u>1.861</u>			
FILTER/AD+ TARE WT.	METER TEMP	<u>80</u>			
<u>Q096</u> <u>.3176</u>	EST. XH ₂ O	<u>6</u>			
<u>Q097</u> <u>.3200</u>	C FACTOR	<u>1.362</u>			
	STACK TEMP	<u>214</u>			
	REF DELTA P	<u>.770</u>			
	K FACTOR	<u>2.389</u>			
FYRITES					
<u>N/A</u>					

* PITOT: VISUAL INSPECTION/LEAK CHECK; NOZZLE: VISUAL INSPECTION; TC: AMBIENT TEMPS.; ORSAT SYSTEM: LEAK CHECK

L I N E	SAMPLE POINT	CLOCK TIME MINUTES	DRY GAS METER READING CUBIC FEET	PITOT READING IN. H ₂ O	GAS METER TEMP. °F	STACK TEMP. °F	ORIFICE SETTING IN. H ₂ O		GAUGE VACUUM IN. HG	GAS TEMPERATURES °F			
							ACTUAL	IDEAL		FILTER BOX	IMPING EXIT	PROBE	COND. EXIT
		0	551.800										
1	5-5	5	555.34	.80	74	229	1.8	1.847	3	250	40	N/A	N/A
2	5	10	558.80	.75	75	212	1.7	1.715	5	250	40		
3	4	15	562.38	.80	76	255	1.7	1.783	7	250	40		
4	3	20	566.21	.90	77	245	2.0	2.038	12	250	40		
5	2	25	569.99	.9	78	276	2.0	1.955	14	250	40		
6	2	30	573.594	.95	78	272	2.0	2.015	17	250	40		
7	4-5	35	577.59	.95	79	238	2.1	2.179	4	250	40		
8	5	40	581.58	.90	80	255	2.0	2.019	8	250	40		
9	4	45	585.20	.9	80	247	2.0	2.042	11	250	50		
10	3	50	588.92	.85	81	255	1.9	1.911	14	250	50		
11	8	55	592.44	.80	81	255	1.8	1.799	17	250	50		
12	2	60	595.535	.80	82	259	1.8	1.793	19	250	50		
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													

60 43.487 0.86 78.4 250 1.9
 Min. (θ) Vm (√ΔP)² tm ts ΔH

1/3 inch
100

	$\Delta P @$ Pt. 2-4	Correction Factor	Calculated ΔP
5-5	0.80	1.57/1.78 0.71 0.71/0.55 = 1.27	0.57
5-5	0.75	0.71 2.0/1.00	0.53
5-4	0.80	0.60 0.78/0.77 = 1.01	0.48
5-3	0.90	0.79 1.00/1.00	0.71
5-2	0.90	1.00 0.86	0.77
5-2	0.95	1.00 0.86	0.82
4-5	0.95	1.00 0.71	0.67
4-5	0.90	1.00 0.71	0.64
4-4	0.90	1.0	0.90
4-3	0.85	1.0	0.85
4-2	0.80	0.87	0.70
4-2	0.80	0.87	0.70

MZ-M60-3

Run No.

Date 7/23/43

Personnel *niket*

Static Pres. (Pg) -1.7 In. H_2O

Pitot Coef. (C_p) .99

Duct Length/Diameter 5.5" Width

--Specify inches (") or feet (')--

ORSAT DATA					
Sampling Time	Analysis Time	CO ₂ (A) Reading	O ₂ (B) Reading	%O ₂ (B-A)	%CO+N ₂ (100-B)
Average					
Bag No. _____		Pump _____			

FYRITE DATA, % CO ₂				
--------------------------------	--	--	--	--

MOISTURE DATA (WET BULB/DRY BULB)					
Port	Time	Dry Bulb °F	Wet Bulb °F	Diff.	% H ₂ O

MOISTURE DATA (STOICHIOMETRIC)		
Free Water in Fuel, %		
Water from Fuel Combustion, %		
Ambient Water, %		
Relative Humidity, %		
Ambient Temperature, °F		
Total %		

VOLUMETRIC AIR FLOW RATES	
Dry at Standard Conditions, Q _{sd} =	SCFM
Wet at Stack Conditions, Q _{aw} =	ACFM

ADDITIONAL DATA

* ΔP average is square of average square root. See page 2 for field flow rate calculations.

FIELD TEST LOG

Plant Name Bureau of Mines Job No. 11885

Sampling Location ARC-Melter

Start	Stop	Comments/Problems*	Run No.
1005	1035	Temp. was up to 525°F. Change parts and Date 7/23/93	MMT-M60-1
1055		Filter (Was delayed because of High temp., leak check took long)	
		We Are determining our Flow Ap while running there fore do not to do Post Pilot travers.	
	1125	End of Run	

Sampling Team Initials Whe C (Team Leader) Shon C. Ponder (Others)

Posttest Leak Rate ✓ Sample Appearance Good

Good Run (check)? ✓ YES NO (if NO, explain in "Comments/Problems")

Start	Stop	Comments/Problems*	Run No.
1412	1428	At 1428 Iron scilom Alloyd was dropped into Date 7/23/92	MMT-M60-2
1428	1443	Process. Change Parts and Filters	
1452	1522	End of Run.	

Sampling Team Initials Whe C (Team Leader) Shon C. Ponder (Others)

Posttest Leak Rate ✓ Sample Appearance Good

Good Run (check)? ✓ YES NO (if NO, explain in "Comments/Problems")

Start	Stop	Comments/Problems*	Run No.

Sampling Team Initials (Team Leader) (Others)

Posttest Leak Rate Sample Appearance

Good Run (check)? YES NO (if NO, explain in "Comments/Problems")

* USE REVERSE SIDE IF MORE SPACE REQUIRED.

Appendix G

Elemental Composition of Slag, Fume Trap, Baghouse and Metal Product Samples

Chemical Composition of S60 Furnace Products

Element	Concentration, mg/kg											
	S60-S1*	S60-S2	S60-S3	S60-S4	S60-S5	S60-S6	S60-S7	S60-S8	S60-L1	S60-T1	S60-T2	S60-BH
Ag	<1	<1	2	2	1	5	8	7	6	14	15	22
Al	35300	36200	37900	37600	40700	39000	39300	39000	40100	36300	32200	6900
As	2	2	3	2	2	2	3	2	3	21	45	96
Ba	591	557	551	647	629	630	619	587	642	1231	1509	660
Ca	125000	106000	83000	71900	65300	64000	56500	56000	56500	72000	70800	25900
Cd	<1	<1	<1	<1	<1	<1	<1	<1	2	2	7	17
Ce	2227	2099	1873	2403	2239	2091	2264	2332	2338	3092	5291	462
Cl	100	180	210	190	180	170	170	160	140	20900	127000	361000
C	180	180	190	190	180	240	340	220	350	4670	2100	480
Cr	260	353	411	465	366	466	555	540	622	274	152	152
Cs	997	1300	1360	1420	1530	1570	1500	1520	1460	14600	27200	82200
Cu	53	92	299	365	255	476	587	498	507	575	964	3264
Fe	117000	113000	115000	121000	124000	120000	139000	119000	124000	70000	56600	46800
Hg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	3	11
K	6500	6600	6700	6700	7500	6800	6500	6300	6100	34700	49200	118000
Mg	31000	51400	74200	79500	58600	85700	97100	96700	99400	15300	13700	6700
Na	11800	11200	10100	8000	11700	8200	7100	6900	2300	28900	38400	94400
Ni	52	54	55	67	57	66	73	70	71	117	86	84
P	20	50	140	120	80	230	170	150	290	1840	1910	3760
Pb	5	13	25	25	20	41	49	51	47	108	500	1370
S	80	<10	10	<10	<10	<10	<10	<10	10	5720	5980	12500
Se	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	3	7
Si	238000	229000	221000	220000	233000	221000	213000	219000	215000	219000	184000	74600
Ti	10890	10386	10182	10911	11170	10784	10996	10461	10343	4721	3282	703
Zn	104	120	112	124	107	121	124	114	120	548	1358	2710
Zr	216	167	150	190	162	158	163	167	156	85	70	11

* S60-S1: S60 waste form, slag pot #1, etc.

S60-L1: S60 waste form, slag tapped into ladle from metal tap hole

S60-T1: fume solids collected from fume trap #1, etc.

S60-BH: fume solids collected from baghouse

Chemical Composition of S60-IV Furnace Products

Element	Concentration, mg/kg										
	S60-IV-S1*	S60-IV-S2	S60-IV-S3	S60-IV-S4	S60-IV-S5	S60-IV-S6	S60-IV-S7	S60-IV-L1	S60-IV-T1	S60-IV-T2	S60-IV-BH
Ag	<1	<1	<1	<1	<1	<1	<1	<1	3	6	13
Al	39100	39700	38700	39600	37000	37600	36800	37800	30200	25000	4400
As	3	3	3	2	2	3	2	2	28	48	51
Ba	613	656	607	679	644	655	667	713	1519	1630	602
Ca	69900	72200	72700	73400	73100	72700	74100	80200	76500	76800	25400
Cd	<1	<1	<1	<1	<1	<1	<1	<1	3	7	23
Ce	3232	3602	3419	4100	3625	3608	3865	3879	5667	4179	384
Cl	120	110	130	100	100	110	120	90	94000	154000	387000
C	170	150	230	310	340	1270	450	490	3130	2740	480
Cr	313	342	324	336	334	324	343	539	236	170	143
Cs	2270	2190	2370	2130	2040	2040	2130	2070	19900	36400	91600
Cu	56	53	47	49	42	39	42	58	162	240	1011
Fe	154000	135000	138000	133000	136000	155000	133000	123000	83500	66900	47000
Hg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	1	10
K	8300	8000	7800	7500	7500	7400	7800	8200	37800	58600	140000
Mg	26600	25100	22700	20800	21700	20500	20600	20000	18400	14800	4400
Na	15900	12300	13900	14500	13300	12300	14700	16300	30600	45100	122000
Ni	49	51	50	56	55	56	53	61	71	82	72
P	150	180	160	120	80	120	60	20	1760	2370	6030
Pb	14	15	15	12	13	11	11	8	130	329	1350
S	<10	<10	10	10	10	10	30	120	8910	8830	19800
Se	<1	<1	<1	<1	<1	<1	<1	<1	3	6	6
Si	226000	222000	218000	223000	217000	218000	222000	231000	189000	162000	63300
Ti	23610	27254	27814	28394	28961	29162	29641	24787	7014	3483	681
Zn	113	124	114	108	118	104	105	88	771	1112	3249
Zr	14248	16451	16993	16972	18070	18240	18346	15025	195	117	89

* S60-IV-S1: S60-IV waste form, slag pot #1, etc.
S60-IV-L1: S60-IV waste form, slag tapped into ladle from metal tap hole
S60-IV-T1: fume solids collected from fume trap #1, etc.
S60-IV-BH: fume solids collected from baghouse

Chemical Composition of N80 Furnace Products

Element	Concentration, mg/kg					
	N80-S1*	N80-S2	N80-S3	N80-T1	N80-T2	N80-BH
Ag	<1	<1	<1	2	10	42
Al	46400	48600	48800	42100	36800	6500
As	2	2	2	45	99	83
Ba	798	885	782	1011	1438	668
Ca	60700	59500	57300	50100	58500	21100
Cd	<1	<1	<1	6	16	21
Ce	2282	2125	1838	1994	3949	353
Cl	40	20	30	8700	57200	375000
C	740	350	570	7760	9240	860
Cr	220	231	202	179	306	154
Cs	460	380	310	1570	8950	80700
Cu	37	40	38	45	173	1225
Fe	92000	81400	132000	52700	54300	44900
Hg	<0.1	<0.1	<0.1	0.1	4	12
K	50900	49700	51000	48400	58800	120000
Mg	14700	14700	15100	13700	13100	5300
Na	58300	55200	56800	46100	53600	109000
Ni	73	75	58	392	1909	3530
P	370	250	340	1590	3030	5830
Pb	9	9	10	136	888	1310
S	290	260	260	8100	15700	21300
Se	<1	<1	<1	1	6	6
Si	234000	239000	236000	237000	186000	69500
Ti	9558	10189	8256	3430	2925	722
Zn	82	97	87	392	1909	3530
Zr	1308	1410	1127	89	112	61

* N80-S1: N80 waste form, slag pot #1, etc.

N80-T1: fume solids collected from fume trap #1, etc.

N80-BH: fume solids collected from baghouse

Chemical Composition of Modified N80 Furnace Products

Element	Concentration, mg/kg							
	N80-Mod-S4*	N80-Mod-S5	N80-Mod-S6	N80-Mod-S7	N80-Mod-L1	N80-Mod-T1	N80-Mod-T2	N80-Mod-BH
Ag	<1	<1	<1	<1	<1	2	4	12
Al	45500	41900	38100	36500	36200	22100	19900	10100
As	3	4	5	6	6	79	110	187
Ba	725	626	589	592	562	650	715	71
Ca	73000	87200	101000	110000	119000	211000	236000	114000
Cd	<1	<1	<1	<1	<1	5	9	24
Ce	1851	1834	1808	1760	1731	1925	2357	1675
Cl	30	30	30	30	30	25800	22100	108000
C	240	240	210	170	140	36100	48800	28900
Cr	198	243	245	313	355	564	157	320
Cs	430	400	480	490	520	3000	2890	16800
Cu	76	118	162	197	199	186	166	727
Fe	102000	122000	169000	173000	156000	49900	32600	30000
Hg	<0.1	<0.1	<0.1	<0.1	<0.1	1	3	7
K	44900	41500	34900	33200	32500	32700	32200	102000
Mg	14900	14100	14500	14500	16900	11500	12200	7400
Na	50700	50300	42700	41200	39200	32400	27600	85200
Ni	57	100	95	127	108	250	84	126
P	650	650	660	600	610	1650	1740	6740
Pb	9	10	10	9	9	98	331	755
S	280	260	220	170	120	9740	9460	38900
Se	<1	<1	<1	<1	<1	3	2	6
Si	225000	203000	193000	172000	181000	123000	97700	70000
Ti	8429	7868	8634	8607	7981	2042	1518	968
Zn	81	85	85	119	86	335	815	2906
Zr	1612	1587	2506	2530	2297	67	54	61

* N80-Mod-S1: N80 modified waste form, slag pot #4, etc.

N80-Mod-L1: N80 modified waste form, slag tapped into ladle from metal tap hole

N80-Mod-T1: fume solids collected from fume trap #1, etc.

N80-Mod-BH: fume solids collected from baghouse

Chemical Composition of N80-IV Furnace Products

Element	Concentration, mg/kg						
	N80-IV-S1*	N80-IV-S2	N80-IV-S3	N80-IV-S4	N80-IV-T1	N80-IV-T2	N80-IV-BH
Ag	<1	<1	<1	<1	2	4	9
Al	41000	40200	36800	36700	36100	30000	7600
As	20000	30000	20000	30000	58	110	200
Ba	808	732	926	782	1374	1801	792
Ca	57000	53600	50700	51800	51500	84700	39900
Cd	<1	<1	<1	<1	4	10	30
Ce	3913	3673	3308	3240	8180	8431	3658
Cl	12	11	9	7	3130	13700	56400
C	180	290	180	280	3940	12000	22900
Cr	308	261	303	213	144	158	359
Cs	140	93	65	45	360	1450	5420
Cu	65	51	43	49	46	89	311
Fe	85300	84300	81600	88500	36200	37000	26400
Hg	<0.1	<0.1	<0.1	<0.1	0.3	2	7
K	51400	49400	50700	48700	60600	64500	115000
Mg	15200	15400	14500	13800	11400	18900	4600
Na	62900	60300	58600	59700	50300	62400	134000
Ni	41	38	50	38	43	93	90
P	<1	4	2	12	2	16	8580
Pb	21	26	23	27	110	310	1510
S	330	260	170	120	4230	7110	31500
Se	<1	<1	<1	<1	3	4	16
Si	198000	203000	206000	203000	189000	163000	103000
Ti	42955	39355	52562	39813	4423	3024	1853
Zn	85	160	90	86	300	750	3042
Zr	23158	21269	24325	20892	100000	61239	10403

* N80-IV-S1: N80-IV waste form, slag pot #1, etc.
 N80-IV-T1: fume solids collected from fume trap #1, etc.
 N80-IV-BH: fume solids collected from baghouse

Chemical Composition of Modified N80-IV Furnace Products

Element	Concentration, mg/kg									
	N80-IV-Mod-S5*	N80-IV-Mod-S6	N80-IV-Mod-S7	N80-IV-Mod-S8	N80-IV-Mod-S9	N80-IV-Mod-S10	N80-IV-Mod-L1	N80-IV-Mod-T1	N80-IV-Mod-T2	N80-IV-Mod-BH
Ag	<1	<1	<1	<1	<1	<1	<1	2	5	7
Al	37000	34400	33700	30600	28500	31200	32500	28500	30100	7700
As	4	6	7	7	8	7	8	110	190	150
Ba	722	676	647	590	587	600	622	1179	1508	1452
Ca	69900	91300	105000	110000	126000	135000	133000	140000	140000	55500
Cd	<1	<1	<1	<1	<1	<1	<1	3	7	40
Ce	3255	2981	2840	2671	2520	2545	2881	8129	8501	8492
Cl	19	10	19	3	7	7	8	3100	8800	42400
C	270	510	280	260	340	210	330	8120	12400	16700
Cr	288	304	321	315	417	351	349	164	201	597
Cs	68	63	54	43	45	27	63	310	1000	3920
Cu	89	144	189	209	233	244	242	260	301	821
Fe	97300	120000	134000	145000	154000	191000	148000	42500	38000	43200
Hg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	1	5
K	45300	43700	41800	40700	38700	37800	38300	65100	67400	109000
Mg	13300	12500	11700	11000	10500	10700	10800	10000	10900	5900
Na	51700	50400	49400	50500	46700	45400	45200	52100	58600	129000
Ni	78	80	94	112	150	136	121	51	69	114
P	76	160	210	130	270	110	370	<1	2	550
Pb	24	23	20	21	21	21	21	94	260	1640
S	180	130	110	120	120	100	150	7980	9720	33300
Se	<1	<1	<1	<1	<1	<1	<1	3	5	17
Si	192000	176000	166000	158000	147000	148000	121000	146000	138000	120000
Ti	35368	32512	32385	30024	29726	31267	30400	2866	2466	2520
Zn	88	85	83	94	82	86	88	395	706	1810
Zr	20346	19448	18749	17620	17336	16601	19184	73060	42741	13380

* N80-IV-Mod-S1: N80-IV modified waste form, slag pot #5, etc.

N80-IV-Mod-L1: N80-IV modified waste form, slag tapped into ladle from metal tap hole

N80-IV-Mod-T1: fume solids collected from fume trap #1, etc.

N80-IV-Mod-BH: fume solids collected from baghouse

Chemical Composition of M60 Furnace Products

Element	Concentration, mg/kg				
	M60-RS*	M60-RM	M60-T1	M60-T2	M60-BH
Ag	<1	3	2	13	9
Al	74000	280	40300	31100	5100
As	2	88	15	69	47
Ba	969	30	1721	1980	527
Ca	81300	380	80600	87900	15800
Cd	<1	<1	5	16	18
Ce	3928	<50	7528	8119	1751
Cl	60	7	7640	14900	27300
C	260	4340	4480	6370	2650
Cr	13002	2569	601	1070	526
Cs	62	<3	740	1530	1610
Cu	330	18401	255	441	822
Fe	59000	889000	33100	32000	15100
Hg	<0.1	<0.1	0.2	4	8
K	20000	140	26500	36000	30100
Mg	14600	39	11400	9500	2000
Na	13200	220	17600	29200	27900
Ni	662	3053	400	401	189
P	15	2070	720	360	1760
Pb	1130	6820	22500	42300	1700
S	300	610	2020	5050	8940
Se	<1	<1	<1	4	8
Si	257000	17800	222000	153000	67200
Ti	6824	32	2367	1781	358
Zn	2654	1224	62297	107000	210000
Zr	3398	45	4556	12135	2272

* M60-RS: M60 waste form, slag collected from rod dipped into furnace

M60-RM: M60 metal sample, collected from rod dipped into furnace

M60-T1: fume solids collected from fume trap #1, etc.

M60-BH: fume solids collected from baghouse

Chemical Composition of Modified M60 Furnace Products

Element	Concentration, mg/kg										
	M60-Mod-S1*	M60-Mod-S2	M60-Mod-S3	M60-Mod-S4	M60-Mod-S5	M60-Mod-L1	M60-Mod-M1	M60-Mod-M2	M60-Mod-T1	M60-Mod-T2	M60-Mod-BH
Ag	<1	<1	<1	<1	<1	<1	<1	<1	2	7	12
Al	70100	59400	49000	43700	39400	40300	810	1100	33900	33500	5100
As	<1	1	4	5	5	5	74	99	47	96	120
Ba	1056	801	652	572	568	595	29	18	1185	1740	637
Ca	109000	139000	160000	157000	173000	180000	390	690	134000	128000	22300
Cd	<1	<1	<1	<1	<1	<1	<1	<1	2	9	35
Ce	4476	3864	3071	3150	2739	2270	<50	<10	7557	8989	965
Cl	10	15	15	10	19	21	4	<1	3480	8730	50900
C	630	230	230	1460	560	830	300	1490	5440	7240	4090
Cr	13595	8219	4146	1736	1958	2337	12031	17053	496	841	1429
Cs	62	60	51	37	140	160	<3	<3	370	930	4980
Cu	73	103	151	179	213	231	17134	17949	224	361	749
Fe	24300	75400	95800	121000	186000	118000	947000	902000	43000	38000	22100
Hg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	2.5	8.3
K	19600	22900	25300	29200	28300	28100	110	59	42300	48800	69400
Mg	14500	13000	11600	10800	10400	11000	31	170	10300	10300	2400
Na	13200	19800	25600	31400	29600	29600	190	210	33100	49000	52500
Ni	57	102	144	146	199	203	20360	17681	131	217	193
P	41	1	340	290	270	190	390	2100	10	3	2610
Pb	75	350	260	220	420	440	3110	2020	9290	21900	130000
S	250	270	190	160	300	330	720	500	2130	4770	20200
Se	<1	<1	<1	<1	<1	<1	4	3	1	3	11
Si	246000	210000	180000	166000	159000	158000	1200	25100	168000	154000	81300
Ti	7310	10451	14440	17600	16904	17859	248	178	2484	1979	609
Zn	509	1578	1101	730	2037	2138	808	979	22381	45948	159000
Zr	3803	5693	7898	10080	10756	11151	.43	33	46450	29289	3609

* M60-Mod-S1: M60 modified waste form, slag pot #1, etc.

M60-Mod-L1: M60 modified waste form, slag tapped into ladle from metal tap hole

M60-Mod-M1: M60 modified metal, sampled near surface of 1200 lb ingot

M60-Mod-M2: M60 modified metal, sample cut from center of 1200 lb ingot

M60-Mod-T1: fume solids collected from fume trap #1, etc.

M60-Mod-BH: fume solids collected from baghouse

Appendix H

Composition of Slag, Fume Trap, Baghouse and Metal Product Samples (Assuming all Oxides)

Chemical Composition of S-60 Furnace Products

Oxide	Calculated Oxides Concentration, ppm											
	S-60-S1	S-60-S2	S-60-S3	S-60-S4	S-60-S5	S-60-S6	S-60-S7	S-60-S8	S-60-L1	S-60-T1	S-60-T2	S-60-BH
Ag ₂ O	<1	<1	2	2	1	5	9	8	6	15	16	24
Al ₂ O ₃	66698	68398	71611	71044	76901	73689	74256	73689	75767	68587	60841	13037
As ₂ O	2	2	3	2	2	2	3	2	3	23	50	106
BaO	660	622	615	723	702	704	691	656	717	1375	1685	737
CaO	175000	148400	116200	100660	91420	89600	79100	78400	79100	100800	99120	36260
CdO	<1	<1	<1	<1	<1	<1	<1	<1	2	2	8	19
CeO ₂	2736	2579	2301	2952	2751	2569	2781	2865	2872	3799	6500	568
Cl	100	180	210	190	180	170	170	160	140	20900	127000	361000
CO ₂	660	660	697	697	660	880	1247	807	1283	17123	7700	1760
CrO ₂	420	570	664	751	591	753	897	872	1005	443	246	246
Cs ₂ O	1057	1378	1442	1505	1622	1664	1590	1611	1548	15478	28836	87144
CuO	66	115	374	456	319	595	734	623	634	719	1205	4080
Fe ₃ O ₄	161571	156047	158809	167095	171238	165714	191952	164333	171238	96667	78162	64628
HgO	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	3	12
K ₂ O	7833	7954	8074	8074	9038	8195	7833	7592	7351	41818	59292	142205
MgO	51667	85667	123667	132500	97667	142834	161834	161167	165667	25500	22833	11167
Na ₂ O	15904	15096	13613	10783	15770	11052	9570	9300	3100	38952	51757	127235
NiO	66	69	70	85	72	84	93	89	90	149	109	107
P ₂ O ₅	46	115	321	275	183	527	389	344	664	4214	4375	8612
PbO	5	14	27	27	22	44	53	55	51	116	539	1476
SO ₃	120	<10	15	<10	<10	<10	<10	<10	15	8580	8970	18750
SeO	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	4	8
SiO ₂	510001	490715	473572	471429	499286	473572	456429	469286	460715	469286	394286	159857
TiO ₂	18150	17310	16970	18185	18617	17973	18327	17435	17238	7868	5470	1172
ZnO	130	150	140	155	133	151	155	142	150	683	1692	3377
ZrO ₂	292	226	203	257	219	214	220	226	211	115	95	15
Sum	1013185	996266	989599	987847	987395	990991	1008332	989661	989568	923214	960793	1043602

Chemical Composition of S-60-IV Furnace Products

Oxide	Calculated Oxides Concentration, ppm										
	S-60-S1	S-60-S2	S-60-S3	S-60-S4	S-60-S5	S-60-S6	S-60-S7	S-60-L1	S-60-T1	S-60-T2	S-60-BH
Ag ₂ O	<1	<1	<1	<1	<1	<1	<1	<1	3	6	14
Al ₂ O ₃	73878	75012	73122	74823	69910	71044	69532	71422	57062	47237	8314
As ₂ O	3	3	3	2	2	3	2	2	31	53	56
BaO	685	733	678	758	719	731	745	796	1696	1820	672
CaO	97860	101080	101780	102760	102340	101780	103740	112280	107100	107520	35560
CdO	<1	<1	<1	<1	<1	<1	<1	<1	3	8	26
CeO ₂	3971	4425	4200	5037	4454	4433	4748	4766	6962	5134	472
Cl	120	110	130	100	100	110	120	90	94000	154000	387000
CO ₂	623	550	843	1137	1247	4657	1650	1797	11477	10047	1760
CrO ₂	506	552	523	543	540	523	554	871	381	275	231
Cs ₂ O	2407	2322	2513	2258	2163	2163	2258	2195	21097	38589	97110
CuO	70	66	59	61	53	49	53	73	203	300	1264
Fe ₃ O ₄	212666	186428	190571	183666	187809	214047	183666	169857	115309	92386	64905
HgO	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	1	11
K ₂ O	10003	9641	9400	9038	9038	8918	9400	9882	45554	70621	168718
MgO	44333	41833	37833	34667	36167	34167	34333	33333	30667	24667	7333
Na ₂ O	21430	16578	18735	19544	17926	16578	19813	21970	41244	60787	164435
NiO	62	65	64	71	70	71	67	78	90	104	92
P ₂ O ₅	344	412	366	275	183	275	137	46	4031	5428	13811
PbO	15	16	16	13	14	12	12	9	140	354	1454
SO ₃	<10	<10	15	15	15	15	45	180	13365	13245	29700
SeO	<1	<1	<1	<1	<1	<1	<1	<1	4	7	7
SiO ₂	484286	475715	467143	477858	465001	467143	475715	495001	405001	347143	135643
TiO ₂	39350	45423	46357	47323	48268	48603	49402	41312	11690	5805	1135
ZnO	141	155	142	135	147	130	131	110	961	1386	4049
ZrO ₂	19258	22236	22969	22940	24424	24654	24797	20309	264	158	120
Sum	1012011	983356	977463	983024	970590	1000106	980922	986375	968334	987082	1123892

Chemical Composition of N-80 Furnace Products

Oxide	Calculated Oxides Concentration, ppm					
	N-80-S1	N-80-S2	N-80-S3	N-80-T1	N-80-T2	N-80-BH
Ag ₂ O	<1	<1	<1	2	11	45
Al ₂ O ₃	87671	91828	92206	79546	69532	12281
As ₂ O	2	2	2	50	110	92
BaO	891	988	873	1129	1606	746
CaO	84980	83300	80220	70140	81900	29540
CdO	<1	<1	<1	7	18	24
CeO ₂	2804	2611	2258	2450	4852	434
Cl	40	20	30	8700	57200	375000
CO ₂	2713	1283	2090	28453	33880	3153
CrO ₂	355	373	326	289	494	249
Cs ₂ O	488	403	329	1664	9488	85554
CuO	46	50	48	56	216	1531
Fe ₃ O ₄	127047	112409	182285	72776	74986	62005
HgO	<0.1	<0.1	<0.1	0.1	4	13
K ₂ O	61341	59895	61462	58328	70862	144616
MgO	24500	24500	25167	22833	21833	8833
Na ₂ O	78578	74400	76557	62135	72244	146913
NiO	93	95	74	498	2427	4487
P ₂ O ₅	847	573	779	3642	6940	13353
PbO	10	10	11	147	957	1411
SO ₃	435	390	390	12150	23550	31950
SeO	<1	<1	<1	1	7	7
SiO ₂	501429	512144	505715	507858	398572	148929
TiO ₂	15930	16982	13760	5717	4875	1203
ZnO	102	121	108	488	2379	4399
ZrO ₂	1768	1906	1523	120	151	82
Sum	992072	984282	1046212	939181	939093	1076851

Chemical Composition of N-80M Furnace Products

Oxide	Calculated Oxides Concentration, ppm							
	N-80M-S4	N-80M-S5	N-80M-S6	N-80M-S7	N-80M-L1	N-80M-T1	N-80M-T2	N-80M-BH
Ag ₂ O	<1	<1	<1	<1	<1	2	4	13
Al ₂ O ₃	85970	79168	71988	68965	68398	41757	37600	19084
As ₂ O	3	4	6	7	7	87	122	207
BaO	810	699	658	661	628	726	799	79
CaO	102200	122080	141400	154000	166600	295400	330400	159600
CdO	<1	<1	<1	<1	<1	6	10	27
CeO ₂	2274	2253	2221	2162	2127	2365	2896	2058
Cl	30	30	30	30	30	25800	22100	108000
CO ₂	880	880	770	623	513	132367	178933	105967
CrO ₂	320	393	396	506	573	911	254	517
Cs ₂ O	456	424	509	519	551	3180	3064	17811
CuO	95	148	203	246	249	233	208	909
Fe ₃ O ₄	140857	168476	233381	238904	215428	68909	45019	41429
HgO	<0.1	<0.1	<0.1	<0.1	<0.1	1	3	7
K ₂ O	54110	50013	42059	40010	39167	39408	38805	122923
MgO	24833	23500	24167	24167	28167	19167	20333	12333
Na ₂ O	68335	67796	57552	55531	52835	43670	37200	114835
NiO	72	127	121	161	137	318	107	160
P ₂ O ₅	1489	1489	1512	1374	1397	3779	3985	15437
PbO	10	11	11	10	10	106	357	813
SO ₃	420	390	330	255	180	14610	14190	58350
SeO	<1	<1	<1	<1	<1	4	2	7
SiO ₂	482144	435001	413572	368572	387858	263572	209357	150000
TiO ₂	14048	13113	14390	14345	13302	3403	2530	1613
ZnO	101	106	106	148	107	417	1016	3621
ZrO ₂	2179	2145	3387	3420	3105	91	73	82
Sum	981636	968245	1008767	974617	981368	960287	949367	935883

Chemical Composition of N-80-IV Furnace Products

Oxide	Calculated Oxides Concentration, ppm						
	N-80-IV-S1	N-80-IV-S2	N-80-IV-S3	N-80-IV-S4	N-80-IV-T1	N-80-IV-T2	N-80-IV-BH
Ag ₂ O	<1	<1	<1	<1	2	4	10
Al ₂ O ₃	77468	75956	69532	69343	68210	56684	14360
As ₂ O	22133	33200	22133	33200	64	122	221
BaO	902	817	1034	873	1534	2011	884
CaO	79800	75040	70980	72520	72100	118580	55860
CdO	<1	<1	<1	<1	5	11	34
CeO ₂	4807	4513	4064	3981	10050	10358	4494
Cl	12	11	9	7	3130	13700	56400
CO ₂	660	1063	660	1027	14447	44000	83967
CrO ₂	498	422	489	344	233	255	580
Cs ₂ O	148	99	69	48	382	1537	5746
CuO	81	64	54	61	58	111	389
Fe ₃ O ₄	117795	116414	112686	122214	49990	51095	36457
HgO	<0.1	<0.1	<0.1	<0.1	0.3	2	7
K ₂ O	61944	59533	61100	58690	73031	77731	138590
MgO	25333	25667	24167	23000	19000	31500	7667
Na ₂ O	84779	81274	78983	80465	67796	84105	180609
NiO	52	48	64	48	55	118	114
P ₂ O ₅	<1	9	5	27	5	37	19651
PbO	23	28	25	29	119	334	1627
SO ₃	495	390	255	180	6345	10665	47250
SeO	<1	<1	<1	<1	4	5	19
SiO ₂	424286	435001	441429	435001	405001	349286	220715
TiO ₂	71592	65592	87604	66355	7372	5040	3088
ZnO	106	199	112	107	374	935	3791
ZrO ₂	31302	28748	32879	28239	135165	82774	14061
Sum	1004216	1004089	1008332	995760	934468	941000	896591

Chemical Composition of N-80M-IV Furnace Products

Oxide	Calculated Oxides Concentration, ppm									
	N-80M-IV-S5	N-80M-IV-S6	N-80M-IV-S7	N-80M-IV-S8	N-80M-IV-S9	N-80M-IV-S10	N-80M-IV-L1	N-80M-IV-T1	N-80M-IV-T2	N-80M-IV-BH
Ag ₂ O	<1	<1	<1	<1	<1	<1	<1	2	5	8
Al ₂ O ₃	69910	64997	63675	57817	53850	58951	61407	53850	56873	14549
As ₂ O	4	7	8	8	9	8	9	122	210	166
BaO	806	755	723	659	656	670	695	1317	1684	1622
CaO	97860	127820	147000	154000	176400	189000	186200	196000	196000	77700
CdO	<1	<1	<1	<1	<1	<1	<1	3	8	46
CeO ₂	3999	3662	3489	3282	3096	3127	3540	9987	10444	10433
Cl	19	10	19	3	7	7	8	3100	8800	42400
CO ₂	990	1870	1027	953	1247	770	1210	29773	45467	61233
CrO ₂	465	491	519	509	674	567	564	265	325	964
Cs ₂ O	72	67	57	46	48	29	67	329	1060	4156
CuO	111	180	236	261	291	305	303	325	376	1026
Fe ₃ O ₄	134366	165714	185047	200238	212666	263761	204381	58690	52476	59657
HgO	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	1	5
K ₂ O	54592	52664	50374	49049	46639	45554	46156	78454	81226	131359
MgO	22167	20833	19500	18333	17500	17833	18000	16667	18167	9833
Na ₂ O	69683	67931	66583	68065	62944	61191	60922	70222	78983	173870
NiO	99	102	119	142	191	173	154	65	88	145
P ₂ O ₅	174	366	481	298	618	252	847	<1	5	1260
PbO	26	25	22	23	23	23	23	101	280	1767
SO ₃	270	195	165	180	180	150	225	11970	14580	49950
SeO	<1	<1	<1	<1	<1	<1	<1	4	6	20
SiO ₂	411429	377143	355715	338572	315000	317143	259286	312858	295715	257143
TiO ₂	58947	54187	53975	50040	49543	52112	50667	4777	4110	4200
ZnO	110	106	103	117	102	107	110	492	880	2256
ZrO ₂	27501	26287	25342	23816	23432	22439	25930	98752	57771	18085
Sum	953601	965412	974179	966411	965115	1034172	920702	948123	925539	923853

Appendix I

**Elemental Analysis of Multiple
Metals Train Samples**

Analytical methods and corresponding elements.

Analytical Method	Letter Designation	Elements
AA	a	Al, Ca, Cs, Hg, K, Mg, Na
Wet Chemistry	c	Cl, Fe, P, Si
ICP	s	Ba, Ce, Cr, Cu, Ni, Ti, Zn, Zr
Zeeman Furnace	z	Ag, As, Cd, Pb, Se
LECO Gas	e	C, S

11/12/93 14:28 503 967 5958 7-I USBM ALBANY OR 0002

ANALYTICAL REQUEST : 5823P3 s ACCT#: 0809 NAME : B.O'CONNOR

5823P3

SAMPLE	DESCRIPTION	SAMPLE#	sAg	sAl	sAs	sB	sBa	sCa	sCd	sCe	sCl
5843P3/1	MMT-N80-1 FH (Front Half)	5823P3	<20 \$	39041\$	264 \$	+	1094 \$	49835\$	20 \$	3052 \$	+
5844P3/2	MMT-N80-1 BH (Back Half)	5824P3	<50 &	50 &	<200 &	500 &	<50 &	<500 &	<1 &	<50 &	+
5845P3/3	MMT-N80-2 FH	5825P3	<20 \$	11744\$	<200 \$	+	1066 \$	35079\$	11 \$	1972 \$	+
5846P3/4	MMT-N80-2 BH	5826P3	<50 &	75 &	<200 &	<200 &	<50 &	<500 &	<1 &	<50 &	+
5847P3/5	MMT-S60-IV-2 FH	5827P3	<20 \$	14193\$	<200 \$	+	598 \$	23.7 %	12 \$	2565 \$	+
5848P3/6	MMT-S60-IV-2 BH	5828P3	<50 &	900 &	<200 &	350 &	<50 &	5700 &	<1 &	<50 &	+
5849P3/7	MMT-N80-IV-2 FH	5829P3	283 \$	23069\$	<200 \$	+	1499 \$	32781\$	10 \$	7598 \$	+
5850P3/8	MMT-N80-IV-2 BH	5830P3	<50 &	100 &	<200 &	<200 &	<50 &	<500 &	<1 &	<50 &	+
5851P3/9	MMT-N80-IV-3 FH	5831P3	215 \$	22411\$	238. \$	+	2027 \$	13.1 %	18 \$	9258 \$	+
5852P3/10	MMT-N80-IV-3 BH	5832P3	<50 &	150 &	<200 &	<200 &	<50 &	<500 &	<1 &	<50 &	+
5853P3/11	MMT-M60-1 FH	5833P3	54 \$	15535\$	<200 \$	+	1333 \$	30022\$	13 \$	1701 \$	+
5854P3/12	MMT-M60-1 BH	5834P3	<50 &	150 &	<200 &	<200 &	<50 &	<500 &	<1 &	<50 &	+
5855P3/13	MMT-M60-2 FH	5835P3	221 \$	23396\$	<200 \$	+	1521 \$	10.2 %	13 \$	6779 \$	+
5856P3/14	MMT-M60-2 BH	5836P3	<50 &	50 &	<200 &	<200 &	<50 &	<500 &	<1 &	<50 &	+

*****	SAMPLE	DESCRIPTION	*****	SAMPLE#	sCr	sCs	sCu	sFe	sHg	sK	sMg	sMn	sNa
5843P3/1	MMT-N80-1	FH (Front Half)		5823P3	311 \$	+	197 \$	43369\$	<200 \$	77370\$	10189\$	383 \$	97425\$
5844P3/2	MMT-N80-1	BH (Back Half)		5824P3	<20 &	+	<100 &	400 &	<200 &	500 &	<500 &	<20 &	<500 &
5845P3/3	MMT-N80-2	FH		5825P3	118 \$	+	301 \$	54598\$	<200 \$	74342\$	6597 \$	613 \$	86929\$
5846P3/4	MMT-N80-2	BH		5826P3	<20 &	+	<100 &	<500 &	<200 &	<500 &	<500 &	<20 &	<500 &
5847P3/5	MMT-S60-IV-2	FH		5827P3	159 \$	+	388 \$	25225\$	<200 \$	66905\$	9361 \$	300 \$	45456\$
5848P3/6	MMT-S60-IV-2	BH		5828P3	<20 &	+	<100 &	<500 &	<200 &	<500 &	<500 &	<20 &	8700 &
5849P3/7	MMT-N80-IV-2	FH		5829P3	321 \$	+	128 \$	27430\$	<200 \$	85488\$	6937 \$	379 \$	94839\$
5850P3/8	MMT-N80-IV-2	BH		5830P3	<20 &	+	<100 &	<500 &	<200 &	<500 &	<500 &	<20 &	<500 &
5851P3/9	MMT-N80-IV-3	FH		5831P3	342 \$	+	640 \$	41192\$	<200 \$	80076\$	8005 \$	448 \$	71230\$
5852P3/10	MMT-N80-IV-3	BH		5832P3	<20 &	+	<100 &	2700 &	<200 &	<500 &	<500 &	<20 &	<500 &
5853P3/11	MMT-M60-1	FH		5833P3	463 \$	+	420 \$	12942\$	<200 \$	16550\$	4382 \$	402 \$	10392\$
5854P3/12	MMT-M60-1	BH		5834P3	<20 &	+	<100 &	<500 &	<200 &	<500 &	<500 &	<20 &	<500 &
5855P3/13	MMT-M60-2	FH		5835P3	1877 \$	+	784 \$	42556\$	<200 \$	80723\$	7604 \$	497 \$	72463\$
5856P3/14	MMT-M60-2	BH		5836P3	<20 &	+	<100 &	<500 &	<200 &	<500 &	<500 &	<20 &	<500 &

by This method.

REMARKS : + = unable to be determined in this matrix.

Duplicate 5836P3-Ag (<50), Al (50), As (<200), B (<200), Ca (<500), Cd (<1),
Cr (<20), Cu (<100), Fe (<500), Hg (<200), Mg (<500), Mn (<20), V (<20), Se (<200),
Ni (<50), Zn (<500).

ANALYST : SAM SUPERVISOR : [Signature] VALUES REPORTED AS : %, ug/L(&), mg/kg(\$)

AU:
HOI
DET
SAM
TOI

11/12/93 14:29 503 967 5958 C-1 USBM ALBANY OR

*****	SAMPLE	DESCRIPTION	*****	RECALL#	SAMPLE#	SN1	SP	sPb	sSe	sSi	sSr	sTi	sV	sZn
1	MMT-N80-1	FH (Front Half)		5823P3	5843P3	128	\$ 12587\$	535 \$	<200 \$	17.7 %	313 \$	3103 \$	290 \$	2534 \$
2	MMT-N80-1	BH (Back Half)		5824P3	5844P3	<50	& <100 &	<100 &	<200 &	<200 &	<20 &	<50 &	<20 &	<500 &
3	MMT-N80-2	FH		5825P3	5845P3	62	\$ 5126 \$	559 \$	<200 \$	98598\$	345 \$	1983 \$	283 \$	2323 \$
4	MMT-N80-2	BH		5826P3	5846P3	<50	& <100 &	<100 &	<200 &	<200 &	<20 &	<50 &	<20 &	<500 &
5	MMT-S60-IV-2	FH		5827P3	5847P3	48	\$ 3500 \$	254 \$	<200 \$	75131\$	351 \$	1188 \$	162 \$	975 \$
6	MMT-S60-IV-2	BH		5828P3	5848P3	<50	& <100 &	<100 &	<200 &	<200 &	<20 &	<50 &	<20 &	<500 &
7	MMT-N80-IV-2	FH		5829P3	5849P3	47	\$ 8260 \$	464 \$	<200 \$	14.5 %	411 \$	3450 \$	363 \$	1076 \$
8	MMT-N80-IV-2	BH		5830P3	5850P3	<50	& <100 &	<100 &	<200 &	<200 &	<20 &	<50 &	<20 &	<500 &
9	MMT-N80-IV-3	FH		5831P3	5851P3	82	\$ 4756 \$	612 \$	<200 \$	13.1 %	658 \$	3059 \$	229 \$	786 \$
10	MMT-N80-IV-3	BH		5832P3	5852P3	<50	& <100 &	<100 &	<200 &	<200 &	<20 &	<50 &	<20 &	<500 &
11	MMT-M60-1	FH		5833P3	5853P3	123	\$ 1542 \$	14.4 %	<200 \$	11.8 %	357 \$	921 \$	28 \$	22.0 %
12	MMT-M60-1	BH		5834P3	5854P3	<50	& <100 &	<100 &	<200 &	<200 &	<20 &	<50 &	<20 &	<500 &
13	MMT-M60-2	FH		5835P3	5855P3	161	\$ 5162 \$	5452 \$	<200 \$	12.6 %	570 \$	2808 \$	188 \$	14016\$
14	MMT-M60-2	BH		5836P3	5856P3	<50	& <100 &	<100 &	<200 &	<200 &	<20 &	<50 &	<20 &	<500 &

*****	SAMPLE	DESCRIPTION	*****	SAMPLE#	sZr	gC	gS							
1	MMT-N80-1	FH (Front Half)		5823P3	5843P3	84	\$							
2	MMT-N80-1	BH (Back Half)		5824P3	5844P3	<50	& XXXXX	XXXXX						
3	MMT-N80-2	FH		5825P3	5845P3	199	\$							
4	MMT-N80-2	BH		5826P3	5846P3	<50	& XXXXX	XXXXX						
5	MMT-S60-IV-2	FH		5827P3	5847P3	52	\$							
6	MMT-S60-IV-2	BH		5828P3	5848P3	<50	& XXXXX	XXXXX						
7	MMT-N80-IV-2	FH		5829P3	5849P3	46903\$								
8	MMT-N80-IV-2	BH		5830P3	5850P3	<50	& XXXXX	XXXXX						
9	MMT-N80-IV-3	FH		5831P3	5851P3	37046\$								
10	MMT-N80-IV-3	BH		5832P3	5852P3	<50	& XXXXX	XXXXX						
11	MMT-M60-1	FH		5833P3	5853P3	541	\$							
12	MMT-M60-1	BH		5834P3	5854P3	<50	& XXXXX	XXXXX						
13	MMT-M60-2	FH		5835P3	5855P3	38100\$								
14	MMT-M60-2	BH		5836P3	5856P3	<50	& XXXXX	XXXXX						

INCOMPLETE REPORT
COMPLETED REPORT TO FOLLOW

REMARKS :

ANALYST :

JAM

SUPERVISOR :

[Signature]

VALUES REPORTED AS : %, mg/kg(\$), ug/L(&)

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ACCT#: 0809

5837P3

ANALYTICAL REQUEST : 5837P3 B

NAME : B.O'CONNOR

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***** SAMPLE DESCRIPTION *****			SAMPLE#	sAg	sAl	sAs	sB	sBa	sCa	sCd	sCe	sCl
5857P3/15	MMT-S60-1	FH	5837P3	<20 \$	18147\$	<200 \$	+	1058 \$	43000\$	10 \$	3387 \$	+
5858P3/16	MMT-S60-1	BH	5838P3	<50 &	900 &	300 &	450 &	<50 &	3100 &	<1 &	<100 &	+
5859P3/17	MMT-S60-2	FH	5839P3	<20 \$	15143\$	<200 \$	+	971 \$	30762\$	11 \$	1439 \$	+
5860P3/18	MMT-S60-2	BH	5840P3	<50 &	850 &	<200 &	750 &	<50 &	7000 &	<1 &	<100 &	+
5861P3/19	MMT-S60-IV-1	FH	5841P3	<20 \$	13142\$	<200 \$	+	1250 \$	41791\$	12 \$	3412 \$	+
5862P3/20	MMT-S60-IV-1	BH	5842P3	<50 &	1450 &	<200 &	550 &	<50 &	6500 &	<1 &	<100 &	+

***** SAMPLE DESCRIPTION *****			SAMPLE#	sCr	sCs	sCu	sFe	sHg	sK	sMg	sMn	sNa
5857P3/15	MMT-S60-1	FH	5837P3	131 \$	+	627 \$	46128\$	<200 \$	70211\$	9324 \$	439 \$	67878\$
5858P3/16	MMT-S60-1	BH	5838P3	<20 &	+	<100 &	<500 &	<200 &	<500 &	<500 &	<20 &	5000 &
5859P3/17	MMT-S60-2	FH	5839P3	243 \$	+	4069 \$	45524\$	<200 \$	91214\$	8071 \$	589 \$	87786\$
5860P3/18	MMT-S60-2	BH	5840P3	<20 &	+	<100 &	<500 &	<200 &	650 &	<500 &	<20 &	10500&
5861P3/19	MMT-S60-IV-1	FH	5841P3	137 \$	+	321 \$	47768\$	<200 \$	62384\$	7503 \$	543 \$	81305\$
5862P3/20	MMT-S60-IV-1	BH	5842P3	51 &	+	<100 &	500 &	<200 &	825 &	<500 &	<20 &	11250&

REMARKS : + = unable to be determined by this method.

Duplicate 5837P3 - Al (18489), Ba (1116), Ca (44744), Cd (10), Ce (3417),
Cr (128), Cu (616), Fe (46580), K (70121), Mg (9265), Mn (438), Na (66854).

ANALYST : SAM SUPERVISOR : [Signature] VALUES REPORTED AS : mg/kg(\$), ug/L(&)

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11/12/93

NAME : B.O'CONNOR

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*****	SAMPLE	DESCRIPTION	*****	RECALL#	SAMPLE#	sNi	sP	sPb	sSe	sSi	sSr	sTi	sV	sZn
15	MMT-S60-1	FH (Front Half)		5837P3	5857P3	57 \$	3732 \$	396 \$	<200 \$	11.1 %	369 \$	2170 \$	238 \$	1760 \$
16	MMT-S60-1	BH (Back Half)		5838P3	5858P3	<50 &	<200 &	<100 &	<200 &	<200 &	<20 &	<50 &	<20 &	<500 &
17	MMT-S60-2	FH		5839P3	5859P3	70 \$	13704\$	1070 \$	<200 \$	10.5 %	335 \$	1527 \$	267 \$	2532 \$
18	MMT-S60-2	BH		5840P3	5860P3	<50 &	200 &	<100 &	<200 &	<200 &	<20 &	<50 &	<20 &	<500 &
19	MMT-S60-IV-1	FH		5841P3	5861P3	46 \$	3489 \$	536 \$	<200 \$	92747\$	399 \$	2394 \$	251 \$	1811 \$
20	MMT-S60-IV-1	BH		5842P3	5862P3	<50 &	<200 &	<100 &	<200 &	<200 &	21 &	<50 &	<20 &	<500 &

*****	SAMPLE	DESCRIPTION	*****	SAMPLE#	sZr	gC	gS							
15	MMT-S60-1	FH (Front Half)		5837P3	5857P3	47 \$								
16	MMT-S60-1	BH (Back Half)		5838P3	5858P3	<50 &	XXXXX	XXXXX						
17	MMT-S60-2	FH		5839P3	5859P3	43 \$								
18	MMT-S60-2	BH		5840P3	5860P3	<50 &	XXXXX	XXXXX						
19	MMT-S60-IV-1	FH		5841P3	5861P3	96 \$								
20	MMT-S60-IV-1	BH		5842P3	5862P3	<50 &	XXXXX	XXXXX						

USBM ALBANY OR

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INCOMPLETE REPORT
COMPLETED REPORT TO FOLLOW

REMARKS : Duplicate: 5837P3 - Ni (58), P (3490), Pb (402), Si (11.4%), Sr (380),
Ti (2254), V (234), Zn (1808), Zr (42)

ANALYST : JAM

SUPERVISOR :

VALUES REPORTED AS : %, mg/kg (\$), ug/L (&)

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Appendix J

Gravimetric Analysis of Multiple Metals Train Samples

ANALYTICAL REQUEST : 5357P3 c NAME : B.O'CONNOR

DATE(IN) : 08/05/93 (OUT)

***** SAMPLE DESCRIPTION *****									
1	MMT-N80-1	Q0824Q083	combine for grav.	5357P3	9.450G	9.4504			
2	MMT-N80-1	PH Acetone		5358P3	.4767G	0.4767			
3	MMT-N80-1	PH Nitric		5359P3	.5689G	0.5689			
4	MMT-S60-IV-2	Q0814Q080	combine for grav.	5360P3	7.152G	7.1526			
5	MMT-S60-IV-2	PH Acetone		5361P3	1.383G	1.3832			
6	MMT-S60-IV-2	PH Nitric		5362P3	1.080G	1.0800			
7	MMT-N80-2	Q084		5363P3	11.30G	11.3082			
8	MMT-N80-2	PH Acetone		5364P3	.3060G	0.3060			
9	MMT-N80-2	PH Nitric		5365P3	.2095G	0.2095			
10	MMT-N80-IV-2	Q0874Q089	combine for grav.	5366P3	11.20G	11.2042			
11	MMT-N80-IV-2	PH Acetone		5367P3	1.583G	1.5834			
12	MMT-N80-IV-2	PH Nitric		5368P3	1.043G	1.0435			

08/25/93 15:19 5303 967 5958

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G = gram

SUPERVISOR : ANALYST :

REMARKS :

ACCT#: 0809

5369P3

ANALYTICAL REQUEST : 5369P3 c

NAME : B.O'CONNOR

DATE(IN) : 08/05/93 (OUT) :

SAMPLE	DESCRIPTION	SAMPLE#	cSPREP								
1	MMT-N-80-IV-3 Q090&Q086 combine for grav.	5369P3	6.645G	6.6459							
2	MMT-N-80-IV-3 FH Acetone	5370P3	2.312G	2.3128							
3	MMT-N-80-IV-3 FH Nitric	5371P3	0.303G	0.3034							
4	MMT-M-60-1 Q092&Q091 combine for grav.	5372P3	9.834G	9.8341							
5	MMT-M-60-1 FH Acetone	5373P3	1.746G	1.7463							
6	MMT-M-60-1 FH Nitric	5374P3	0.247G	0.2471							
7	MMT-M-60-2 Q096&Q097 combine for grav.	5375P3	11.14G	11.1450							
8	MMT-M-60-2 FH Acetone	5376P3	1.912G	1.9126							
9	MMT-M-60-2 FH Nitric	5377P3	0.363G	0.3631							

REMARKS :

ANALYST :

SUPERVISOR :

VALUES REPORTED AS :

G = grams

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***** SAMPLE DESCRIPTION *****	SAMPLE#	cSPREP									
1 MMT-S60-1 Q074&Q076 combine for grav.	5378P3	16.33G	16.3338								
2 MMT-S60-1 FH Acetone	5379P3	1.681G	1.6817								
3 MMT-S60-1 FH Nitric	5380P3	1.074G	1.0743								
4 MMT-S60-2 Q075	5381P3	8.783G	8.7834								
5 MMT-S60-2 FH Acetone	5382P3	2.261G	2.2612								
6 MMT-S60-2 FH Nitric	5383P3	.9410G	0.9410								
7 MMT-S60-IV-1 Q079&Q078 combine for grav.	5384P3	12.53G	12.5337								
8 MMT-S60-IV-1 FH Acetone	5385P3	.5221G	0.5221								
9 MMT-S60-IV-1 FH Nitric	5386P3	.7809G	0.7809								

J-5

REMARKS :

ANALYST : *J. Baker* SUPERVISOR : *Jimmy* VALUES REPORTED AS : G = gram

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08/25/93 15:20 0503 807 3330

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