JOHN ASHCROFT
Governor

G. TRACY MEHAN III
Director

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY
P.O. Box 176
Jefferson City, MO 65102

Division of Energy
Division of Environmental Quality
Division of Geology and Land Survey
Division of Management Services
Division of Parks, Recreation,
and Historic Preservation

February 21, 1992

Mr. David M. Fraley
City Utilities of Springfield
301 East Central, Box 551
Springfield, MO 65801

Dear Mr. Fraley:

My staff has completed a review of emission tests completed in 1991 on both your James River and Southwest Power Stations.

1) James River; GE Model PG711EA Gas Turbine

Emission testing by Cubix Corporation of Austin, TX, on July 16-18, 1991, verified compliance of the turbine, on those dates, with both New Source Performance Standards (NSPS), Subpart GG, for stationary gas turbines, as well as with MDNR Permit #0391-002.

Subpart GG of the NSPS limits the emission of nitrogen oxides, sulfur dioxide, and sulfur content of any fuel. The MDNR Permit, written in accordance with Prevention of Significant Deterioration (PSD) rules, sets a more restrictive emission limit for nitrogen oxides which is that determined by a Best Available Control Technology (BACT) analysis.

Testing conducted under the required condition of four generating loads for both natural gas and distillate oil fuels found that the state and federal limits were met for: (1) nitrogen oxides from natural gas combustion, being less than the 42 ppmv @15% O_2 limit (ranging from 37.1 to 41.1 ppmv); and from distillate oil combustion, being less than the 79.5 ppmv @ 15% O_2 limit (ranging 71.8 to 76.4 ppmv)[water injection rate and water/fuel ratio for each load that demonstrated compliance are given in summary of test results]; (2) sulfur dioxide emission, being less than 150 ppmv @ 15% O_2 on a dry basis, at 65 ppmv while burning the distillate oil; (3) fuel sulfur content of 0.8% by weight, with the distillate oil having a sulfur content of 0.34% by weight.

As agreed to in previous correspondence, the particulate matter emission testing which had been required on this turbine will be performed, instead, on the identical Unit #2 when it comes on line this year.

2) Southwest; Two United Technologies TP4 Twin Pac Model FT4C-1(DF) combustion turbine units are not to exceed de minimus levels for any pollutant except nitrogen oxides, carbon monoxide, and volatile organic compounds. Limits set for this facility in MDNR permit # 031-001 are as follows:

Nitrogen oxides;

42 ppm @15% O_2 when burning natural gas
77 ppm @15% O_2 (@ 306 ppm fuelbound N) when burning No. 2 fuel oil

Emission testing by Total Source Analysis, Inc., of Wellington, OH, on August 6-15, 1991, found the following emissions:

36.88 ppm burning natural gas
60.6 ppm burning No. 2 fuel oil.

Based on these test results, the permitted limits for NO_x were not exceeded.

Particulate;

No more than 25 tons per year

During full load testing TSA found the following particulate emissions. Equivalent annual emissions are also noted:

Unit 1 burning gas;	4.19 lb/hr @ 4500 hrs/yr	= 9.43 T/yr
Unit 1 burning oil;	34.57 lb/hr @ 160 hr/yr	= 2.77 T/yr
Unit 2 burning gas;	3.89 lb/hr @ 4500 hr/yr	= 8.75 T/yr
Unit 2 burning gas;	34.70 lb/hr @ 160 hr/yr	= 2.78 T/yr
TOTAL		23.73 T/yr

Based on these test results, the de minimus level for particulate emissions (425 T/yr) were not exceeded.

Results of particulate testing were adjusted by TSA to remove iron particles found on the filters and assumed to have come from plant duct-work rather than the turbine exhaust. APCP will accept these adjusted results, but in the future, such adjustments should be discussed with APCP before results are submitted. Such deviations from standard reference methods will generally not be approved, and test results so adjusted will not be accepted.

Sulfur dioxide;

No more than 40 tons per year

Emissions were determined from fuel usage and fuel sulfur content. During full load testing TSA found the following SO_2 emissions. Equivalent annual emissions are also noted:

Unit 1 burning gas;	.3926 lb/hr @ 4500 hrs/yr =	.8834	T/yr
Unit 1 burning oil;	264.13 lb/hr @ 160 hr/yr =	21.13	T/yr
Unit 2 burning gas;	.2364 lb/hr @ 4500 hr/yr =	.5319	T/yr
Unit 2 burning oil;	246.68 lb/hr @ 160 hr/yr =	19.73	T/yr
TOTAL		42.28	T/yr

Based on these test results, the de minimus level for SO_2 (40 T/yr) was exceeded.

The two United Technologies TP4 Twin Pac Model FT4C-1(DF) combustion turbine units were found to comply with permit conditions for NO_x and particulates at the time of the test. Emissions for SO_2 exceeded de minimus levels and were not in compliance with permit conditions. Aggregate operating hours for both units when burning No 2 fuel oil are therefore restricted to 300 per year. Permit number 031-001 will be corrected to reflect this new limitation on total annual hours burning fuel oil.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Steven Feeler

Steven Feeler
Compliance Unit Chief

TOTAL SOURCE ANALYSIS, INC.
ENVIRONMENTAL TESTING CONSULTANTS
Services Worldwide

January 29, 1992

Mr. Peter Yronwode
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102

Dear Peter:

In response to your request for clarification of the SO_2 emissions calculations for City Utilities of Springfield, the following is a sample calculation for Unit 1 for both gas and oil fuels:

SO_2 Emissions Calculations

Gas as Fuel

Analysis Turbine #1 = 6 PPMW

Full Load Test 9:30 - 17:45 8-12-91

Avg. gas consumption in lb/hr for full load test
32,717 lb gas/hr

$$\frac{6 \text{ lb S}}{10^6 \text{ lb gas}} \times \frac{2 \text{ lb SO2}}{\text{lb S}} \times 32{,}717 \text{ lb gas/hr} = .3926 \text{ lb } SO_2/\text{hr}$$

139 W. Herrick • P.O. Box 257 • Wellington, OH 44090 • (216) 647-4444 • FAX (216) 647-5288
41444 Hwy. 19 N. • P.O. Box 2807 • Umatilla, FL 32784 • (904) 669-3113 • FAX (904) 669-1965
599 James Rollo Ct. • P.O. Box 272 • Grain Valley, MO 64029 • (816) 224-6905 • FAX (816) 443-2515

Oil as Fuel

From Analysis .37% Sw

Full Load Test 8:00 - 15:30 8-13-91

Avg. oil consumption for full load test
35,693 lb/hr

$$\frac{.0037 \text{ lb S}}{\text{lb oil}} \times \frac{2 \text{ lb SO2}}{\text{lb S}} \times 35{,}693 \text{ lb oil/hr} = 264.13 \text{ lb/hr}$$

SO_2 emissions for Unit 2 were calculated as shown above. The emissions were .236 lb/hr for gas and 246.68 lb/hr for oil.

If you have any questions, please call.

Sincerely,

Carl Vineyard, P.E.
Total Source Analysis, Inc.

CC: Dave Fraley
City Utilities of Springfield

CV/lh

TSA
TOTAL SOURCE ANALYSIS, INC.

CITY UTILITIES of SPRINGFIELD

November 15, 1991

Mr. Mike Tharpe
Air Pollution Control Program
Missouri Department of Natural Resources
P. O. Box 176
Jefferson City, MO 65102

RE: Southwest Power Station Turbine Compliance Test
APCP Permit Number 0391-001

Dear Mr. Tharpe:

Enclosed are two copies of the final report on emissions testing conducted at the referenced facility in August of this year. We believe you will find that the report verifies that the two combustion turbines at our Southwest Power Station comply with the emissions limits set forth in the PSD permit. This testing was observed by Mr. Doug Elley of your staff. Results can be summarized as follows:

NO_x

All four turbine engines exhibited compliance with the 42 ppm NO_x limit while burning natural gas at generating loads ranging from 50 to 100 percent of peak output. Compliance was also demonstrated for distillate oil firing on all four engines. The NO_x limit established during this testing was equal to the 65 ppm base limit contained in the permit plus a 12 ppm allowance for fuel bound nitrogen. These tests established the water to fuel ratios required to maintain NO_x compliance across the generating range tested. These ratios will be programmed into a control curve, which will be used in the future for continuous compliance documentation.

Sulfur Dioxide

SO_2 compliance was documented on the basis of fuel analysis. Both gaseous and liquid fuels were found to have a sulfur content below the 0.8% limit established in Sub-part GG. The distillate concentration of 0.37% sulfur resulted in a mass emission rate of 119 to 138 pounds SO_2 per hour under full load conditions. This fuel could be burned for approximately 300 hours per turbine per year to stay under the 40 ton *de minimis* level as stipulated in the permit. Of course, these hours could increase or decrease, depending on the sulfur content of fuel oil procured in the future.

301 East Central ● P.O. Box 551 ● Springfield, Missouri 65801 ● (417) 831-8311

Particulates

Anomalies encountered during particulate testing account for the time lag in submitting this final report. As observed by Mr. Elley, the particulate filters collected during the Method 5 runs on natural gas were exceptionally clean. However, these filters exhibited an inordinate weight gain when analyzed in the laboratory. Closer inspection revealed that the weight gain was due to small ferritic particles which appear to have come from the sampling port, rather than the combustion process. When the results were adjusted to account for these rust flakes, all four engines evidenced mass emission rates on the order of five pounds particulate matter per million cubic feet natural gas combusted, a figure which is in reasonable agreement with AP-42 emission factors. At this level, the turbines could easily combust gas for the 9,000 total hours stipulated in the permit without exceeding the 25 TPY *de minimis* level for particulates. As expected, particulate emissions during distillate oil firing were considerably higher, yet would not approach the 25 TPY *de minimis* limit until over 1,400 gallons of fuel oil were combusted per year. In other words, particulate matter emissions are less important than SO_2 emissions in restricting the use of distillate fuel in emergency situations.

If you have questions or comments regarding the contents of this report, please do not hesitate me by phone at (417) 831-8778.

Respectfully,

Dave Fraley

David M. Fraley, Ph.D.
Director - Environmental Compliance

DMF:cab

c: D. Galloway
A. Roesener
D. Hicks

COMBUSTION TURBINE EMISSIONS TEST REPORT FOR CITY UTILITIES OF SPRINGFIELD, MO.

Twin-Pac Combustion Turbines

Nos. 1 and 2

Southwest Power Station

August 6/15, 1991

91-126-OH

TOTAL SOURCE ANALYSIS, INC.
ENVIRONMENTAL TESTING CONSULTANTS
Services Worldwide

I, Frank Whitt, hereby certify that the two Twin-Pac emissions tests conducted at the Southwest Power Station for City Utilities of Springfield, Missouri are in accordance with procedures established by the USEPA. This report accurately and faithfully presents the data obtained from the tests and the results determined from analysis of this data.

Frank Whitt
Crew Chief

I, Bruce Woods, Jr., hereby attest that all work on this project was completed under my supervision and this report accurately presents the emissions from the unit.

Bruce Woods, Jr.
Chief Test Engineer

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INTRODUCTION

INTRODUCTION

This report presents the results of the Twin-Pac combustion turbine emissions tests performed on Units 1 and 2, Southwest Power Station for the City Utilities of Springfield, Missouri.

The purpose of the tests was to determine the emissions of the combustion turbines for compliance. Each of the two turbines has a North and South stack. NO_x (Nitrogen Dioxide) EPA Method 20, PM (Particulate) EPA Method 5 sampling was performed on each stack while burning gas and then oil as fuel. The results of the tests can be found in Sections II and III of this report.

The emissions testing was performed by Total Source Analysis, Inc., whose main office is located at 139 W. Herrick, Wellington, Ohio 44090.

The test dates for Unit #1 was August 12/15, 1991 and Unit #2 was August 6/9, 1991. The testing was performed in accordance with EPA reference methods as published in the July 1, 1990 Federal Register, - "Standards of Performance for New Stationary Sources" and subsequent revisions.

The testing equipment, sampling procedures and analytical procedures are described in Section IV of this report. The raw field data, lab analysis reports and equations used in determining final results are presented in the Appendix.

DISCUSSION OF PARTICULATE TEST RESULTS

The following procedures were followed in the analysis of the particulate samples.

1. The samples were prepared and weighed in strict accordance with EPA Method 5 procedures.

2. Visual inspection of the filters and acetone wash indicated a metallic, rust like material that would not normally be the result of natural gas combustion.

3. The metallic material was removed from the filters and acetone wash with a magnet, rinsed with acetone and the samples reweighed.

4. Results of both weighings, initial and after, the metallic material was removed were included in the test report.

It is our opinion that the weights of the samples after the removal of the metallic material are the most accurate reflection of the actual particulate emissions.

The two Summary of Test Results following present the results with and without the metallic flakes.

SUMMARY OF TEST RESULTS

The following table presents the results of the particulate full load gas and oil fuel tests and the NO_x PPM Emissions corrected to 15% O_2 at four load levels as shown below, while burning gas and oil as fuel.

UNIT/STACK	FUEL	POLLUTANT	LB/HR	LOAD	DATE	ALLOWABLE
#2 North	Gas	PM	7.31	Full	8-6-91	2.78 lb/hr
#2 South	Gas	PM	3.92	Full	8-6-91	2.78 lb/hr
TOTAL			11.23			5.56
#2 North	Oil	PM	18.06	Full	8-7-91	21.0 lb/hr
#2 South	Oil	PM	16.64	Full	8-7-91	21.0 lb/hr
TOTAL			34.70			42.0
#1 North	Gas	PM	10.35	Full	8-12-91	2.78 lb/hr
#1 South	Gas	PM	3.96	Full	8-12-91	2.78 lb/hr
TOTAL			14.31			5.56
#1 North	Oil	PM	14.64	Full	8-13-91	21.0 lb/hr
#1 South	Oil	PM	19.93	Full	8-13-91	21.0 lb/hr
TOTAL			34.57			42.0

Do to the nitrogen content of the fuel 65 ppm NOx increases to 77 ppm allowable.

SO_2 emissions calculated from fuel analysis is .3926 for gas for Unit 1 and .2364 for gas on Unit 2.

SO_2 emissions calculated from fuel analysis is 264.13 for oil for Unit 1 and 246.68 for oil on Unit 2.

SUMMARY OF TEST RESULTS

The following table presents the results of the particulate full load gas and oil fuel tests and the NO_x PPM Emissions corrected to 15% O_2 at four load levels as shown below, while burning gas and oil as fuel.

Results for Gas Turbine after metal flakes were removed.

UNIT/STACK	FUEL	POLLUTANT	LB/HR	LOAD	DATE	ALLOWABLE
#2 North	Gas	PM	2.32	Full	8-6-91	2.78 lb/hr
#2 South	Gas	PM	1.57	Full	8-6-91	2.78 lb/hr
TOTAL			3.89			5.56
#2 North	Oil	PM	18.06	Full	8-7-91	21.0 lb/hr
#2 South	Oil	PM	16.64	Full	8-7-91	21.0 lb/hr
TOTAL			34.70			42.0
#1 North	Gas	PM	2.45	Full	8-12-91	2.78 lb/hr
#1 South	Gas	PM	1.74	Full	8-12-91	2.78 lb/hr
TOTAL			4.19			5.56
#1 North	Oil	PM	14.64	Full	8-13-91	21.0 lb/hr
#1 South	Oil	PM	19.93	Full	8-13-91	21.0 lb/hr
TOTAL			34.57			42.0

Due to the nitrogen content of the fuel 65 ppm NOx increases to 77 ppm allowable.

SO_2 emissions calculated from fuel analysis is .3926 for gas for Unit 1 and .2364 for gas on Unit 2.

SO_2 emissions calculated from fuel analysis is 264.13 for oil for Unit 1 and 246.68 for oil on Unit 2.

UNIT/STACK	FUEL	POLLUTANT	PPM	LOAD	DATE	ALLOWABLE
#2 North	Gas	NO_x	39.5	50%	8-8-91	42 PPM
#2 South	Gas	NO_x	37.7	50%	8-8-91	42 PPM
AVG.			38.6			
#2 North	Gas	NO_x	36.0	65%	8-8-91	42 PPM
#2 South	Gas	NO_x	39.7	65%	8-8-91	42 PPM
AVG.			37.9			
#2 North	Gas	NO_x	36.5	80%	8-8-91	42 PPM
#2 South	Gas	NO_x	38.3	80%	8-8-91	42 PPM
AVG.			37.4			
#2 North	Gas	NO_x	31.9	100%	8-8-91	42 PPM
#2 South	Gas	NO_x	33.4	100%	8-8-91	42 PPM
AVG.			32.7			

UNIT/STACK	FUEL	POLLUTANT	PPM	LOAD	DATE	ALLOWABLE
#2 North	Oil	NO_x	51.6	50%	8-9-91	77 PPM
#2 South	Oil	NO_x	64.0	50%	8-9-91	77 PPM
AVG.			57.8			
#2 North	Oil	NO_x	59.5	65%	8-9-91	77 PPM
#2 South	Oil	NO_x	57.7	65%	8-9-91	77 PPM
AVG.			58.6			
#2 North	Oil	NO_x	61.1	80%	8-9-91	77 PPM
#2 South	Oil	NO_x	59.5	80%	8-9-91	77 PPM
AVG.			60.3			
#2 North	Oil	NO_x	68.0	100%	8-9-91	77 PPM
#2 South	Oil	NO_x	63.4	100%	8-9-91	77 PPM
AVG.			65.7			

----------average fuel consumption----------

16990.38	16036.49	18984.44	17410.81	15369.02	14073.34	16932.08	16133.98
Unit 1B gas	Unit 1A gas	Unit 1A oil	Unit 1B oil	Unit 2A gas	Unit 2B gas	Unit 2A oil	Unit 2B oil
8/12/91	8/12/91	8/13/91	8/13/91	8/6/91	8/6/91	8/7/91	8/7/91

Springfield City Utilities, Southwest Power Station gas turbines
Fuel use totals for SO2 determination from "GAS TURBINE OUTPUT DATA"

	Unit 1 on gas	Unit 1 on oil	Unit 2 on gas*	Unit 2 on oil
SO2 lb/hr	0.396323	269.3249	0.235539	244.6888

SO2 annual emissions @4500 hours on gas, and 160 hours on oil (tons)
per unit Unit 1: 22.43772 Unit 2: 20.10507
Total annual SO2 emissions at maximum permitted operating hours (tons)
42.54278
SO2 annual emissions @ 150 hours on oil (tons)

Unit 1		Unit 2		TOTAL
21.09109	+	18.88162	=	39.97271

* Note, gas analyzed on 8/14 was 6ppm sulfur, on 8/8 it was 4ppm sulfur

UNIT/STACK	FUEL	POLLUTANT	PPM	LOAD	DATE	ALLOWABLE
#1 North	Gas	NO_x	40.5	50%	8-14-91	42 PPM
#1 South	Gas	NO_x	41.2	50%	8-14-91	42 PPM
AVG.			40.9			
#1 North	Gas	NO_x	40.0	65%	8-14-91	42 PPM
#1 South	Gas	NO_x	38.6	65%	8-14-91	42 PPM
AVG.			39.3			
#1 North	Gas	NO_x	39.6	80%	8-14-91	42 PPM
#1 South	Gas	NO_x	37.4	80%	8-14-91	42 PPM
AVG.			38.5			
#1 North	Gas	NO_x	38.4	100%	8-14-91	42 PPM
#1 South	Gas	NO_x	36.4	100%	8-14-91	42 PPM
AVG.			37.4			

UNIT/STACK	FUEL	POLLUTANT	PPM	LOAD	DATE	ALLOWABLE
#1 North	Oil	NO_x	61.4	50%	8-15-91	77 PPM
#1 South	Oil	NO_x	68.6	50%	8-15-91	77 PPM
AVG.			65.0			
#1 North	Oil	NO_x	66.8	65%	8-15-91	77 PPM
#1 South	Oil	NO_x	69.6	65%	8-15-91	77 PPM
AVG.			68.2			
#1 North	Oil	NO_x	65.5	80%	8-15-91	77 PPM
#1 South	Oil	NO_x	64.8	80%	8-15-91	77 PPM
AVG.			65.2			
#1 North	Oil	NO_x	69.6	100%	8-15-91	77 PPM
#1 South	Oil	NO_x	66.1	100%	8-15-91	77 PPM
AVG.			67.9			

Violation? NO

STACK	UNIT	FUEL	POLLUTANT	LB/HR	LOAD	DATE	ALLOWABLE
A	1	GAS	SO2	.1913	FULL	8-12-91	.2 LB/HR
B	1	GAS	SO2	.2013	FULL	8-12-91	.2 LB/HR
A	1	OIL	SO2	137.65	FULL	8-13-91	237 LB/HR
B	1	OIL	SO2	126.48	FULL	8-13-91	237 LB/HR
				264.13			
A	2	GAS	SO2	.1232	FULL	8-6-91	.2 LB/HR
B	2	GAS	SO2	.1132	FULL	8-6-91	.2 LB/HR
A	2	OIL	SO2	127.59	FULL	8-7-91	237 LB/HR
B	2	OIL	SO2	119.09	FULL	8-7-91	237 LB/HR
				246.68			

A Gas .1845 } .35343
B Gas .16893

PLANT NAME:Springfield Southwest unit 1 TEST UNIT:North stack, OIL

LOCATION: Springfield, MO DATE: 8/13/91 RUN NO: 1 (04)

USE FOR ANY TEST WITH A SQUARE OR RECTANGULAR STACK

NUMBER OF POINTS	24	PERCENT OXYGEN	16.70
TIME, MINUTE/POINT	5.00	PERCENT CARBON DIOXIDE	2.70
LEAK RATE, FT3/MIN	0.010	PERCENT CARBON MONOXIDE	0.00
BAR PRESS, INCH Hg	29.92	Cp (PITOT COEFFICIENT)	0.790
STATIC PRESS (in H2O)	4.00	NOZZLE DIAMETER, INCHES	0.200
STACK EXIT LENGTH IN	52.00	INITIAL METER VOL, FT3	842.222
STACK EXIT WIDTH IN	156.00	FINAL METER VOL, FT3	948.671
IMPINGER H2O, ML	100.0	METER CORR FACT, Y	0.990
SILICA GEL H2O, GM	32.0	PARTIC COLLECTED, MG	52.50

PT NO	STACK TEMP (Ts)	VELOC PRESS (dPs)	ORIFICE PRESS (dH)	METER TEMP INLET (Tmi	METER TEMP OUTLET (Tmo)	SQR ROOT VELOC PRESS
1	755	1.6	0.17	83	82	1.265
2	801	1.9	0.20	84	83	1.378
3	819	2.6	0.27	84	83	1.612
4	808	3.0	0.31	85	84	1.732
5	815	2.2	0.23	86	84	1.483
6	800	1.0	0.10	86	85	1.000
7	854	3.9	0.40	87	86	1.975
8	870	4.0	0.40	87	86	2.000
9	892	11.0	1.10	88	87	3.317
10	880	9.6	0.96	89	87	3.098
11	845	6.3	0.63	90	87	2.510
12	835	5.6	0.56	90	87	2.366
13	852	4.2	0.42	90	88	2.049
14	861	7.0	0.70	90	88	2.646
15	885	11.4	1.14	92	88	3.376
16	870	8.2	0.82	92	89	2.864
17	858	6.4	0.64	92	89	2.530
18	836	3.9	0.39	92	89	1.975
19	791	2.0	0.70	91	89	1.414
20	812	4.4	0.46	91	90	2.098
21	802	5.8	0.60	93	91	2.408
22	800	3.8	0.39	93	91	1.949
23	793	1.8	0.19	92	91	1.342
24	780	0.4	0.04	92	91	0.632
25						
26						
27						
28						
29						
30						
AVG	829.8	4.667	0.49	89.1	87.3	2.0425

Compare →

STACK GAS MOL WT. WET	28.46	AVG ABS STACK TEMP (deg R)	1289.8
STACK VELOCITY (ft/sec)	168.94	AVG ABS METER TEMP (deg R)	548.2
STD VOL SAMPLED (std ft2)	101.58	METER LEAK RATE (ft3/min)	0.000
AVG METER TEMP (deg F)	88.21	SAMPLE VOL LK CORR'D (ft3)	106.45
PERCENT MOISTURE (%)	5.77	AVG ABS STACK PRESS (in Hg)	30.21
STD STACK FLOW RATE (DSCFM)	222454.7	VOL H20 IN METER GAS (std ft3)	6.22
		H20 IN GAS STREAM (vol frac)	0.058
ISOKINETIC VARIATION (%)	98.21	NOZZLE AREA (ft2)	0.00022
PARTIC EMISSION RATE (lb/hr)	15.2077	STACK AREA (ft2)	56.333
PARTICULATE CONC (gr/DSCF)	7.98E-03	STACK EQUIV DIAMETER (in)	78.00
FUEL F FACTOR DRY (Fd)	8710		
POUNDS PER MILLION BTU	0.049384		

Total Source Analysis, Inc.
Particulate Test Analysis

CITY UTILITIES OF SPRINGFIELD
STACK
UNITS 1 & 2
91-126

Run Number		1	2	3
Data set		(01)	(02)	(03)
Date		8-12-91	8-12-91	8-12-91
Location		GAS #1 NORTH	GAS #1 NORTH	GAS #1 NORTH
Start time		09:37	12:50	15:32
End time		11:46	15:00	17:39
Barometric Pressure	In. Hg	29.97	29.97	29.97
Static Pressure	In. H2O	4.00	4.00	4.00
Volume of Condensate	Mls	178	171	180
Volume Sampled	DCF	111.510	108.450	105.274
Meter Correction Factor		0.99	0.99	0.99
Square Root of Delta P		2.039	2.063	1.999
Orifice Pressure	In. H2O	0.58	0.54	0.47
Meter Temperature	Deg. F	108	115	107
Flue Temperature	Deg. F	831	825	820
Percent CO2	%	2.60	3.00	2.60
Percent O2	%	17.00	16.30	16.80
Diameter of Nozzle	In	0.200	0.200	0.200
Area of Flue	Sq Ft	56.33	56.33	56.33
Sample Time	Min	120	120	120
Weight Gain	Grams	0.0298	0.0363	0.0409
F Factor	DSCF/MBtu	8710	8710	8710
Absolute Flue Pressure	In. Hg	30.26	30.26	30.26
Corrected Sample Volume	DSCF	102.90	98.84	97.29
Moisture in Flue Gas	%	7.5	7.5	8.0
Molecular Weight	Lb/LbMole	28.26	28.29	28.20
Velocity of Flue Gas	FpS	169.19	170.68	165.34
Volume of Flue Gas	ACFM	571,823	576,869	558,814
Volume of Flue Gas	DSCFM	218,652	221,610	214,391
Dust Concentration	Lb/DSCF	6.38E-07	8.09E-07	9.26E-07
Dust Concentration	Lbs/Hour	8.37	10.76	11.92
Dust Concentration	Grs/ACF	1.73E-03	2.21E-03	2.53E-03
Dust Concentration	Grs/DSCF	4.47E-03	5.66E-03	6.48E-03
Isokinetic Rate	%	101.1	95.8	97.5
Particulate Emissions	Lb/MBtu	0.030	0.032	0.041

Averages:

Stack Temperature	:	825.3	Percent O2	:	16.7
Vol Flue Gas	ACFM :	569,169	DSCFM	:	218,218
Part Emis	Lb/DSCF :	7.91E-07	Lb/Hour	:	10.35
	Grs/ACF :	2.16E-03	Grs/DSCF	:	5.54E-03
	Lbs/MBtu :	3.43E-02			

Total Source Analysis, Inc.
Particulate Test Analysis

CITY UTILITIES OF SPRINGFIELD
STACK
UNITS 1 & 2
91-126

Run Number		1	2	3
Data set		(04)	(05)	(06)
Date		8-13-91	8-13-91	8-13-91
Location		OIL #1 NORTH	OIL #1 NORTH	OIL #1 NORTH
Start time		08:05	10:40	13:30
End time		10:10	12:45	15:40
Barometric Pressure	In. Hg	29.92	29.92	29.92
Static Pressure	In. H2O	4.00	4.00	4.00
Volume of Condensate	Mls	132	151	137
Volume Sampled	DCF	106.449	111.414	110.775
Meter Correction Factor		0.99	0.99	0.99
Square Root of Delta P		2.042	2.064	2.060
Orifice Pressure	In. H2O	0.47	0.52	0.51
Meter Temperature	Deg. F	88	105	103
Flue Temperature	Deg. F	830	834	833
Percent CO2	%	2.70	3.10	3.10
Percent O2	%	16.70	17.30	17.50
Diameter of Nozzle	In	0.200	0.200	0.200
Area of Flue	Sq Ft	56.33	56.33	56.33
Sample Time	Min	120	120	120
Weight Gain	Grams	0.0525	0.0514	0.0490
F Factor	DSCF/MBtu	9190	9190	9190
Absolute Flue Pressure	In. Hg	30.21	30.21	30.21
Corrected Sample Volume	DSCF	101.62	103.17	102.94
Moisture in Flue Gas	%	5.8	6.4	5.9
Molecular Weight	Lb/LbMole	28.46	28.47	28.54
Velocity of Flue Gas	FpS	168.92	170.98	170.38
Volume of Flue Gas	ACFM	570,901	577,880	575,839
Volume of Flue Gas	DSCFM	222,277	222,672	223,362
Dust Concentration	Lb/DSCF	1.13E-06	1.09E-06	1.04E-06
Dust Concentration	Lbs/Hour	15.19	14.67	14.06
Dust Concentration	Grs/ACF	3.14E-03	3.00E-03	2.90E-03
Dust Concentration	Grs/DSCF	7.97E-03	7.69E-03	7.34E-03
Isokinetic Rate	%	98.2	99.5	99.0
Particulate Emissions	Lb/MBtu	0.052	0.059	0.059

Averages:

Stack Temperature	:	832.3	Percent O2	:	17.2
Vol Flue Gas	ACFM :	574,873	DSCFM	:	222,770
Part Emis	Lb/DSCF :	1.09E-06	Lb/Hour	:	14.64
	Grs/ACF :	3.02E-03	Grs/DSCF	:	7.67E-03
	Lbs/MBtu :	5.66E-02			

USE FOR ANY TEST WITH A SQUARE OR RECTANGULAR STACK

NUMBER OF POINTS	24	PERCENT OXYGEN	16.70
TIME, MINUTE/POINT	5.00	PERCENT CARBON DIOXIDE	2.60
LEAK RATE, FT3/MIN	0.002	PERCENT CARBON MONOXIDE	0.00
BAR PRESS, INCH Hg	29.92	Cp (PITOT COEFFICIENT)	0.790
STATIC PRESS (in H2O)	2.90	NOZZLE DIAMETER, INCHES	0.242
STACK EXIT LENGTH IN	52.00	INITIAL METER VOL, FT3	453.695
STACK EXIT WIDTH IN	156.00	FINAL METER VOL, FT3	651.613
IMPINGER H2O, ML	155.0	METER CORR FACT, Y	0.980
SILICA GEL H2O, GM	68.0	PARTIC COLLECTED, MG	96.10

PT NO	STACK TEMP (Ts)	VELOC PRESS (dPs)	ORIFICE PRESS (dH)	METER TEMP INLET (Tmi	METER TEMP OUTLET (Tmo)	SQR ROOT VELOC PRESS
1	778	2.0	0.47	76	71	1.414
2	786	2.6	0.62	76	70	1.612
3	812	5.6	1.33	76	71	2.366
4	843	6.0	1.42	76	71	2.449
5	840	3.2	0.76	76	72	1.789
6	833	2.2	0.52	79	72	1.483
7	888	12.8	3.03	79	73	3.578
8	906	13.4	3.00	79	75	3.661
9	918	12.0	2.69	81	77	3.464
10	904	11.4	2.55	81	77	3.376
11	900	8.6	1.93	81	78	2.933
12	841	7.0	1.57	86	79	2.646
13	887	13.2	2.96	82	78	3.633
14	897	12.8	2.87	82	79	3.578
15	924	11.6	2.60	83	80	3.406
16	931	12.2	2.73	83	81	3.493
17	901	6.8	1.52	84	81	2.608
18	883	5.6	1.26	84	81	2.366
19	821	5.2	1.17	85	82	2.280
20	813	6.4	1.43	86	83	2.530
21	829	6.8	1.52	87	84	2.608
22	815	5.2	1.22	89	83	2.280
23	807	3.0	0.70	90	84	1.732
24	801	1.4	0.33	91	85	1.183
25						
26						
27						
28						
29						
30						
AVG	856.6	7.375	1.68	82.2	77.8	2.6029

STACK GAS MOL WT. WET	28.50	AVG ABS STACK TEMP (deg R)	1316.6
STACK VELOCITY (ft/sec)	217.64	AVG ABS METER TEMP (deg R)	540.0
STD VOL SAMPLED (std ft2)	190.36	METER LEAK RATE (ft3/min)	0.000
AVG METER TEMP (deg F)	79.98	SAMPLE VOL LK CORR'D (ft3)	197.92
PERCENT MOISTURE (%)	5.23	AVG ABS STACK PRESS (in Hg)	30.13
STD STACK FLOW RATE (DSCFM)	281582.0	VOL H20 IN METER GAS (std ft3)	10.50
		H20 IN GAS STREAM (vol frac)	0.052
ISOKINETIC VARIATION (%)	99.31	NOZZLE AREA (ft2)	0.00032
PARTIC EMISSION RATE (lb/hr)	18.8030	STACK AREA (ft2)	56.333
PARTICULATE CONC (gr/DSCF)	7.79E-03	STACK EQUIV DIAMETER (in)	78.00
FUEL F FACTOR DRY (Fd)	8710		
POUNDS PER MILLION BTU	0.048237		

Total Source Analysis, Inc.
Particulate Test Analysis

CITY UTILITIES OF SPRINGFIELD
STACK
UNITS 1 & 2
91-126

Run Number		1	2	3
Data set		(07)	(08)	(09)
Date		8-12-91	8-12-91	8-12-91
Location		GAS	GAS	GAS
		#1 SOUTH	#1 SOUTH	#1 SOUTH
Start time		09:35	12:50	15:30
End time		11:46	15:04	17:43
Barometric Pressure	In. Hg	29.97	29.97	29.97
Static Pressure	In. H2O	2.60	2.60	2.60
Volume of Condensate	Mls	217	242	230
Volume Sampled	DCF	191.928	195.061	196.819
Meter Correction Factor		0.98	0.98	0.98
Square Root of Delta P		2.473	2.524	2.525
Orifice Pressure	In. H2O	1.58	1.61	1.62
Meter Temperature	Deg. F	90	103	94
Flue Temperature	Deg. F	863	879	883
Percent CO2	%	2.50	2.80	3.20
Percent O2	%	16.80	16.30	16.30
Diameter of Nozzle	In	0.242	0.242	0.242
Area of Flue	Sq Ft	56.33	56.33	56.33
Sample Time	Min	120	120	120
Weight Gain	Grams	0.0151	0.0297	0.0161
F Factor	DSCF/MBtu	8710	8710	8710
Absolute Flue Pressure	In. Hg	30.16	30.16	30.16
Corrected Sample Volume	DSCF	181.49	180.21	184.79
Moisture in Flue Gas	%	5.3	5.9	5.5
Molecular Weight	Lb/LbMole	28.48	28.44	28.55
Velocity of Flue Gas	FpS	207.27	212.98	212.98
Volume of Flue Gas	ACFM	700,535	719,822	719,843
Volume of Flue Gas	DSCFM	266,702	269,007	269,382
Dust Concentration	Lb/DSCF	1.83E-07	3.63E-07	1.92E-07
Dust Concentration	Lbs/Hour	2.93	5.86	3.10
Dust Concentration	Grs/ACF	4.97E-04	9.63E-04	5.13E-04
Dust Concentration	Grs/DSCF	1.28E-03	2.54E-03	1.34E-03
Isokinetic Rate	%	99.9	98.3	100.7
Particulate Emissions	Lb/MBtu	0.008	0.014	0.008

Averages:

Stack Temperature		: 875.0		Percent O2 :	16.5
Vol Flue Gas	ACFM :	713,400		DSCFM :	268,364
Part Emis	Lb/DSCF :	2.46E-07		Lb/Hour :	3.96
	Grs/ACF :	6.6E-04		Grs/DSCF :	1.72E-03
	Lbs/MBtu :	1E-02			

Total Source Analysis, Inc.
Particulate Test Analysis

CITY UTILITIES OF SPRINGFIELD
STACK
UNITS 1 & 2
91-126

Run Number		1	2	3
Data set		(10)	(11)	(12)
Date		8-13-91	8-13-91	8-13-91
Location		OIL #1 SOUTH	OIL #1 SOUTH	OIL #1 SOUTH
Start time		08:00	10:40	13:25
End time		10:11	12:48	15:38
Barometric Pressure	In. Hg	29.92	29.92	29.92
Static Pressure	In. H2O	2.90	2.90	2.90
Volume of Condensate	Mls	223	224	228
Volume Sampled	DCF	197.918	195.990	198.460
Meter Correction Factor		0.98	0.98	0.98
Square Root of Delta P		2.603	2.589	2.594
Orifice Pressure	In. H2O	1.67	1.64	1.69
Meter Temperature	Deg. F	80	87	90
Flue Temperature	Deg. F	857	860	871
Percent CO2	%	2.60	2.80	2.80
Percent O2	%	16.70	16.50	16.40
Diameter of Nozzle	In	0.242	0.242	0.242
Area of Flue	Sq Ft	56.33	56.33	56.33
Sample Time	Min	120	120	120
Weight Gain	Grams	0.0961	0.1218	0.0857
F Factor	DSCF/MBtu	9190	9190	9190
Absolute Flue Pressure	In. Hg	30.13	30.13	30.13
Corrected Sample Volume	DSCF	190.35	186.07	187.41
Moisture in Flue Gas	%	5.2	5.4	5.4
Molecular Weight	Lb/LbMole	28.50	28.51	28.50
Velocity of Flue Gas	FpS	217.69	216.73	218.09
Volume of Flue Gas	ACFM	735,735	732,515	737,106
Volume of Flue Gas	DSCFM	281,421	279,147	278,420
Dust Concentration	Lb/DSCF	1.11E-06	1.44E-06	1.00E-06
Dust Concentration	Lbs/Hour	18.79	24.17	16.84
Dust Concentration	Grs/ACF	3.02E-03	3.93E-03	2.71E-03
Dust Concentration	Grs/DSCF	7.79E-03	1.01E-02	7.05E-03
Isokinetic Rate	%	99.3	97.8	98.8
Particulate Emissions	Lb/MBtu	0.051	0.063	0.043

Averages:

Stack Temperature		: 862.7	Percent O2	:	16.5
Vol Flue Gas	ACFM	: 735,119	DSCFM	:	279,663
Part Emis	Lb/DSCF	: 1.18E-06	Lb/Hour	:	19.93
	Grs/ACF	: 3.22E-03	Grs/DSCF	:	8.32E-03
	Lbs/MBtu	: 5.23E-02			

Total Source Analysis, Inc.
Particulate Test Analysis

CITY UTILITIES OF SPRINGFIELD
STACK
UNITS 1 & 2
91-126

Run Number		1	2	3
Data set		(13)	(14)	(15)
Date		8-6-91	8-6-91	8-6-91
Location		GAS #2 SOUTH	GAS #2 SOUTH	GAS #2 SOUTH
Start time		10:11	14:05	17:05
End time		12:28	16:25	19:40
Barometric Pressure	In. Hg	29.01	29.01	29.01
Static Pressure	In. H2O	3.90	3.90	3.90
Volume of Condensate	Mls	269	204	218
Volume Sampled	DCF	300.866	176.059	179.253
Meter Correction Factor		0.98	0.98	0.98
Square Root of Delta P		2.199	2.142	2.176
Orifice Pressure	In. H2O	4.00	1.40	1.42
Meter Temperature	Deg. F	116	102	101
Flue Temperature	Deg. F	789	810	813
Percent CO2	%	2.80	2.40	2.40
Percent O2	%	16.80	17.00	16.80
Diameter of Nozzle	In	0.310	0.242	0.242
Area of Flue	Sq Ft	56.33	56.33	56.33
Sample Time	Min	120	120	120
Weight Gain	Grams	0.0289	0.0249	0.0178
F Factor	DSCF/MBtu	8710	8710	8710
Absolute Flue Pressure	In. Hg	29.30	29.30	29.30
Corrected Sample Volume	DSCF	264.61	157.67	160.82
Moisture in Flue Gas	%	4.6	5.7	6.0
Molecular Weight	Lb/LbMole	28.61	28.43	28.39
Velocity of Flue Gas	FpS	181.29	178.64	181.80
Volume of Flue Gas	ACFM	612,712	603,763	614,460
Volume of Flue Gas	DSCFM	241,937	231,580	234,483
Dust Concentration	Lb/DSCF	2.40E-07	3.48E-07	2.44E-07
Dust Concentration	Lbs/Hour	3.49	4.83	3.43
Dust Concentration	Grs/ACF	6.75E-04	9.41E-04	6.60E-04
Dust Concentration	Grs/DSCF	1.68E-03	2.43E-03	1.70E-03
Isokinetic Rate	%	97.8	99.9	100.6
Particulate Emissions	Lb/MBtu	0.011	0.016	0.011

Averages:

Stack Temperature		804.0			
Vol Flue Gas	ACFM	610,312	Percent O2		16.9
	DSCFM			236,000	
Part Emis	Lb/DSCF	2.77E-07	Lb/Hour		3.92
	Grs/ACF	7.6E-04	Grs/DSCF		1.94E-03
	Lbs/MBtu	1.26E-02			

Total Source Analysis, Inc.
Particulate Test Analysis

CITY UTILITIES OF SPRINGFIELD
STACK
UNITS 1 & 2
91-126

Run Number		1	2	3
Data set		(16)	(17)	(18)
Date		8-7-91	8-7-91	8-7-91
Location		OIL #2 SOUTH	OIL #2 SOUTH	OIL #2 SOUTH
Start time		08:15	11:42	15:50
End time		10:32	13:56	15:15
Barometric Pressure	In. Hg	29.07	29.07	29.07
Static Pressure	In. H2O	3.90	3.90	3.90
Volume of Condensate	Mls	207	209	210
Volume Sampled	DCF	180.844	186.405	187.909
Meter Correction Factor		0.98	0.98	0.98
Square Root of Delta P		2.270	2.258	2.269
Orifice Pressure	In. H2O	1.49	1.56	1.59
Meter Temperature	Deg. F	96	113	106
Flue Temperature	Deg. F	812	831	836
Percent CO2	%	2.20	2.90	2.70
Percent O2	%	17.20	17.10	17.00
Diameter of Nozzle	In	0.242	0.242	0.242
Area of Flue	Sq Ft	56.33	56.33	56.33
Sample Time	Min	120	120	120
Weight Gain	Grams	0.0837	0.0941	0.0779
F Factor	DSCF/MBtu	9190	9190	9190
Absolute Flue Pressure	In. Hg	29.36	29.36	29.36
Corrected Sample Volume	DSCF	164.07	164.13	167.51
Moisture in Flue Gas	%	5.6	5.7	5.6
Molecular Weight	Lb/LbMole	28.42	28.52	28.49
Velocity of Flue Gas	FpS	189.30	189.37	190.75
Volume of Flue Gas	ACFM	639,780	640,049	644,690
Volume of Flue Gas	DSCFM	245,856	242,212	243,243
Dust Concentration	Lb/DSCF	1.12E-06	1.26E-06	1.02E-06
Dust Concentration	Lbs/Hour	16.59	18.37	14.96
Dust Concentration	Grs/ACF	3.08E-03	3.42E-03	2.75E-03
Dust Concentration	Grs/DSCF	7.87E-03	8.84E-03	7.17E-03
Isokinetic Rate	%	97.9	99.4	101.1
Particulate Emissions	Lb/MBtu	0.058	0.064	0.051

Averages:

Stack Temperature		826.3	Percent O2		17.1
Vol Flue Gas	ACFM	641,506		DSCFM	243,770
Part Emis	Lb/DSCF	1.13E-06		Lb/Hour	16.64
	Grs/ACF	3.09E-03		Grs/DSCF	7.97E-03
	Lbs/MBtu	5.76E-02			

Total Source Analysis, Inc.
Particulate Test Analysis

CITY UTILITIES OF SPRINGFIELD
STACK
UNITS 1 & 2
91-126

Run Number		1	2	3
Data set		(19)	(20)	(21)
Date		8-6-91	8-6-91	8-6-91
Location		GAS #2 NORTH	GAS #2 NORTH	GAS #2 NORTH
Start time		10:20	14:05	17:30
End time		12:28	16:25	19:40
Barometric Pressure	In. Hg	29.01	29.01	29.01
Static Pressure	In. H2O	2.50	2.50	2.50
Volume of Condensate	Mls	263	219	167
Volume Sampled	DCF	294.303	125.159	118.288
Meter Correction Factor		0.99	0.99	0.99
Square Root of Delta P		2.244	2.110	2.069
Orifice Pressure	In. H2O	4.09	0.68	0.62
Meter Temperature	Deg. F	135	116	107
Flue Temperature	Deg. F	801	815	820
Percent CO2	%	2.60	2.20	2.40
Percent O2	%	17.20	17.10	16.90
Diameter of Nozzle	In	0.310	0.200	0.200
Area of Flue	Sq Ft	56.33	56.33	56.33
Sample Time	Min	120	120	120
Weight Gain	Grams	0.0306	0.0374	0.0293
F Factor	DSCF/MBtu	8710	8710	8710
Absolute Flue Pressure	In. Hg	29.19	29.19	29.19
Corrected Sample Volume	DSCF	253.19	110.27	105.86
Moisture in Flue Gas	%	4.7	8.6	6.9
Molecular Weight	Lb/LbMole	28.59	28.09	28.30
Velocity of Flue Gas	FpS	186.29	177.68	173.94
Volume of Flue Gas	ACFM	629,637	600,527	587,891
Volume of Flue Gas	DSCFM	245,146	221,812	220,169
Dust Concentration	Lb/DSCF	2.66E-07	7.47E-07	6.10E-07
Dust Concentration	Lbs/Hour	3.91	9.95	8.06
Dust Concentration	Grs/ACF	7.33E-04	1.97E-03	1.62E-03
Dust Concentration	Grs/DSCF	1.86E-03	5.23E-03	4.27E-03
Isokinetic Rate	%	92.4	106.8	103.3
Particulate Emissions	Lb/MBtu	0.013	0.036	0.028

Averages:

Stack Temperature		812.0	Percent O2		17.1
Vol Flue Gas	ACFM	606,018		DSCFM	229,042
Part Emis	Lb/DSCF	5.41E-07		Lb/Hour	7.31
	Grs/ACF	1.45E-03		Grs/DSCF	3.79E-03
	Lbs/MBtu	2.56E-02			

Total Source Analysis, Inc.
Particulate Test Analysis

CITY UTILITIES OF SPRINGFIELD
STACK
UNITS 1 & 2
91-126

Run Number		1	2	3
Data set		(22)	(23)	(24)
Date		8-7-91	8-7-91	8-7-91
Location		OIL #2 NORTH	OIL #2 NORTH	OIL #2 NORTH
Start time		08:15	08:15	15:52
End time		10:34	10:34	18:02
Barometric Pressure	In. Hg	29.07	29.07	29.07
Static Pressure	In. H2O	2.50	2.50	2.50
Volume of Condensate	Mls	191	132	156
Volume Sampled	DCF	121.390	115.190	125.168
Meter Correction Factor		0.99	0.99	0.99
Square Root of Delta P		2.207	2.050	2.238
Orifice Pressure	In. H2O	0.65	0.60	0.68
Meter Temperature	Deg. F	115	121	109
Flue Temperature	Deg. F	839	857	838
Percent CO2	%	2.30	2.30	2.60
Percent O2	%	16.90	16.90	17.20
Diameter of Nozzle	In	0.200	0.200	0.200
Area of Flue	Sq Ft	56.33	56.33	56.33
Sample Time	Min	120	120	120
Weight Gain	Grams	0.0652	0.0774	0.0479
F Factor	DSCF/MBtu	9190	9190	9190
Absolute Flue Pressure	In. Hg	29.25	29.25	29.25
Corrected Sample Volume	DSCF	107.35	100.80	111.87
Moisture in Flue Gas	%	7.7	5.8	6.2
Molecular Weight	Lb/LbMole	28.19	28.40	28.42
Velocity of Flue Gas	FpS	187.07	174.31	188.86
Volume of Flue Gas	ACFM	632,266	589,130	638,308
Volume of Flue Gas	DSCFM	231,755	217,428	238,128
Dust Concentration	Lb/DSCF	1.33E-06	1.69E-06	9.44E-07
Dust Concentration	Lbs/Hour	18.62	22.08	13.48
Dust Concentration	Grs/ACF	3.50E-03	4.45E-03	2.52E-03
Dust Concentration	Grs/DSCF	9.37E-03	1.18E-02	6.60E-03
Isokinetic Rate	%	99.5	99.6	100.9
Particulate Emissions	Lb/MBtu	0.064	0.081	0.049

Averages:

Stack Temperature	:	844.7	Percent O2 :		17.0
Vol Flue Gas	ACFM :	619,901	DSCFM :		229,104
Part Emis	Lb/DSCF :	1.32E-06	Lb/Hour :		18.06
	Grs/ACF :	3.49E-03	Grs/DSCF :		9.28E-03
	Lbs/MBtu :	6.46E-02			

PLANT NAME: Springfield Southwest Unit 1 TEST UNIT: South stack, GAS

LOCATION: Springfield, MO DATE: 8/12/91 RUN NO: 1 (07)

USE FOR ANY TEST WITH A SQUARE OR RECTANGULAR STACK

NUMBER OF POINTS	24
TIME, MINUTE/POINT	5.00
LEAK RATE, FT3/MIN	0.001
BAR PRESS, INCH Hg	29.97
STATIC PRESS (in H2O)	2.60
STACK EXIT LENGTH IN	52.00
STACK EXIT WIDTH IN	156.00
IMPINGER H2O, ML	145.0
SILICA GEL H2O, GM	72.0

PERCENT OXYGEN	16.75
PERCENT CARBON DIOXIDE	2.45
PERCENT CARBON MONOXIDE	0.00
Cp (PITOT COEFFICIENT)	0.790
NOZZLE DIAMETER, INCHES	0.242
INITIAL METER VOL, FT3	860.315
FINAL METER VOL, FT3	1052.243
METER CORR FACT, Y	0.980
PARTIC COLLECTED, MG	7.80

PT NO	STACK TEMP (Ts)	VELOC PRESS (dPs)	ORIFICE PRESS (dH)	METER TEMP INLET (Tmi	METER TEMP OUTLET (Tmo)	SQR ROOT VELOC PRESS
1	786	2.0	0.46	74	76	1.414
2	781	2.4	0.58	78	77	1.549
3	789	4.0	0.97	79	77	2.000
4	796	4.8	1.17	80	78	2.191
5	779	3.0	0.73	84	81	1.732
6	769	1.4	0.34	85	82	1.183
7	896	8.8	2.14	87	84	2.966
8	847	11.2	2.72	90	87	3.347
9	886	12.4	3.02	90	87	3.521
10	891	8.4	2.04	91	87	2.898
11	901	9.8	2.38	94	88	3.130
12	878	6.2	1.58	94	88	2.490
13	927	12.4	3.16	96	88	3.521
14	932	12.8	2.84	96	89	3.578
15	934	11.4	2.53	97	89	3.376
16	942	9.6	2.13	96	91	3.098
17	913	6.2	1.38	99	94	2.490
18	886	6.4	1.42	106	97	2.530
19	846	3.6	0.80	103	97	1.897
20	886	5.2	1.23	101	96	2.280
21	883	7.6	1.80	99	94	2.757
22	897	5.8	1.34	101	96	2.408
23	825	3.0	0.69	102	92	1.732
24	825	1.6	0.37	103	93	1.265
25						
26						
27						
28						
29						
30						
AVG	862.3	6.667	1.58	92.7	87.8	2.4732

STACK GAS MOL WT. WET	28.47
STACK VELOCITY (ft/sec)	207.27
STD VOL SAMPLED (std ft2)	181.40
AVG METER TEMP (deg F)	90.27
PERCENT MOISTURE (%)	5.33
STD STACK FLOW RATE (DSCFM)	266953.2
ISOKINETIC VARIATION (%)	99.82
PARTIC EMISSION RATE (lb/hr)	1.5183
PARTICULATE CONC (gr/DSCF)	6.64E-04
FUEL F FACTOR DRY (Fd)	8710
POUNDS PER MILLION BTU	0.004158

AVG ABS STACK TEMP (deg R)	1322.3
AVG ABS METER TEMP (deg R)	550.3
METER LEAK RATE (ft3/min)	0.000
SAMPLE VOL LK CORR'D (ft3)	191.93
AVG ABS STACK PRESS (in Hg)	30.16
VOL H2O IN METER GAS (std ft3)	10.22
H2O IN GAS STREAM (vol frac)	0.053
NOZZLE AREA (ft2)	0.00032
STACK AREA (ft2)	56.333
STACK EQUIV DIAMETER (in)	78.00

Total Source Analysis, Inc.
Particulate Test Analysis

CITY UTILITIES OF SPRINGFIELD
STACK
UNITS 1 & 2
91-126

Results for Gas Turbine after metal flakes were removed

Run Number		1	2	3
Data set		(01)	(02)	(03)
Date		8-12-91	8-12-91	8-12-91
Location		GAS #1 NORTH	GAS #1 NORTH	GAS #1 NORTH
Start time		09:37	12:50	15:32
End time		11:46	15:00	17:39
Barometric Pressure	In. Hg	29.97	29.97	29.97
Static Pressure	In. H2O	4.00	4.00	4.00
Volume of Condensate	Mls	178	171	180
Volume Sampled	DCF	111.510	108.450	105.274
Meter Correction Factor		0.99	0.99	0.99
Square Root of Delta P		2.039	2.063	1.999
Orifice Pressure	In. H2O	0.58	0.54	0.47
Meter Temperature	Deg. F	108	115	107
Flue Temperature	Deg. F	831	825	820
Percent CO2	%	2.60	3.00	2.60
Percent O2	%	17.00	16.30	16.80
Diameter of Nozzle	In	0.200	0.200	0.200
Area of Flue	Sq Ft	56.33	56.33	56.33
Sample Time	Min	120	120	120
Weight Gain	Grams	0.0071	0.0093	0.0090
F Factor	DSCF/MBtu	8710	8710	8710
Absolute Flue Pressure	In. Hg	30.26	30.26	30.26
Corrected Sample Volume	DSCF	102.90	98.84	97.29
Moisture in Flue Gas	%	7.5	7.5	8.0
Molecular Weight	Lb/LbMole	28.26	28.29	28.20
Velocity of Flue Gas	FpS	169.19	170.68	165.34
Volume of Flue Gas	ACFM	571,823	576,869	558,814
Volume of Flue Gas	DSCFM	218,652	221,610	214,391
Dust Concentration	Lb/DSCF	1.52E-07	2.07E-07	2.03E-07
Dust Concentration	Lbs/Hour	1.99	2.75	2.62
Dust Concentration	Grs/ACF	4.13E-04	5.66E-04	5.57E-04
Dust Concentration	Grs/DSCF	1.06E-03	1.45E-03	1.42E-03
Isokinetic Rate	%	101.1	95.8	97.5
Particulate Emissions	Lb/MBtu	0.007	0.008	0.009

Averages:

Stack Temperature	:	825.3	Percent O2	:	16.7
Vol Flue Gas ACFM	:	569,169	DSCFM	:	218,218
Part Emis Lb/DSCF	:	1.87E-07	Lb/Hour	:	2.45
Grs/ACF	:	5.1E-04	Grs/DSCF	:	1.32E-03
Lbs/MBtu	:	8E-03			

Total Source Analysis, Inc.
Particulate Test Analysis

CITY UTILITIES OF SPRINGFIELD
STACK
UNITS 1 & 2
91-126

Results for Gas Turbine after metal flakes were removed

Run Number		1	2	3
Data set		(07)	(08)	(09)
Date		8-12-91	8-12-91	8-12-91
Location		GAS #1 SOUTH	GAS #1 SOUTH	GAS #1 SOUTH
Start time		09:35	12:50	15:30
End time		11:46	15:04	17:43
Barometric Pressure	In. Hg	29.97	29.97	29.97
Static Pressure	In. H2O	2.60	2.60	2.60
Volume of Condensate	Mls	217	242	230
Volume Sampled	DCF	191.928	195.061	196.819
Meter Correction Factor		0.98	0.98	0.98
Square Root of Delta P		2.473	2.524	2.525
Orifice Pressure	In. H2O	1.58	1.61	1.62
Meter Temperature	Deg. F	90	103	94
Flue Temperature	Deg. F	863	879	883
Percent CO2	%	2.50	2.80	3.20
Percent O2	%	16.80	16.30	16.30
Diameter of Nozzle	In	0.242	0.242	0.242
Area of Flue	Sq Ft	56.33	56.33	56.33
Sample Time	Min	120	120	120
Weight Gain	Grams	0.0078	0.0087	0.0103
F Factor	DSCF/MBtu	8710	8710	8710
Absolute Flue Pressure	In. Hg	30.16	30.16	30.16
Corrected Sample Volume	DSCF	181.49	180.21	184.79
Moisture in Flue Gas	%	5.3	5.9	5.5
Molecular Weight	Lb/LbMole	28.48	28.44	28.55
Velocity of Flue Gas	FpS	207.27	212.98	212.98
Volume of Flue Gas	ACFM	700,535	719,822	719,843
Volume of Flue Gas	DSCFM	266,702	269,007	269,382
Dust Concentration	Lb/DSCF	9.47E-08	1.06E-07	1.22E-07
Dust Concentration	Lbs/Hour	1.51	1.71	1.98
Dust Concentration	Grs/ACF	2.57E-04	2.82E-04	3.28E-04
Dust Concentration	Grs/DSCF	6.63E-04	7.45E-04	8.60E-04
Isokinetic Rate	%	99.9	98.3	100.7
Particulate Emissions	Lb/MBtu	0.004	0.004	0.005

Averages:

Stack Temperature	:	875.0	Percent O2	:	16.5
Vol Flue Gas	ACFM :	713,400	DSCFM	:	268,364
Part Emis	Lb/DSCF :	1.08E-07	Lb/Hour	:	1.74
	Grs/ACF :	2.9E-04	Grs/DSCF	:	7.6E-04
	Lbs/MBtu :	4.33E-03			

PLANT NAME: Springfield Southwest unit 2 TEST UNIT: South stack, GAS

LOCATION: Springfield, MO DATE: 8/7/91 RUN NO: 1 (13)

USE FOR ANY TEST WITH A SQUARE OR RECTANGULAR STACK

NUMBER OF POINTS	24	PERCENT OXYGEN	16.80
TIME, MINUTE/POINT	5.00	PERCENT CARBON DIOXIDE	2.80
LEAK RATE, FT3/MIN	0.007	PERCENT CARBON MONOXIDE	0.00
BAR PRESS, INCH Hg	29.01	Cp (PITOT COEFFICIENT)	0.790
STATIC PRESS (in H2O)	3.90	NOZZLE DIAMETER, INCHES	0.310
STACK EXIT LENGTH IN	52.00	INITIAL METER VOL, FT3	578.029
STACK EXIT WIDTH IN	156.00	FINAL METER VOL, FT3	878.895
IMPINGER H2O, ML	182.0	METER CORR FACT, Y	0.980
SILICA GEL H2O, GM	87.0	PARTIC COLLECTED, MG	8.60

PT NO	STACK TEMP (Ts)	VELOC PRESS (dPs)	ORIFICE PRESS (dH)	METER TEMP INLET (Tmi	METER TEMP OUTLET (Tmo)	SQR ROOT VELOC PRESS
1	732	1.4	1.02	94	103	1.183
2	758	3.0	2.18	93	105	1.732
3	775	6.4	4.66	101	110	2.530
4	789	5.0	3.64	104	113	2.236
5	781	3.2	2.33	121	109	1.789
6	767	1.8	1.31	124	109	1.342
7	823	11.0	8.01	124	107	3.317
8	869	12.2	8.80	126	109	3.493
9	798	8.2	5.97	132	112	2.864
10	811	7.6	5.53	133	114	2.757
11	824	6.4	4.66	136	114	2.530
12	793	3.6	2.76	136	115	1.897
13	814	7.8	5.98	137	118	2.793
14	864	9.6	7.36	140	119	3.098
15	821	8.4	6.44	141	118	2.898
16	801	6.2	4.75	138	124	2.490
17	803	4.8	3.68	134	121	2.191
18	764	3.6	2.76	136	120	1.897
19	756	1.6	1.23	137	118	1.265
20	780	5.2	3.99	124	119	2.280
21	790	6.4	4.91	129	121	2.530
22	782	3.6	2.76	130	123	1.897
23	731	1.0	0.77	126	119	1.000
24	712	0.6	0.45	123	121	0.775
25						
26						
27						
28						
29						
30						
AVG	789.1	5.358	4.00	125.8	115.0	2.1993

STACK GAS MOL WT. WET	28.61	AVG ABS STACK TEMP (deg R)	1249.1
STACK VELOCITY (ft/sec)	181.33	AVG ABS METER TEMP (deg R)	580.4
STD VOL SAMPLED (std ft2)	262.59	METER LEAK RATE (ft3/min)	0.000
AVG METER TEMP (deg F)	120.42	SAMPLE VOL LK CORR'D (ft3)	300.87
PERCENT MOISTURE (%)	4.60	AVG ABS STACK PRESS (in Hg)	29.30
STD STACK FLOW RATE (DSCFM)	242005.0	VOL H20 IN METER GAS (std ft3)	12.67
		H20 IN GAS STREAM (vol frac)	0.046
ISOKINETIC VARIATION (%)	97.14	NOZZLE AREA (ft2)	0.00052
PARTIC EMISSION RATE (lb/hr)	1.0484	STACK AREA (ft2)	56.333
PARTICULATE CONC (gr/DSCF)	5.05E-04	STACK EQUIV DIAMETER (in)	78.00
FUEL F FACTOR DRY (Fd)	8710		
POUNDS PER MILLION BTU	0.003206		

Total Source Analysis, Inc.
Particulate Test Analysis

CITY UTILITIES OF SPRINGFIELD
STACK
UNITS 1 & 2
91-126

Results for Gas Turbine after metal flakes were removed

Run Number		1	2	3
Data set		(13)	(14)	(15)
Date		8-6-91	8-6-91	8-6-91
Location		GAS #2 SOUTH	GAS #2 SOUTH	GAS #2 SOUTH
Start time		10:11	14:05	17:05
End time		12:28	16:25	19:40
Barometric Pressure	In. Hg	29.01	29.01	29.01
Static Pressure	In. H2O	3.90	3.90	3.90
Volume of Condensate	Mls	269	204	218
Volume Sampled	DCF	300.866	176.059	179.253
Meter Correction Factor		0.98	0.98	0.98
Square Root of Delta P		2.199	2.142	2.176
Orifice Pressure	In. H2O	4.00	1.40	1.42
Meter Temperature	Deg. F	116	102	101
Flue Temperature	Deg. F	789	810	813
Percent CO2	%	2.80	2.40	2.40
Percent O2	%	16.80	17.00	16.80
Diameter of Nozzle	In	0.310	0.242	0.242
Area of Flue	Sq Ft	56.33	56.33	56.33
Sample Time	Min	120	120	120
Weight Gain	Grams	0.0086	0.0098	0.0093
F Factor	DSCF/MBtu	8710	8710	8710
Absolute Flue Pressure	In. Hg	29.30	29.30	29.30
Corrected Sample Volume	DSCF	264.61	157.67	160.82
Moisture in Flue Gas	%	4.6	5.7	6.0
Molecular Weight	Lb/LbMole	28.61	28.43	28.39
Velocity of Flue Gas	FpS	181.29	178.64	181.80
Volume of Flue Gas	ACFM	612,712	603,763	614,460
Volume of Flue Gas	DSCFM	241,937	231,580	234,483
Dust Concentration	Lb/DSCF	7.16E-08	1.37E-07	1.27E-07
Dust Concentration	Lbs/Hour	1.04	1.90	1.79
Dust Concentration	Grs/ACF	2.01E-04	3.70E-04	3.45E-04
Dust Concentration	Grs/DSCF	5.01E-04	9.59E-04	8.92E-04
Isokinetic Rate	%	97.8	99.9	100.6
Particulate Emissions	Lb/MBtu	0.003	0.006	0.006

Averages:

Stack Temperature	:	804.0	Percent O2 :		16.9
Vol Flue Gas	ACFM :	610,312	DSCFM :		236,000
Part Emis	Lb/DSCF :	1.12E-07	Lb/Hour :		1.57
	Grs/ACF :	3.1E-04	Grs/DSCF :		7.8E-04
	Lbs/MBtu :	5E-03			

PLANT NAME:Springfield Southwest Unit 2 TEST UNIT:North stack, GAS

LOCATION: Springfield, MO DATE: 8/7/91 RUN NO: 1 (19)

USE FOR ANY TEST WITH A SQUARE OR RECTANGULAR STACK

NUMBER OF POINTS	24	PERCENT OXYGEN	17.20
TIME, MINUTE/POINT	5.00	PERCENT CARBON DIOXIDE	2.60
LEAK RATE, FT3/MIN	0.011	PERCENT CARBON MONOXIDE	0.00
BAR PRESS, INCH Hg	29.01	Cp (PITOT COEFFICIENT)	0.790
STATIC PRESS (in H2O)	2.50	NOZZLE DIAMETER, INCHES	0.310
STACK EXIT LENGTH IN	52.00	INITIAL METER VOL, FT3	620.545
STACK EXIT WIDTH IN	156.00	FINAL METER VOL, FT3	914.848
IMPINGER H20, ML	205.0	METER CORR FACT, Y	0.990
SILICA GEL H20, GM	58.0	PARTIC COLLECTED, MG	11.10

PT NO	STACK TEMP (Ts)	VELOC PRESS (dPs)	ORIFICE PRESS (dH)	METER TEMP INLET (Tmi	METER TEMP OUTLET (Tmo)	SQR ROOT VELOC PRESS
1	737	1.2	0.74	132	131	1.095
2	750	3.0	2.23	131	132	1.732
3	793	6.1	4.53	134	130	2.470
4	828	5.1	3.61	138	132	2.258
5	823	2.4	1.70	136	131	1.549
6	814	0.4	0.28	133	131	0.632
7	817	6.2	4.38	132	131	2.490
8	885	12.4	8.77	138	131	3.521
9	870	12.5	8.84	139	131	3.536
10	875	10.4	7.35	140	131	3.225
11	870	7.9	5.59	142	132	2.811
12	797	3.5	2.47	144	134	1.871
13	823	8.8	6.22	143	135	2.966
14	854	8.2	5.71	145	135	2.864
15	884	14.0	9.52	143	134	3.742
16	813	10.0	6.80	143	134	3.162
17	771	7.0	4.76	142	133	2.646
18	772	4.2	2.97	144	134	2.049
19	762	1.0	0.71	136	132	1.000
20	782	4.0	2.83	135	132	2.000
21	795	5.9	4.17	133	130	2.429
22	754	3.8	2.69	133	129	1.949
23	675	1.7	1.20	135	130	1.304
24	678	0.3	0.21	135	130	0.548
25						
26						
27						
28						
29						
30						
AVG	800.9	5.833	4.09	137.8	131.9	2.2437

STACK GAS MOL WT. WET	28.59	AVG ABS STACK TEMP (deg R)	1260.9
STACK VELOCITY (ft/sec)	186.27	AVG ABS METER TEMP (deg R)	594.8
STD VOL SAMPLED (std ft2)	253.27	METER LEAK RATE (ft3/min)	0.000
AVG METER TEMP (deg F)	134.81	SAMPLE VOL LK CORR'D (ft3)	294.30
PERCENT MOISTURE (%)	4.66	AVG ABS STACK PRESS (in Hg)	29.19
STD STACK FLOW RATE (DSCFM)	245240.9	VOL H20 IN METER GAS (std ft3)	12.38
		H20 IN GAS STREAM (vol frac)	0.047
ISOKINETIC VARIATION (%)	92.45	NOZZLE AREA (ft2)	0.00052
PARTIC EMISSION RATE (lb/hr)	1.4217	STACK AREA (ft2)	56.333
PARTICULATE CONC (gr/DSCF)	6.76E-04	STACK EQUIV DIAMETER (in)	78.00

Total Source Analysis, Inc.
Particulate Test Analysis

CITY UTILITIES OF SPRINGFIELD
STACK
UNITS 1 & 2
91-126

Results for Gas Turbine after metal flakes were removed

Run Number		1	2	3
Data set		(19)	(20)	(21)
Date		8-6-91	8-6-91	8-6-91
Location		GAS #2 NORTH	GAS #2 NORTH	GAS #2 NORTH
Start time		10:20	14:05	17:30
End time		12:28	16:25	19:40
Barometric Pressure	In. Hg	29.01	29.01	29.01
Static Pressure	In. H2O	2.50	2.50	2.50
Volume of Condensate	Mls	263	219	167
Volume Sampled	DCF	294.303	125.159	118.288
Meter Correction Factor		0.99	0.99	0.99
Square Root of Delta P		2.244	2.110	2.069
Orifice Pressure	In. H2O	4.09	0.68	0.62
Meter Temperature	Deg. F	135	116	107
Flue Temperature	Deg. F	801	815	820
Percent CO2	%	2.60	2.20	2.40
Percent O2	%	17.20	17.10	16.90
Diameter of Nozzle	In	0.310	0.200	0.200
Area of Flue	Sq Ft	56.33	56.33	56.33
Sample Time	Min	120	120	120
Weight Gain	Grams	0.0111	0.0097	0.0108
F Factor	DSCF/MBtu	8710	8710	8710
Absolute Flue Pressure	In. Hg	29.19	29.19	29.19
Corrected Sample Volume	DSCF	253.19	110.27	105.86
Moisture in Flue Gas	%	4.7	8.6	6.9
Molecular Weight	Lb/LbMole	28.59	28.09	28.30
Velocity of Flue Gas	FpS	186.29	177.68	173.94
Volume of Flue Gas	ACFM	629,637	600,527	587,891
Volume of Flue Gas	DSCFM	245,146	221,812	220,169
Dust Concentration	Lb/DSCF	9.66E-08	1.93E-07	2.24E-07
Dust Concentration	Lbs/Hour	1.42	2.58	2.97
Dust Concentration	Grs/ACF	2.66E-04	5.12E-04	6.00E-04
Dust Concentration	Grs/DSCF	6.76E-04	1.35E-03	1.57E-03
Isokinetic Rate	%	92.4	106.8	103.3
Particulate Emissions	Lb/MBtu	0.005	0.009	0.010

Averages:

Stack Temperature		: 812.0	Percent O2	:	17.1
Vol Flue Gas	ACFM	: 606,018	DSCFM	:	229,042
Part Emis	Lb/DSCF	: 1.71E-07	Lb/Hour	:	2.32
	Grs/ACF	: 4.6E-04	Grs/DSCF	:	1.2E-03
	Lbs/MBtu	: 8E-03			

A1

TOTAL SOURCE ANALYSIS, INC.
NOx EMISSIONS TEST RESULTS
CORRECTED

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #2
PROJECT #: 91-126-OH
COMMENTS: GAS 50% LOAD
LOCATION: SOUTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-8-91	23.213	17.23	37.3179
2	8-8-91	23.490	17.20	37.4570
3	8-8-91	23.110	17.35	38.4082
AVERAGE		23.271	17.26	37.728

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #2
PROJECT #: 91-126-OH
COMMENTS: GAS 50% LOAD
LOCATION: NORTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-8-91	22.850	17.43	38.8516
2	8-8-91	22.930	17.43	38.9876
3	8-8-91	23.840	17.44	40.6520
AVERAGE		23.207	17.43	39.497

A1

TOTAL SOURCE ANALYSIS, INC.
NOx EMISSIONS TEST RESULTS
CORRECTED

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #2
PROJECT #: 91-126-OH
COMMENTS: GAS 65% LOAD
LOCATION: SOUTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-8-91	27.810	16.80	40.0193
2	8-8-91	27.270	16.80	39.2422
3	8-8-91	27.680	16.80	39.8322
AVERAGE		27.587	16.80	39.698

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #2
PROJECT #: 91-126-OH
COMMENTS: GAS 65% LOAD
LOCATION: NORTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-8-91	28.040	16.63	38.7438
2	8-8-91	24.510	16.69	34.3489
3	8-8-91	25.060	16.68	35.0365
AVERAGE		25.870	16.67	36.043

A1

TOTAL SOURCE ANALYSIS, INC.
NOx EMISSIONS TEST RESULTS
CORRECTED

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #2
PROJECT #: 91-126-OH
COMMENTS: GAS 80% LOAD
LOCATION: SOUTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-8-91	27.850	16.67	38.8452
2	8-8-91	27.580	16.70	38.7433
3	8-8-91	26.690	16.68	37.3154
AVERAGE		27.373	16.68	38.301

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #2
PROJECT #: 91-126-OH
COMMENTS: GAS 80% LOAD
LOCATION: NORTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-8-91	28.680	16.40	37.6027
2	8-8-91	27.140	16.45	35.9834
3	8-8-91	27.380	16.39	35.8186
AVERAGE		27.733	16.41	36.468

A1

TOTAL SOURCE ANALYSIS, INC.
NOx EMISSIONS TEST RESULTS
CORRECTED

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #2
PROJECT #: 91-126-OH
COMMENTS: GAS 100% LOAD
LOCATION: SOUTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-8-91	27.550	16.14	34.1481
2	8-8-91	27.060	16.14	33.5408
3	8-8-91	26.790	16.06	32.6572
AVERAGE		27.133	16.11	33.449

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #2
PROJECT #: 91-126-OH
COMMENTS: GAS 100% LOAD
LOCATION: NORTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-8-91	25.100	16.03	30.4086
2	8-8-91	25.560	16.01	30.8393
3	8-8-91	27.750	16.16	34.5411
AVERAGE		26.137	16.07	31.930

A1

TOTAL SOURCE ANALYSIS, INC.
NOx EMISSIONS TEST RESULTS
CORRECTED

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #2
PROJECT #: 91-126-OH
COMMENTS: OIL 50% LOAD
LOCATION: SOUTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-9-91	42.080	16.75	59.8246
2	8-9-91	45.180	16.86	65.9807
3	8-9-91	44.880	16.90	66.1980
AVERAGE		44.047	16.84	64.001

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #2
PROJECT #: 91-126-OH
COMMENTS: OIL 50% LOAD
LOCATION: NORTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-9-91	32.280	17.50	56.0153
2	8-9-91	31.180	16.88	45.7617
3	8-9-91	36.830	16.81	53.1289
AVERAGE		33.430	17.06	51.635

A1

TOTAL SOURCE ANALYSIS, INC.
NOx EMISSIONS TEST RESULTS
CORRECTED

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #2
PROJECT #: 91-126-OH
COMMENTS: OIL 65% LOAD
LOCATION: SOUTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-9-91	40.140	16.80	57.7624
2	8-9-91	39.360	16.84	57.1980
3	8-9-91	39.680	16.88	58.2368
AVERAGE		39.727	16.84	57.732

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #2
PROJECT #: 91-126-OH
COMMENTS: OIL 65% LOAD
LOCATION: NORTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-9-91	38.160	17.06	58.6313
2	8-9-91	38.500	17.08	59.4634
3	8-9-91	38.950	17.09	60.3163
AVERAGE		38.537	17.08	59.470

A1

TOTAL SOURCE ANALYSIS, INC.
NOx EMISSIONS TEST RESULTS
CORRECTED

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #2
PROJECT #: 91-126-OH
COMMENTS: OIL 80% LOAD
LOCATION: SOUTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-9-91	45.080	16.55	61.1430
2	8-9-91	43.630	16.60	59.8644
3	8-9-91	41.580	16.64	57.5873
AVERAGE		43.430	16.60	59.532

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #2
PROJECT #: 91-126-OH
COMMENTS: OIL 80% LOAD
LOCATION: NORTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-9-91	43.700	16.66	60.8090
2	8-9-91	43.740	16.65	60.7214
3	8-9-91	44.130	16.69	61.8449
AVERAGE		43.857	16.67	61.125

A1

TOTAL SOURCE ANALYSIS, INC.
NOx EMISSIONS TEST RESULTS
CORRECTED

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #2
PROJECT #: 91-126-OH
COMMENTS: OIL 100% LOAD
LOCATION: SOUTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-9-91	50.650	16.18	63.3125
2	8-9-91	50.080	16.21	63.0004
3	8-9-91	51.060	16.18	63.8250
AVERAGE		50.597	16.19	63.379

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #2
PROJECT #: 91-126-OH
COMMENTS: OIL 100% LOAD
LOCATION: NORTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-9-91	54.340	16.15	67.4960
2	8-9-91	55.710	16.10	68.4769
3	8-9-91	56.040	16.04	68.0321
AVERAGE		55.363	16.10	68.002

A1

TOTAL SOURCE ANALYSIS, INC.
NOx EMISSIONS TEST RESULTS
CORRECTED

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #1
PROJECT #: 91-126-OH
COMMENTS: GAS 50% LOAD
LOCATION: SOUTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-14-91	27.090	16.90	39.9578
2	8-14-91	29.590	16.75	42.0677
3	8-14-91	28.800	16.80	41.4439
AVERAGE		28.493	16.82	41.156

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #1
PROJECT #: 91-126-OH
COMMENTS: GAS 50% LOAD
LOCATION: NORTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-14-91	24.310	17.26	39.4036
2	8-14-91	24.690	17.35	41.0341
3	8-14-91	25.330	17.27	41.1700
AVERAGE		24.777	17.29	40.536

A1

TOTAL SOURCE ANALYSIS, INC.
NOx EMISSIONS TEST RESULTS
CORRECTED

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #1
PROJECT #: 91-126-OH
COMMENTS: GAS 65% LOAD
LOCATION: SOUTH SIDE

RUN	DATE	PPM	02	NOx Corrected
1	8-14-91	29.490	16.35	38.2398
2	8-14-91	29.060	16.40	38.1009
3	8-14-91	29.800	16.45	39.5101
AVERAGE		29.450	16.40	38.617

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #1
PROJECT #: 91-126-OH
COMMENTS: GAS 65% LOAD
LOCATION: NORTH SIDE

RUN	DATE	PPM	02	NOx Corrected
1	8-14-91	27.250	16.95	40.7025
2	8-14-91	26.300	17.00	39.7872
3	8-14-91	26.810	16.90	39.5448
AVERAGE		26.787	16.95	40.011

A1

TOTAL SOURCE ANALYSIS, INC.
NOx EMISSIONS TEST RESULTS
CORRECTED

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #1
PROJECT #: 91-126-OH
COMMENTS: GAS 80% LOAD
LOCATION: SOUTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-14-91	30.830	16.00	37.1218
2	8-14-91	31.820	15.95	37.9269
3	8-14-91	31.260	16.00	37.6396
AVERAGE		31.303	15.98	37.563

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #1
PROJECT #: 91-126-OH
COMMENTS: GAS 80% LOAD
LOCATION: NORTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-14-91	30.100	16.40	39.4644
2	8-14-91	29.950	16.36	38.9218
3	8-14-91	30.430	16.45	40.3454
AVERAGE		30.160	16.40	39.577

A1

TOTAL SOURCE ANALYSIS, INC.
NOx EMISSIONS TEST RESULTS
CORRECTED

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #1
PROJECT #: 91-126-OH
COMMENTS: GAS 100% LOAD
LOCATION: SOUTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-14-91	34.100	15.60	37.9604
2	8-14-91	34.520	15.50	37.7163
3	8-14-91	29.500	15.73	33.6654
AVERAGE		32.707	15.61	36.447

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #1
PROJECT #: 91-126-OH
COMMENTS: GAS 100% LOAD
LOCATION: NORTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-14-91	33.280	15.93	39.5074
2	8-14-91	32.700	15.83	38.0533
3	8-14-91	32.150	15.85	37.5614
AVERAGE		32.710	15.87	38.374

A1

TOTAL SOURCE ANALYSIS, INC.
NOx EMISSIONS TEST RESULTS
CORRECTED

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #1
PROJECT #: 91-126-OH
COMMENTS: OIL 50% LOAD
LOCATION: SOUTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-15-91	46.580	17.09	72.1318
2	8-15-91	43.600	17.06	66.9896
3	8-15-91	42.100	17.18	66.7715
AVERAGE		44.093	17.11	68.631

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #1
PROJECT #: 91-126-OH
COMMENTS: OIL 50% LOAD
LOCATION: NORTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-15-91	36.010	17.38	60.3577
2	8-15-91	36.380	17.38	60.9778
3	8-15-91	37.260	17.40	62.8097
AVERAGE		36.550	17.39	61.382

A1

TOTAL SOURCE ANALYSIS, INC.
NOx EMISSIONS TEST RESULTS
CORRECTED

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #1
PROJECT #: 91-126-OH
COMMENTS: OIL 65% LOAD
LOCATION: SOUTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-15-91	48.700	16.75	69.2361
2	8-15-91	47.990	16.80	69.0588
3	8-15-91	49.750	16.74	70.5589
AVERAGE		48.813	16.76	69.618

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #1
PROJECT #: 91-126-OH
COMMENTS: OIL 65% LOAD
LOCATION: NORTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-15-91	43.800	17.01	66.4319
2	8-15-91	43.250	17.06	66.4518
3	8-15-91	44.280	17.03	67.5070
AVERAGE		43.777	17.03	66.797

A1

TOTAL SOURCE ANALYSIS, INC.
NOx EMISSIONS TEST RESULTS
CORRECTED

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #1
PROJECT #: 91-126-OH
COMMENTS: OIL 80% LOAD
LOCATION: SOUTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-15-91	50.850	16.31	65.3627
2	8-15-91	49.140	16.36	63.8604
3	8-15-91	49.460	16.43	65.2828
AVERAGE		49.817	16.37	64.835

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #1
PROJECT #: 91-126-OH
COMMENTS: OIL 80% LOAD
LOCATION: NORTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-15-91	49.380	16.40	64.7427
2	8-15-91	49.230	16.46	65.4182
3	8-15-91	49.350	16.51	66.3246
AVERAGE		49.320	16.46	65.495

A1

TOTAL SOURCE ANALYSIS, INC.
NOx EMISSIONS TEST RESULTS
CORRECTED

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #1
PROJECT #: 91-126-OH
COMMENTS: OIL 100% LOAD
LOCATION: SOUTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-15-91	56.710	16.01	68.4231
2	8-15-91	54.700	15.89	64.4172
3	8-15-91	54.290	16.00	65.3696
AVERAGE		55.233	15.97	66.070

CLIENT: CITY UTILITIES OF SPRINGFIELD, MISSOURI
SITE: SOUTHWEST STATION
UNIT: UNIT #1
PROJECT #: 91-126-OH
COMMENTS: OIL 100% LOAD
LOCATION: NORTH SIDE

RUN	DATE	PPM	O2	NOx Corrected
1	8-15-91	58.410	16.05	71.0555
2	8-15-91	57.600	15.94	68.5161
3	8-15-91	58.430	15.93	69.3636
AVERAGE		58.147	15.97	69.645

SAMPLING AND ANALYTICAL PROCEDURES

TESTING EQUIPMENT - EPA METHOD 5 SAMPLING TRAIN

A Aerotherm Corporation Stack Sampler was used at the sampling location(s) (Figure A-1). The particulate sampling train consisted basically of a glass or stainless steel probe; a variable-heat-controlled filter oven with a calibrated Type K (Chromel/Alumel) thermocouple located at the impinger outlet; a 1/2-hp shaft sealed carbon vane vacuum pump assembly with a vacuum gauge; a control unit with an elapse time indicator, a temperature selector switch, a temperature indicator (potentiometer), temperature controllers, gauges, a calibrated dry gas meter, and an umbilical and various interconnecting hoses, fitting and valves. An appropriately sized glass or stainless-steel nozzle, a calibrated Type K temperature sensor, a static pressure tube, a calibrated S type pitot tube and a variable-heat-controlled stainless-steel liner with a calibrated Type K (Chromel/Alumel) thermocouple are integral parts of the probe assembly.

The vacuum pump was used to control gas sampling rates. The control unit was used to control probe and oven temperatures. The control unit was also used to monitor elapsed sampling times, temperatures, velocities, static pressure, gas sampling rates and sampled gas volume.

Analyzer (Orsat)

Flue gas concentrations were determined with a Gas Analyzer (Orsat) which measures the percentage of carbon dioxide, percentage of oxygen and percentage of carbon monoxide to the nearest tenth of a percent.

Programmable Calculator

A Hewlett Packard, Model 32S, programmable calculator was used to determine the isokinetic sampling rate at each sampling point.

Prior to the field testing, the following procedures were performed: All instruments were checked and calibrated. Gelman Spectro Grade, glass-fiber-mat filters with 99.95 percent retention of 0.3-micron particles were individually numbered, placed in similarly numbered glass petri dishes, desiccated for 24 hours and weighed on a Sartorious analytical balance to the nearest 0.1-milligram, and weighed a minimum of every six hours until two consecutive weights within +0.5 milligram were obtained, or heated for two to three hours at 220 degrees F, cooled in a desiccator and weighed. Several 250 milliliter crucibles were desiccated for a minimum of 24 hours and weighed in the same manner as the filters and petri dishes. Also, several 200-gram quantities of Type 6-16 mesh indicating silica gel were weighed on an Ohaus beam balance and placed into separate airtight polypropylene storage bottles.

The number of sampling points and positions of the points in the flue at the sampling location(s), and the sampling time at each point were determined prior to the particulate testing. The sampling procedures were performed in accordance with the Environmental Protection Agency's Reference Method 5, "Determination of Particulate Emissions from Stationary Sources" in the July 1, 1990 Code of the Federal Register, "Standards of Performance for New Stationary Sources" and subsequent revisions.

Before each test run a particulate sampling train was prepared inpart at the sampling location(s) in the following manner: An appropriately sized sampling nozzle was installed onto the inlet of the sampling probe and capped. The probe was then dimensioned and marked with glass-cloth tape at increments that corresponded with the predetermined sampling positions in the flue. A standard impinger assembly was prepared by adding 250 milliliters of distilled water to each of the first two impingers. The third impinger was left dry and the fourth was filled with approximately 400 grams of type 6-16 mesh indicating silica gel. The entire impinger assembly was then placed in an ice bath. A disc filter was removed from its petri dish and placed inside of a filter holder. The filter holder was then placed inside of a filter oven and assembled to the sampling probe outlet and the impinger unit inlet. Next, an umbilical and sampling hoses were connected to the sampling probe, filter oven, impinger unit, a vacuum pump and the control unit, accordingly. The probe and oven were then heated to and held at 248 degrees F plus of minus 25 degrees.

As soon as the probe and oven temperatures had stabilized the entire sampling train assembly was leak-checked at a minimum of 15 inches of mercury vacuum for one minute and the leakage rate recorded. A leakage rate of less than .02 cfm and no vacuum loss was considered acceptable.

After the particulate sampling train had been assembled, the probe and oven heated, and the entire system leak-checked, as previously described, the particulate sampling was performed.

Three test runs were performed at the sampling location(s). The sampling data for each test run was recorded on a field test form during each of the sampling periods.

After the completion of a test run, the following procedures were performed: A final leak-check was performed at maximum vacuum or greater incurred during the test for one minute and the leakage rate recorded. The flue gas moisture collected in the first three impingers was measured and recorded. The moisture laden silica gel in the fourth impinger was transferred to an appropriately marked, airtight polypropylene bottle and retained for later weighing. The weight gain of the silica gel moisture collection was added to the measured moisture condensed for that test run. The sample nozzle, probe and filter holder were capped and taken to a clean area for sample recovery. At the recovery area, the disc filter was carefully removed from the filter

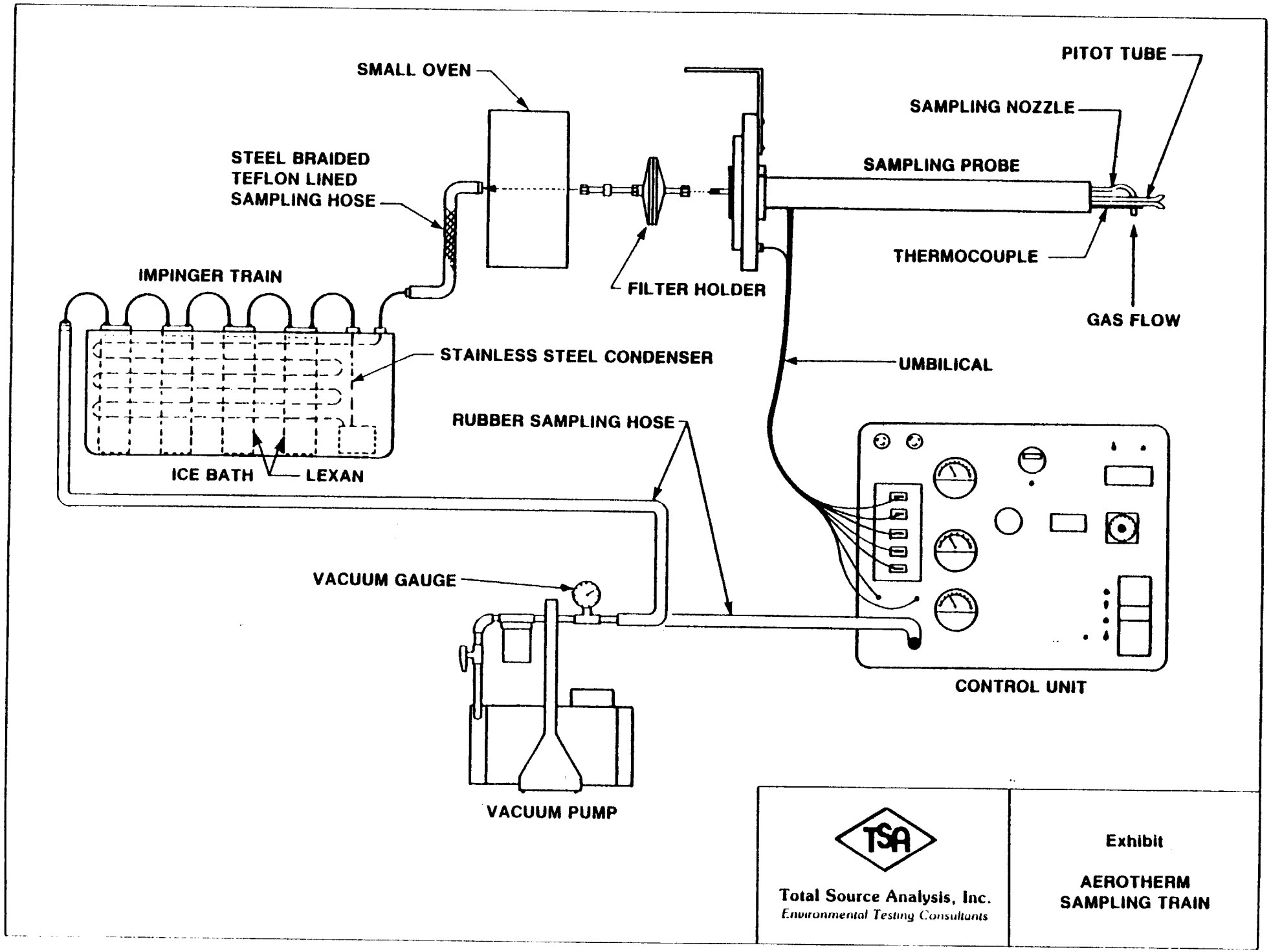
holder and transferred to its petri dish for later weighing. The sampling nozzle, probe and filter holder were washed with nanograde acetone, glass components were washed three times, stainless steel components were washed six times and visually inspected for cleanliness. The acetone washing and acetone blank were collected and labeled polypropylene sample bottles and retained for later evaporation, desiccation and weighing.

Flue gas concentrations (percentage of CO_2, percentage of O_2, and percentage of CO) were determined by taking several Orsat samples of the gas collected, simultaneously with the particulate sampling, throughout the test run, by an integrated gas sampling train. The integrated gas sample was collected from the discharge of the particulate control unit. The sampling train was set at a predetermined constant flow rate to obtain an adequate sample or by taking direct readings from the sampling points. The concentrations for each test run were recorded on a field test form.

ANALYTICAL PROCEDURES - EPA REFERENCE METHOD 5 (PARTICULATE)

After the field testing was completed, the following procedures were performed: Each silica gel moisture collection was weighed in its storage bottle on an Ohaus beam balance with sensitivity of 0.1-gram. Each disc filter and petri dish was oven dried at 220 degrees Fahrenheit for two to three hours and cooled in a dessicator for two hours before weighing. Each acetone washing and acetone blank was transferred from its sample bottle to a preweighed crucible for evaporation. When the acetone in a crucible had completely evaporated, the crucible was transferred to a desiccator for further drying at room temperature. Each acetone blank collected was used to determine the amount of residual weight each crucible retained due to acetone impurities. Each disc filter and petri dish, acetone washing and acetone blank was weighed on a Sartorious analytical balance with a sensitivity of 0.1-milligram.

All test instruments were recalibrated to determine the deviation percentage.



Total Source Analysis, Inc.
Environmental Testing Consultants

Exhibit

AEROTHERM
SAMPLING TRAIN

TESTING EQUIPMENT EPA TEST METHOD 20 (NOx)

Principle: A 48 or 49 point traverse is performed at the sample location and O2 concentrations are measured at each point. The eight test points with the lowest O2 concentrations will be traversed for the NOx testing. At each NOx test point the gas is sampled for a period of one minute plus the system response time. Both NOx and O2 are measured at each point.

1. Sampling Train
    1. A Beckman Corporation Portable Compliance Monitor Model 951A and/or a Teco Model 10AR NO/NO_x analyzer is used along with an Esterline Angus Model MS411BB Strip Chart Recorder together with sample probe, sample line, calibration valve assembly, moisture removal system, particulate filter, sample pump, sample flow rate control and sample gas manifold make up the sampling system.

2. Measurement System Performance Specifications
    1. Analyzer Calibration Error: Less than +2 percent of the span for the zero, mid-range, and high-range calibration gases.

    2. Sampling System Bias: Less than +5 percent of the span for the zero, and mid or high range calibration gases.

    3. Zero Drift: Less than +3 percent of the span over the period of each run.

    4. Calibration Drift: Less than +3 percent of the span over the period of each run.

3. Calibration Gases The calibration gases for the NOx analyzer are NO in nitrogen.

1. High-Range Gas: Concentration equivalent to 80 to 90 percent of the span.

2. Mid-Range Gas: Concentration equivalent to 45 to 55 percent of the span.

3. Low-Level Gas: Concentration equivalent to 20 to 30 percent of the span.

4. Zero Gas: Concentration of less than 0.25 percent of the span. Purified ambient air is used for the zero gas by passing air through a charcoal filter, or through one or more impingers containing a solution of 3 percent H202.

The calibration gases for the O_2 analyzer are O_2 in nitrogen.

1. High-Range: Purified air is used for the high range gas.

2. Mid-Range: A concentration between 11 and 15 percent was used.

3. Zero Gas: Purified nitrogen was used for zero gas.

4. Calibration Gas Concentration Verification:
Calibration gases that are analyzed following the Environmental Protection Agency Traceability Protocol Number.

1. A certification from the gas manufacturer that Protocol Number 1 was followed is included.

5. Measurement System Preparation

The measurement system was assembled by following the manufacturer's written instructions for preparing and preconditioning the gas analyzer and, as applicable, the other system components. The calibration gases were introduced and all necessary adjustments to calibrate the analyzer and the data recorder were performed.

6. Analyzer Calibration Error:

1. The analyzer calibration error check is conducted by introducing calibration gases to the measurement system at any point upstream of the gas analyzer as follows: After the measurement system is prepared for use, the zero, mid-range, and the high-range gases are introduced to the analyzer. During this check, no adjustments to the system are made except those necessary to achieve the correct calibration gas flow rate at the analyzer. The analyzer calibration error check is considered invalid if the gas concentration displayed by the analyzer exceeds +2 percent of the span for any of the calibration gases.

2. Sampling System Bias Check:

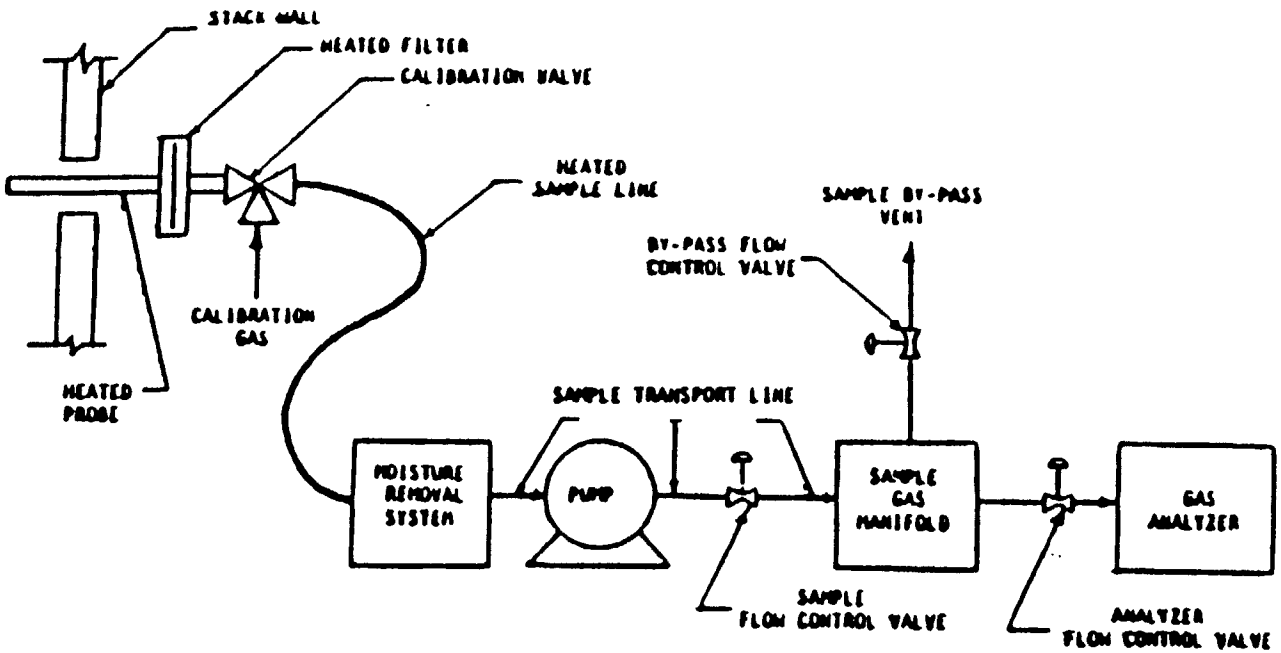
The sampling system bias check was performed by introducing calibration gases at the calibration valve installed at the outlet of the sampling probe. A zero gas and either the mid-range or high-range gas, whichever most closely approximates the effluent concentrations, is used for this check as follows: The upscale calibration

gas is introduced and the gas concentration recorded. The zero gas is introduced and recorded. During the sampling system bias check, the system is operated at the normal sampling rate, no adjustments to the measurement system, other than those necessary to achieve proper calibration gas flow rates at the analyzer, are made. Alternately, introduce the zero and upscale gases until a stable response is achieved. The tester determined the measurement system response time by observing the times required to achieve a stable response for both the zero and upscale gases. Note the longer of the two times as the response time.

The sampling system bias check shall be considered invalid if the difference between the gas concentrations displayed by the measurement system for the analyzer calibration error check and for the sampling system bias check exceeds +5 percent of the span for either the zero or upscale calibration gas.

7. Sample Collection:

1. The sampling probe was positioned at the first measurement point, and sampling began at the same rate as used during the system calibration drift test. A constant sampling rate was maintained (i.e., +10 percent) during the entire run. The sampling time per point was one minute, plus twice the system response time. For each run, those measurements obtained after twice the response time of the measurement system has elapsed were used to determine the average effluent concentration.



Measurement System Schematic

Prior to the field testing, the following procedures were performed: All instruments were checked and calibrated. Gelman Spectro Grade type A/E, Binder free, organic free, glass-fiber-mat filters with 99.98 percent retention of 0.3-micron particles were individually numbered, placed in similarly numbered glass petri dishes, heated for two to three hours at 220°F, cooled in a desiccator and weighed. Several 250 milliliter crucibles were desiccated for a minimum of 24 hours and weighed in the same manner as the filters and petri dishes. Also, several 400-gram quantities of Type 6-16 mesh indicating silica gel were weighed on an Ohaus beam balance and placed into separate airtight polypropylene storage bottles.

The number of sampling points and positions of the points in the flue at the sampling location, and the sampling time at each point were determined prior to the particulate testing. The sampling procedures were performed in accordance with the Environmental Protection Agency's Reference Method 5, "Determination of Particulate Emissions from Stationary Sources" in the July 1, 1991 Code of the Federal Register, "Standards of Performance for New Stationary Sources" and subsequent revisions.

Shroud area

$10.33' \times 13.0' = 134.33\ ft^2$

Baffel area

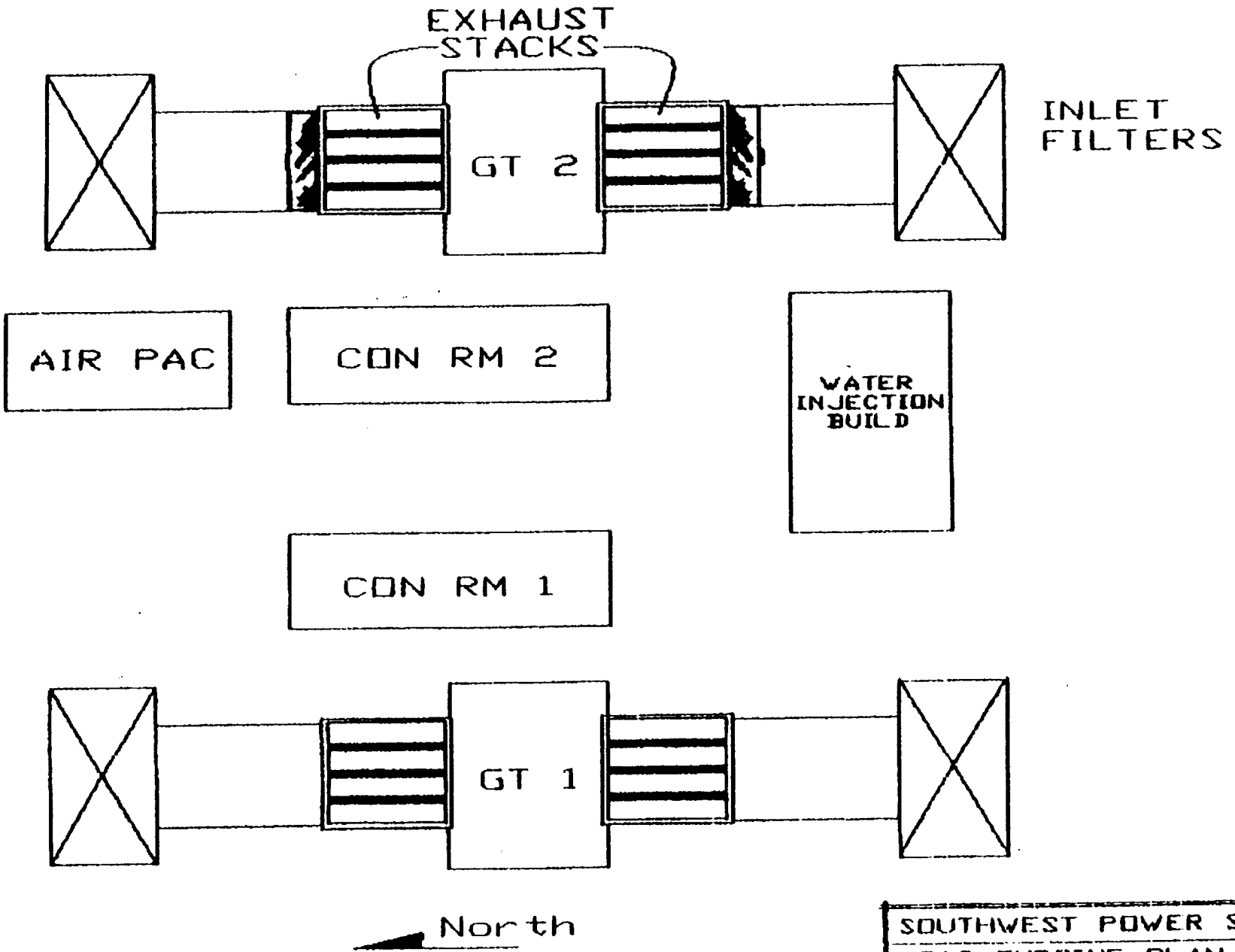
$3 - 13' \times 18'' = 13' \times 1.5' \times 3 = 58.5\ ft^2$

$2 - 13' \times 9'' = 13' \times .75' \times 2 = 19.5\ ft^2$

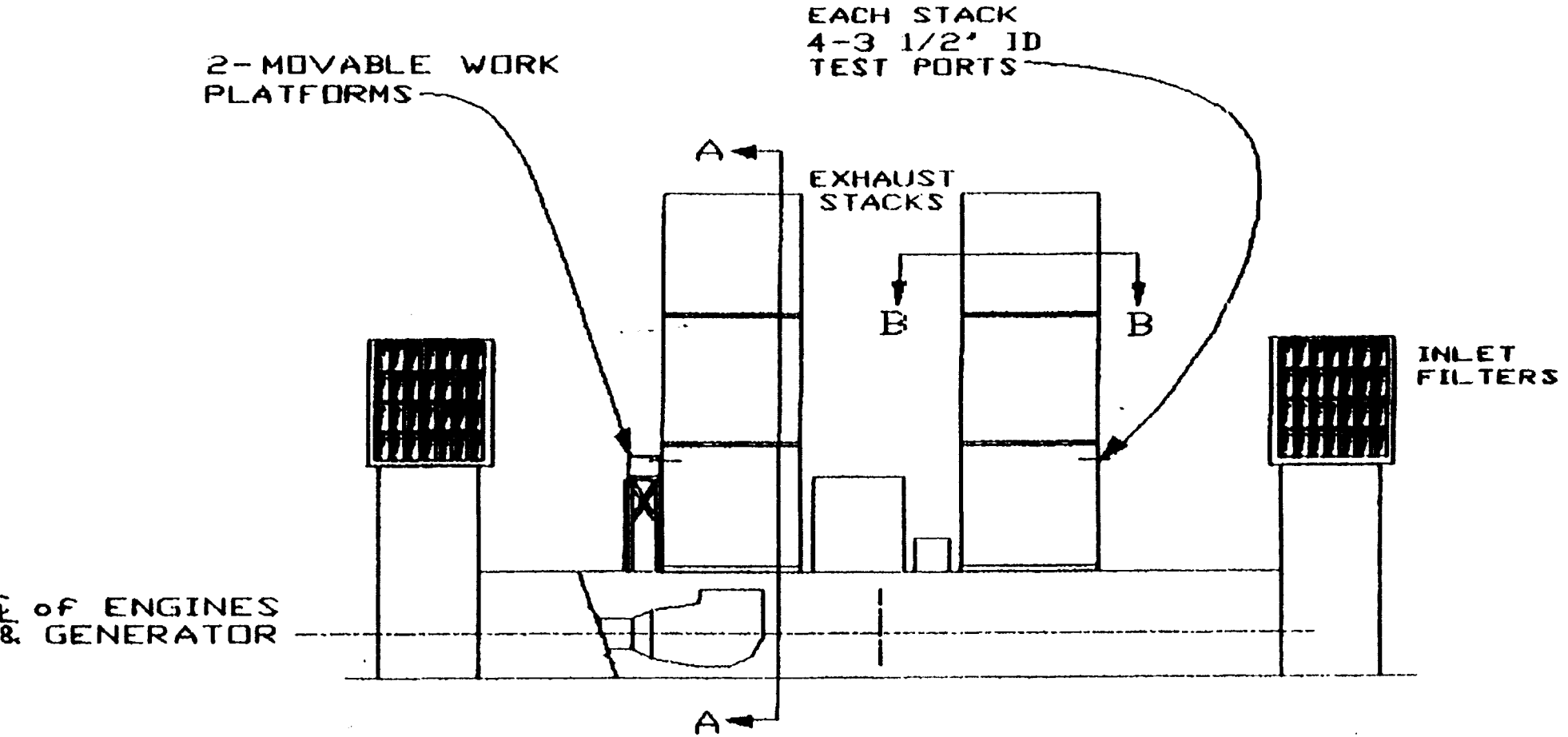
$78.0\ ft^2$

Effective Area (Open)

$134.33 - 78.0 = 56.33\ ft^2$



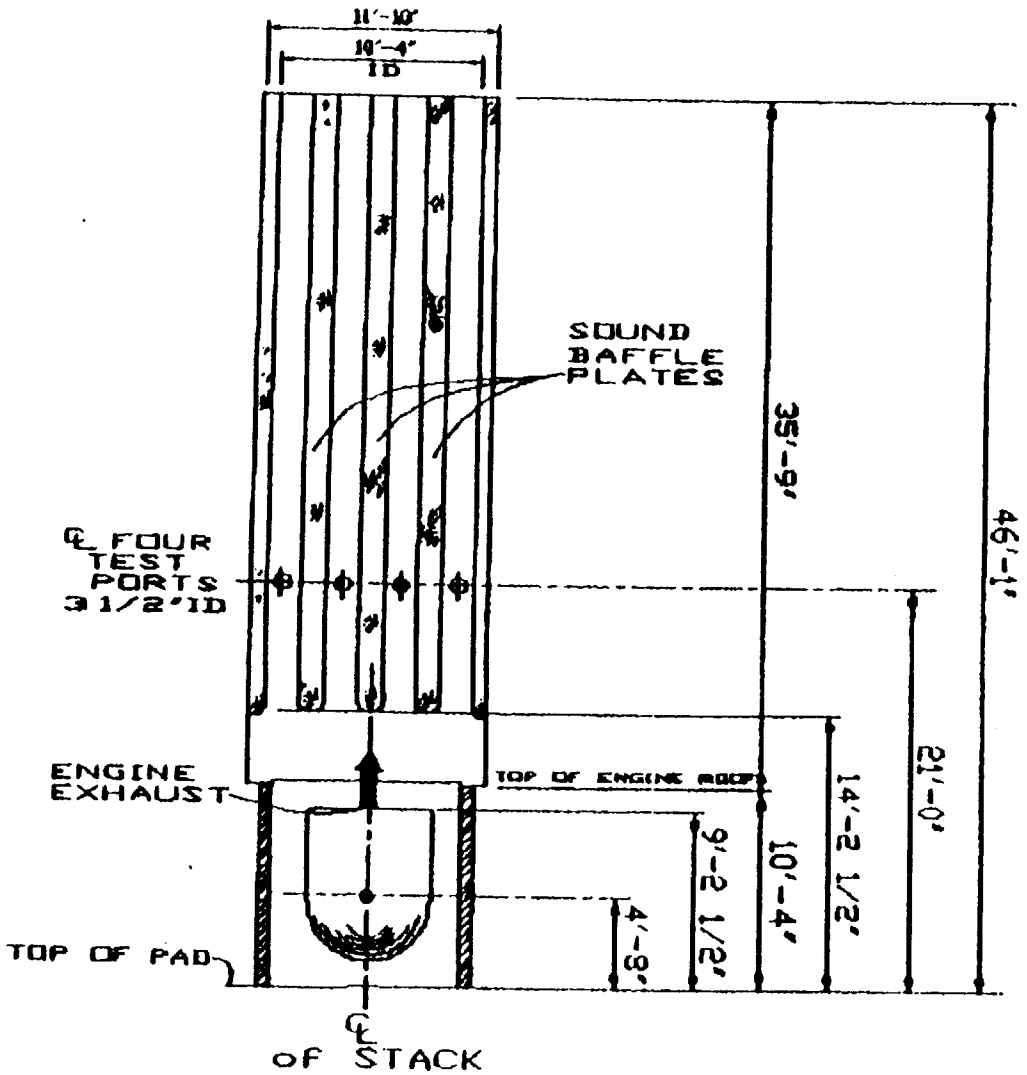
SOUTHWEST POWER STATION
GAS TURBINE PLAN VIEW
DWG 1 of 3 5-29-91



ELEVATION

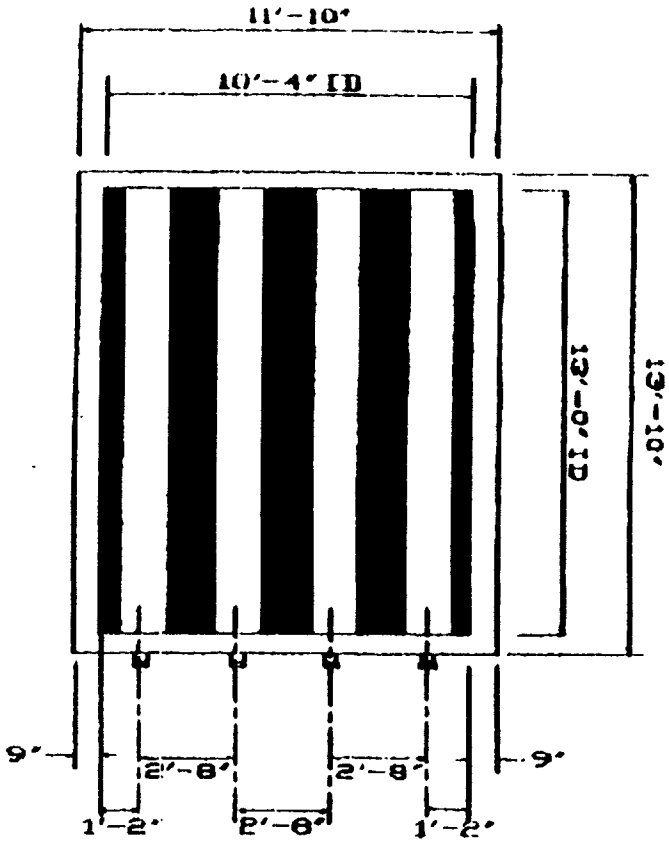
North

SOUTHWEST POWER STATION
GAS TURBINE-ELEVATION
DWG 2 of 3 5-29-91



SECTION A-A

TYPICAL LOOKING
NORTH OR SOUTH
FROM GENERATOR



SECTION B-B
NOT TO SCALE

SOUTHWEST POWER STATIO
GAS TURBINE SEC.VIEW
DWG 3 of 3 5-29-91

PARTICULATE FIELD DATA SHEET (Continued)

UNIT #1

CLIENT				PROJECT #					DATE		
RUN NO.				TEMPERATURE							Dry Gas Meter Reading in CuFt
SAMPLE POINT	ΔP	$\sqrt{\Delta P}$	ΔH	STACK	PROBE	IMP OUT	OVEN	METER IN	METER OUT	Vac Pr (In Hg)	

PARTICULATE FIELD DATA SHEET (Continued)

UNIT #2

CLIENT SPRINGFIELD	PROJECT #91-126	DATE 8- 91

RUN NO. 1-2+3				TEMPERATURE							Dry Gas Meter Reading in CuFt
SAMPLE POINT	ΔP	$\sqrt{\Delta P}$	ΔH	STACK	PROBE	IMP OUT	OVEN	METER IN	METER OUT	Vac Pr (In Hg)	

APPENDIX

Sample Calculations

NOMENCLATURE

acf	= actual cubic feet
acfm	= actual cubic feet per minute
A	= effective area of flue in square feet
acm	= actual cubic meters
acmm	= actual cubic meters per minute
A_n	= inside area of sampling nozzle in square feet
B_{ws}	= water vapor in gas stream, proportion by volume
%C	= percent carbon by weight, dry basis
%CO	= percent carbon monoxide by volume, dry basis
$\%CO_2$	= percent carbon dioxide by volume, dry basis
C_p	= pitot tube coeffecient
D_I	= dust loading per heat input in pounds (grams) per million Btu (calories) per Fr constant
D_I'	= dust loading per heat input in pounds (grams) per million Btu (calories) per Fr calculated
dscf	= dry standard cubic feet
dscfh	= dry standard cubic feet per hour
dscm	= dry standard cubic meters
dscmh	= dry standard cubic meters per hour
fps	= feet per second
F_r	= ratio factor of dry flue gas volume to heat value of combusted fuel in dry standard cubic feet (meters) per million Btu (calories)
gms	= grams
gm-mole	= gram-mole
grs	= grains
ΔH	= orfice pressure drop in inches water, average
%H	= percent hydrogen by weight, dry basis
H_c	= heat of combustion in Btu per pound, dry basis
hr	= hour
%I	= percent isokinetic
in. Hg	= inches mercury
lbs	= pounds
lb-mole	= pound-mole
%M	= percent moisture by volume
mmBtu	= million Btu
mmcal	= million calories
mm Hg	= millimeters mercury
mps	= meters per second
M_s	= molecular weight in pounds (gram) per pound (gram) mole (wet basis)
%N	= percent nitrogen by weight, dry basis
$\%N_2$	= percent nitrogen by difference, dry basis
%O	= percent oxygen by difference, dry basis
$\%O_2$	= percent oxygen by volume, dry basis
P_b	= barometric pressure in inches mercury
P_{std}	= standard absolute pressure (29.92 in Hg)
P_s	= absolute pressure in flue in inches (millimeters) mercury
P_f	= static pressure in flue in inches water, average
$\sqrt{\Delta P}$	= square root of velocity head in inches water, average
%S	= percent sulfur by weight, dry basis
scf	= standard cubic feet
scm	= standard cubic meters
T_{std}	= absolute temperature of air in degrees Rankine at standard conditions (528 degrees)
T_S	= absolute temperature of flue gas in degrees Rankin, average
T_m	= absolute temperature at meter in degrees Rankine, average
V_S	= velocity of flue gas in feet (meters) per second
V_l	= volume of condensate through the impingers in milliliters
V_{lc}	= volume of liquid collected in condenser in milliliters plus weight of liquid absorbed in silica gel in grams indicated as milliliters
V_m	= volume of metered gas measured at meter conditions in cubic feet (meters)
V_{ms}	= volume of metered gas corrected to dry standard conditions in cubic feet (meters)
V_o	= volume of flue gas at actual conditions in cubic feet (meters) per minute
Q_{sd}	= volume of flue gas corrected to dry standard conditions in cubic feet (meters) per hour
V_t	= total volume of flue gas sampled at actual conditions in cubic feet (meters)
V_w	= volume of water vapor in metered gas corrected to standard conditions in cubic feet (meters)
V_{wc}	= volume of water condensed in impingers corrected to standard conditions
V_{wsg}	= volume of water collected in silica gel corrected to standard conditions
W_a	= total weight of dust collected per unit volume in grains (grams) per actual cubic feet (meters)
W_d	= total weight of dust collected per unit volume in pounds (grams) per dry standard cubic feet (meters)
W_g	= total weight of dust collected in grams
W_h	= total weight of dust collected per unit volume in pounds (grams) per hour, dry basis
W_p	= total weight of dust collected in pounds
W_s	= total weight of dust collected per unit volume in grains (grams) per dry standard cubic feet (meters)
W_{sg}	= impinger silica gel weight gain in grams
Y	= metered gas volume correction factor
Θ	= total elapsed sampling time in minutes

EPA DUST LOADING Formulas

(1) ABSOLUTE FLUE PRESSURE (in. Hg)

$$P_s = (\pm P_f \div 13.6) + P_b$$

(2) WATER VAPOR VOLUME IN METERED GAS CORRECTED TO STANDARD CONDITIONS (scf)

$$V_{wc} = .04707 \times V_l \qquad V_{wsg} = .04715 \times W_{sg}$$
$$V_w = V_{wc} + V_{wsg}$$

(3) METERED GAS VOLUME CORRECTED TO STANDARD CONDITIONS (scf)

$$V_{ms} = 17.64 \times Y \times V_m \frac{P_b + (\Delta H/13.6)}{T_m}$$

(4) PERCENT MOISTURE IN FLUE GAS

$$B_{ws} = \frac{V_w}{(V_{ms} + V_w)} \qquad \%M = B_{ws} \times 100$$

(5) AVERAGE RESULTS OF FLUE GAS ANALYSIS

$$\%N_2 \text{ dry} = 100 - (\%CO_2 + \%O_2 + \%CO)$$

(6) APPROXIMATE MOLECULAR WEIGHT OF FLUE GAS (WET BASIS) (lb/lb-mole)

$$M_s = (18 \times B_{ws}) + \Big((.440\ (\%CO_2) + .320\ (\%O_2) + .280\ (\%N_2 + \%CO)\Big) \times (1 - B_{ws})$$

(7) GAS VELOCITY IN FLUE (fps)

$$V_s = 85.49 \times C_p \times (\sqrt{\Delta P}\ )\ \text{avg.} \sqrt{\frac{T_s}{P_s \times M_s}}$$

(8) FLUE GAS VOLUME AT ACTUAL CONDITIONS (acfm)

$$V_o = V_s \times A \times 60$$

(9) FLUE GAS VOLUME CORRECTED TO DRY STANDARD CONDITIONS (dscfh)

$$Q_{sd} = \frac{T_{std}}{29.92} \times \frac{P_s}{T_s} \times V_o \times (1 - B_{ws}) \times 60$$

(10) TOTAL FLUE GAS VOLUME SAMPLED AT ACTUAL CONDITIONS (acf)

$$V_t = \left[V_m \times Y \times \frac{T_s}{T_m} \times \left(\frac{P_b + (\Delta H/13.6)}{P_s} \right) \right] + \left(0.00267 \times V_{lc} \times \frac{T_s}{P_s} \right)$$

EPA DUST LOADING FORMULAS (Continued)

(11) DUST CONCENTRATION FOR INDIRECT HEATING UNIT ACTUAL CONDITIONS AND STANDARD CONDITIONS

W_g = gms

$W_p = 0.002205 \times W_g$ (lb)

$W_d = \frac{W_p}{V_{ms}}$ (lb/dscf)

$W_h = W_d \times Q_{sd}$ (lb/hr dry)

$W_a = \frac{7000 \times W_p}{V_t}$ (gr/acf)

$W_s = 7000 \times W_d$ (gr/dscf)

$D_l = \frac{9780 \times 20.9 \times W_d}{(20.9 - \%O_2)}$ (lb/mmBtu with constant 9780Fr)

$F_r = \frac{10^6 \times [(3.64 \times \%H) + (1.53 \times \%C) + (0.57 \times \%S) + (0.14 \times \%N) - (0.46 \times \%O)]}{H_c}$ (dscf/mmBtu)

$D_l' = \frac{20.9 \times W_d \times F_r}{(20.9 - \%O_2)}$ (lb/mmBtu with calculated F_r)

(12) PERCENT OF ISOKINETIC SAMPLING

$$\%I = \frac{1.667 \times T_s \times \left\{0.00267 \times V_{lc} + \left[\frac{V_m \times Y}{T_m} \times \left(P_b + \Delta H/13.6\right)\right]\right\}}{\Theta \times V_s \times P_s \times A_n}$$

NO_x NOMENCLATURE

A	= Absorbance of sample
%C	= Percent carbon by weight, dry basis
C_{NO_2}	= Concentration of NO_x as NO_2, dry basis corrected to standard conditions, 1b/dscf.
E_{NO_2}	= Emissions of NO_x as NO_2, dry basis, lbs/mmBtu
F	= Dilution factor (ie 25/5, 25/10 etc., required only if sample dilution was needed to reduce the absorbance into the range of calibration).
Fr	= F factor, ratio factor of dry flue gas volume to heat value of combusted fuel in dry standard cubic feet per million Btu.
%H	= Percent hydrogen by weight, dry basis
Hc	= Heat of comubstion, dry basis, Btu/lb
Kc	= Spectrophotometer calibration factor
M	= Mass of NO_xas NO_2 in fA AMPLW, UF, (micro grams)
%N	= Percent nitrogren by weight, dry basis
%O	= Percent oxygen by weight, dry basis
$\%O_2$	= Percent oxygen by volume, dry basis
Pf	= Final absolute pressure of flask, (in. Hg).
Pi	= Initial absolute pressure of flask, (in. Hg).
PPM	= Parts per million
P_{std}	= Standard absolute pressure (29.92 in. Hg).
%S	= Percent sulfure by weight, dry basis
Tf	= Final basolute temperature of flask, (°R)
Ti	= Initial absolute temperature of flask, (°F)
T_{std}	= Standard absolute temperature, (528°F)
Vac	= Sample volume at standard conditions (dry basis) ml.
Vf	= Volume of flask and valve, ml.
Va	= Volume of absorbing solution, 25 ml.
2	= 50/25, the aliquot factor. (If other than a 25-ml aliquot was used for anlaysis, the corresponding factor must be substitued.)

NO_x CALCULATION

$1.194 \times 10^{-7} \times PPM = \underline{lb/dscf}$

$lb/dscf \times F\ Factor \times \frac{20.9}{20.9 - \%\ O_2} = \underline{lb/mmbtu}$

$lb/dscf \times dscfm \times 60 = \underline{lb/hr}$

NO_x Test Data

NOX
August 8, 1991

NOX FIELD DATA FORM

CLIENT Utilities of Sacramento PROJECT # 91-126-011 TEST DATE 8-8-91
SAMPLE LOCATION North Stack OPERATOR JW
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 50% 25 MW COMMENT North Side North gas

24 HOUR TIME	RUN #1	TEST PORT/POINT	NOX (PPM)	O2 (%)
A-1 10:10		Chan Nels 1-2	20.1	17.7
2			20.5	17.7
3			21.0	18.1
4			21.9	18.0
5			22.8	18.0
6			24.0	17.8
7			25.1	17.7
8			26.3	17.7
9			25.9	17.7
10		10:49 Reset	24.5	17.8
11		Water Injection	24.8	17.8
12			24.1	17.8
B-1			21.9	18.1
2			21.3	18.1
3			24.0	17.9
4			25.1	17.6
5			27.9	17.4
6			26.5	17.3 -1
7			27.0	17.3 -2
8			23.9	17.3 -3
9			23.4	17.3 -4
10			22.6	17.4
11			19.6	17.5
12			18.8	18.1
C-1			33.1	17.8
2			24.3	17.8
3			21.1	17.5
4			22.5	17.4
5			20.0	16.9 -3
6			30.7	17.2 -5
7			31.4	17.2 -6
8			31.4	17.3 -7
9			31.3	17.3 -8
10			28.5	18.1
11			28.7	17.8
12			27.3	17.9
D-1			23.8	18.4
2			24.2	18.4
3			18.6	18.3
4			19.4	18.3
5			18.2	18.2
6			18.4	18.1
7			19.8	18.0
8			19.1	18.1
9			18.8	18.1
10			18.7	18.1
11			19.2	18.1
12			17.9	18.2
		AVERAGE		

* Leak check with dry gas meter .009 at 15"

NOX FIELD DATA FORM

CLIENT Sorling Engr. PROJECT # 91-126-OH TEST DATE 8-8-91
SAMPLE LOCATION North Stack OPERATOR J Wright
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 50% 24 mw COMMENT _____
RUN #

24 HOUR TIME	RUN #	TEST PORT/POINT	1 NOX (PPM)	2 O2 (%)
13:00	B-6		22.5	17.4
	B-7		22.9	17.4
	B-8		22.5	17.4
	B-9		22.9	17.5
	C-5		22.2	17.5
	C-6		22.5	17.4
	C-7		23.4	17.4
	C-8		23.9	17.4
			22.85 AV	17.43 AV
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	1 NOX (PPM)	2 O2 (%)
	B-6		22.4	17.4
	7		23.0	17.4
	8		23.1	17.4
	9		22.8	17.5
	C-5		23.9	17.5
	6		23.2	17.4
	7		22.9	17.4
	8		22.1	17.4
			22.93 AV	17.43 AV
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	1 NOX (PPM)	2 O2 (%)
	B-6		23.4	17.5
	7		23.3	17.4
	8		23.2	17.4
	9		22.8	17.5
	C-5		23.9	17.4
	6		24.6	17.4
	7		25.2	17.4
	8		24.3	17.5
			23.84	17.44
14:28				
		AVERAGE		

NOX FIELD DATA FORM

CLIENT _____ PROJECT # 91-126-014 TEST DATE _____

SAMPLE LOCATION North OPERATOR _____

AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____

% LOAD 65% 33mw COMMENT _____

RUN #

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
14:48	B-6		28.3	16.1
	7		29.0	16.6
	8		27.8	16.8
	9		24.6	17.2
	C-5		29.6	16.5
	6		24.6	16.5
	7		28.8	16.5
	8		26.6	16.8
			28.04	16.63
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
	B-6		24.4	16.5
	7		24.0	16.6
	8		24.5	16.8
	9		23.8	17.2
	C-5		24.0	16.5
	6		24.6	16.5
	7		25.2	16.6
	8		25.6	16.8
			24.51 AVG	16.69
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
	B-6		25.1	16.5
	7		25.4	16.6
	8		25.4	16.8
	9		24.8	17.1
	C-5		24.4	16.5
	6		25.0	16.5
	7		25.5	16.5
	8		24.9	16.9
			25.06	16.68
		AVERAGE		

NOX FIELD DATA FORM

CLIENT SPRINGFIELD PROJECT # 91136 TEST DATE 8-8-91
SAMPLE LOCATION NORTH OPERATOR JJ
AMBIENT TEMPERTURE ____ RELATIVE HUMIDITY % ____ Pbar ____
% LOAD 80% 40 MW GAS COMMENT ____
RUN #

24 HOUR TIME	RUN #	TEST PORT/POINT	1 NOX (PPM)	2 O2 (%)
16:44	B-6		28.5	16.4
	7		28.6	16.4
	8		28.6	16.3
	9		28.8	16.4
	C-5		28.1	16.5
	6		28.7	16.4
	7		29.2	16.4
	8		28.7	16.5
			28.65 AV	16.4 AV
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	1 NOX (PPM)	2 O2 (%)
	B-6		24.4	16.3
	7		25.4	16.4
	8		27.0	16.4
	9		27.1	16.3
	C-5		27.8	16.6
	6		28.3	16.6
	7		28.7	16.9
	8		28.4	16.3
			27.14	16.45
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	1 NOX (PPM)	2 O2 (%)
	B-6		29.4	16.4
	7		27.3	16.3
	8		29.7	16.3
	9		26.6	16.4
	C-5		25.5	16.5
	6		27.7	16.4
	7		26.7	16.4
	8		26.7	16.4
			27.38	16.39
		AVERAGE		

NOX FIELD DATA FORM

CLIENT Springfield PROJECT # 91-126-01H TEST DATE 8-8-91
SAMPLE LOCATION North OPERATOR
AMBIENT TEMPERTURE RELATIVE HUMIDITY % Pbar 28.25
% LOAD 100% mw gas COMMENT
RUN #

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
18:45	B-6		24.5	16.0
	7		24.8	16.0
	8		24.2	16.0
	9		24.7	16.0
	C-5		26.2	16.0
	6		26.1	16.0
	7		25.9	16.1
	8		25.0	16.1
			25.10	16.03
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O2 (%)
	B-6		23.6	16.0
	7		24.6	16.0
	8		24.3	16.0
	9		23.1	16.0
	C-5		22.7	15.9
	6		22.2	15.7
	7		23.0	16.1
	8		22.0	16.4
			25.56	16.01
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O2 (%)
	B-6		28.3	16.0
	7		28.3	16.1
	8		29.4	16.1
	9		25.8	16.3
	C-5		27.5	16.2
	6		27.3	16.2
	7		27.6	16.2
	8		27.8	16.2
			27.75	16.16
		AVERAGE		

NOX FIELD DATA FORM

CLIENT Utilities of Springfield PROJECT # 91-126 TEST DATE 8-8-91
SAMPLE LOCATION South Side gas OPERATOR JW
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 50% 24 mw COMMENT South Side gas

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O_2 (%)	
A-1 10:10		Channel 4-5	20.7	18.7	
2			20.1	17.7	
3			20.7	17.1	
4			21.4	17.6	
5			21.9	17.5	
6			21.4	17.5	
7			19.9	17.7	
8			18.4	18.0	
9			17.0	18.0	
10			16.4	18.3	
11			13.8	18.8	
12			13.2	18.9	
B-1			19.4	17.5	
2			19.5	17.4	
3			21.3	17.1	
4			21.7	17.0	-7
5			22.0	16.9	-1
6			21.9	16.9	-2
7			21.3	17.0	-8
8			19.0	17.5	
9			14.2	18.1	
10			13.9	18.1	
11			11.9	18.6	
12			11.5	18.8	
C-1			17.0	17.6	
2			21.3	17.4	
3			19.4	17.1	
4			20.3	16.9	-3
5			20.1	16.9	-4
6			20.1	16.9	-5
7			19.5	17.0	-6
8			18.3	17.3	
9			17.0	17.6	
10			14.8	18.0	
12			14.4	18.1	
D-1			13.6	18.2	
2			16.3	17.7	
3			19.0	17.8	
4			19.4	17.8	
5			19.7	17.7	
6			19.5	17.7	
7			19.7	17.7	
8			19.5	17.8	
9			19.1	17.9	
10			18.4	18.0	
11			18.2	18.0	
12			17.9	18.1	
* LEAK check with DRY gas meter .004 #/hr					
		AVERAGE			

NOX FIELD DATA FORM

CLIENT SPRINGFIELD PROJECT # 91-126-OH TEST DATE 8-8-91
SAMPLE LOCATION SOUTH OPERATOR F Whee
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 50% 24 mw COMMENT _____
RUN #

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
13:00	B-4		18.5	18.0
	B-5		21.2	17.4
	B-6		23.8	17.1
	B-7		24.7	17.1
	C-4		23.5	17.2
	C-5		24.2	17.2
	C-6		24.0	17.1
	C-7		25.3	17.1
			23.213 AV	17.23 AV
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
	B-4		23.8	17.1
	5		21.9	17.5
	6		22.9	17.1
	7		24.3	17.1
	C-4		24.3	17.1
	5		24.0	17.1
	6		23.4	17.3
	7		22.9	17.3
			23.49 AV	17.2 AV
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
	B-4		24.5	17.1
	5		24.3	17.1
	6		21.9	17.4
	7		19.4	18.1
	C-4		25.0	17.1
	5		24.7	17.2
	6		23.8	17.3
	7		22.3	17.5
			23.11	17.35
14:28				
		AVERAGE		

NOX FIELD DATA FORM PAGE 2

CLIENT _____ PROJECT # 91-126-OH TEST DATE 8-8-91
SAMPLE LOCATION South OPERATOR _____
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 65% 33 MW COMMENT _____
RUN #

24 HOUR TIME	RUN #	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
14:48	D-4		27.9	16.6
	5		28.7	16.7
	6		27.1	16.9
	7		24.0	17.3
	C-4		29.6	16.6
	5		30.1	16.6
	6		28.6	16.7
	7		26.5	16.9
			27.81	16.8
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
	B-4		28.8	16.7
	5		28.6	16.7
	6		26.2	16.9
	7		23.1	17.3
	C-4		29.0	16.6
	5		28.4	16.6
	6		28.3	16.7
	7		25.7	16.9
			27.27	16.8
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
	B-4		29.6	16.6
	5		29.1	16.7
	6		26.7	16.9
	7		24.5	17.3
	C-4		29.3	16.6
	5		28.7	16.6
	6		28.1	16.7
	7		25.4	17.0
			27.68	16.8
		AVERAGE		

NOX FIELD DATA FORM

CLIENT Springfield PROJECT # 91-126 TEST DATE 8-8-91
SAMPLE LOCATION South OPERATOR JM
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 80% 40 mw gas COMMENT _____
RUN #

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
16:44	B-4		28.7	16.5
	5		29.1	16.5
	6		27.7	16.7
	7		24.6	17.1
	C-4		28.8	16.6
	5		29.4	16.6
	6		28.2	16.6
	7		26.3	16.8
			27.85	16.67
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O2 (%)
	B-4		27.7	16.7
	5		27.3	16.7
	6		26.4	16.7
	7		26.0	16.8
	C-4		29.1	16.6
	5		30.2	16.6
	6		27.4	16.7
	7		26.3	16.8
			27.58	16.70
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O2 (%)
	B-4		27.5	16.7
	5		27.3	16.7
	6		26.5	16.7
	7		25.3	16.8
	C-4		27.5	16.6
	5		28.3	16.3
	6		26.3	16.7
	7		24.8	16.9
			26.69 AV	16.68
		AVERAGE		

NOX FIELD DATA FORM

CLIENT Spring Field PROJECT # 91-126-01F TEST DATE 8-8-91
SAMPLE LOCATION South OPERATOR JW
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar 28.75
% LOAD 100% mw GAS COMMENT _____
RUN #

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
18:45	B-4		27.7	16.1
	5		27.1	16.1
	6		26.6	16.1
	7		23.9	16.3
	C 4		29.7	16.1
	5		29.5	16.0
	6		29.0	16.2
	7		26.9	16.2
			27.55	16.14
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
	B-4		28.0	16.1
	5		27.7	16.1
	6		26.4	16.1
	7		25.3	16.2
	C-4		27.8	16.1
	5		28.6	16.1
	6		26.6	16.1
	7		26.1	16.3
			27.06	16.14
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
	B-4		26.9	16.0
	5		26.7	16.0
	6		26.3	16.1
	7		22.7	16.2
	C-4		28.8	16.1
	5		27.4	16.0
	6		27.7	16.0
	7		27.3	
			26.79	16.06
		AVERAGE		

NOX
August 9, 1991

NOX FIELD DATA FORM

CLIENT _____ PROJECT # 91-126-01 TEST DATE 8-9-91

SAMPLE LOCATION North Stack OPERATOR _____

AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____

% LOAD 50% 0.L COMMENT North - 1 - 2

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O2 (%)
A-1			29.6	18.3
2			30.9	18.2
3			32.0	18.2
4			31.0	18.2
5			31.9	18.1
6			33.1	18.0
7		* Change water	31.3	17.8
8		Injection	29.6	17.8
9			31.6	17.8
10			30.2	17.8
11			29.9	17.9
12			28.5	17.9
B-1			28.8	18.2
2			28.9	18.0
3			29.6	18.0
4			30.6	17.8
5			32.6	17.6 7
6			33.9	17.4 -1
7			33.2	17.4 2
8			32.5	17.5 3
9			29.6	17.6 8
10			30.2	17.7
11			30.3	17.7
12			28.6	17.7
C-1			27.2	18.1
2			29.2	18.0
3			29.6	17.8
4			31.0	17.7
5			32.9	17.6
6			33.1	17.5 4
7			32.6	17.5 5
8			30.7	17.5 6
9			29.2	17.7
10			27.9	17.8
11			27.4	17.8
12			27.0	17.9
D-1			27.4	18.2
2			26.5	18.3
3			26.2	18.2
4			25.7	18.2
5			26.8	18.1
6			27.5	18.0
7			29.5	18.0
8			27.7	17.9
9			27.4	18.0
10			26.8	18.0
11			26.3	18.1
12			25.9	18.1
		AVERAGE		

NOX FIELD DATA FORM

CLIENT Springfield PROJECT # 91-126-OH TEST DATE 8-9-91
SAMPLE LOCATION North 1-2 Stack OPERATOR [illegible]
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD North 50% COMMENT 50% 0.2
RUN # 50% 0.2

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
	B-5		33.9	17.4
Taken From	6		32.6	17.6
48 point	7		33.2	17.4
Test	8		32.5	17.5
	9		29.6	17.6
	C-6		33.1	17.5
	7		32.6	17.5
	8		30.7	17.5
			32.28 AV	17.50 AV
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O2 (%)
11:25 pm	B-5		36.1	17.0
	6		36.4	16.9
	7		38.0	16.8
	8		36.5	16.8
	9		34.8	16.9
	C-6		36.2	16.9
	7		36.9	16.8
	8		34.6	16.9
			31.18 AV	16.88 AV
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O2 (%)
	B-5		37.2	17.0
	6		38.5	16.8
	7		38.0	16.7
	8		37.1	16.7
	9		36.0	16.8
	C-6		35.9	16.8
	7		36.0	16.8
	8		33.9	16.9
			36.83	16.81
		AVERAGE		

NOX FIELD DATA FORM

CLIENT C.U.O.S PROJECT # _____ TEST DATE 8-9-91
SAMPLE LOCATION _____ OPERATOR J W
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 65% COMMENT NORTH 65%

RUN # 65% I

24 HOUR TIME		TEST PORT/POINT	1 NOX (PPM)	2 O2 (%)
	B-S		39.9	17.02
	6		41.3	17.1
NORTH	7		38.6	17.0
	8		37.3	17.0
	9		37.7	17.1
	C-6		36.3	17.1
	7		37.8	17.0
	8		39.0	17.0
			38.16	17.06
		AVERAGE		

RUN # II

24 HOUR TIME		TEST PORT/POINT	1 NOX (PPM)	2 O2 (%)
	B-S		38.1	17.1
	6		39.3	17.1
	7		39.8	17.0
	8		38.2	17.1
	9		37.0	17.2
	C-6		39.1	17.0
	7		39.3	17.0
	8		37.1	17.1
			38.5 AV	17.08 AV
		AVERAGE		

RUN # III

24 HOUR TIME		TEST PORT/POINT	1 NOX (PPM)	2 O2 (%)
	B-S		38.1	17.2
	6		40.7	17.0
	7		40.3	17.0
	8		38.0	17.0
	9		38.8	17.2
	C-6		38.3	17.1
	7		40.0	17.1
	8		37.4	17.1
			38.95	17.09
		AVERAGE		

NOX FIELD DATA FORM

CLIENT C.U.S. PROJECT # 91-126-01H TEST DATE 8-9-91
SAMPLE LOCATION _____ OPERATOR J WELD
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD North 80%/6 COMMENT 80%
RUN #

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
North	B-5		43.2	16.7
	6		43.4	16.7
	7		44.2	16.7
	8		45.1	16.7
	9		44.1	16.6
	C-6		44.4	16.6
	7		43.1	16.6
	8		42.1	16.5
			43.7	16.606
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
North	B-5		44.3	16.7
	6		43.4	16.7
	7		43.8	16.6
	8		43.7	16.7
	9		44.1	16.7
	C-6		45.0	16.7
	7		43.1	16.5
	8		42.5	16.6
			43.74	16.65
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
North	B-5		43.5	16.7
	6		43.2	16.7
	7		42.9	16.8
	8		42.9	16.8
	9		44.8	16.6
	C-6		44.9	16.6
	7		45.5	16.5
	8		44.8	16.8
			44.13	16.69
		AVERAGE		

NOX FIELD DATA FORM

CLIENT C.U.S PROJECT # 91-126-04 TEST DATE 8-9-91
SAMPLE LOCATION North OPERATOR [illegible]
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 100% COMMENT 100% LOAD 0.L
RUN #

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
NORTH	B-5		56.1	16.2
	6		56.1	16.1
	7		56.3	16.1
SIDE	8		55.0	16.0
	9		53.5	16.1
	C-6		51.1	16.3
	7		53.3	16.2
	8		53.3	16.3
			54.34 AV	16.15 AV
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
	B 5		54.6	16.2
NORTH	6		54.4	16.2
	7		51.8	16.3
	8		56.5	16.1
	9		58.3	16.0
SIDE	C-6		56.9	16.0
	7		56.9	16.0
	8		56.3	16.0
			55.71 AV	16.10 AV
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
	B-5		55.1	16.2
NORTH	6		55.6	16.1
	7		57.3	15.9
	8		56.0	16.0
	9		54.7	16.1
SIDE	C-6		56.6	16.0
	7		57.1	16.0
	8		55.9	16.0
			56.04	16.04
9:10 pm stop				
		AVERAGE		

NOX FIELD DATA FORM

CLIENT _____ PROJECT # 91-126-014 TEST DATE 8-9-91

SAMPLE LOCATION South Stack OPERATOR TW

AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____

% LOAD 50% 0.6 COMMENT South - 4-5

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5	
A - 1			29.3	17.6	
2			29.7	17.6	
3			29.9	17.5	
4			30.1	17.6	
5			29.9	17.4	
6		* change water	31.0	17.4	
7		injection	31.9	17.4	
8			31.4	17.4	
9			31.1	17.4	
10		* change water	34.2	17.5	
11		injection	33.0	17.6	
12			32.6	17.5	
B - 1			36.2	17.3	
2			39.7	17.1	
3			43.4	16.9	-5
4			44.2	16.7	-2
5			42.5	16.6	-1
6			39.8	16.7	-3
7			40.2	16.8	-4
8			37.0	17.1	
9			34.4	17.1	
10			34.1	17.2	
11			33.8	17.3	
12			34.3	17.3	
C - 1			39.6	17.0	
2			41.3	16.9	
3			41.4	16.8	6
4			43.0	16.8	7
5			43.6	16.8	8
6			41.9	16.8	5
7			41.4	16.9	
8			39.0	16.9	
9			39.4	17.0	
10			39.3	17.0	
11			39.1	17.1	
12			37.0	17.2	
D - 1			35.3	17.5	
2			35.5	17.6	
3			36.1	17.5	
4			37.3	17.4	
5			37.4	17.3	
6			37.2	17.2	
7			37.9	17.3	
8			36.1	17.4	
9			36.1	17.5	
10			35.5	17.4	
11			35.1	17.5	
12			34.5	17.5	
		AVERAGE			

NOX FIELD DATA FORM

CLIENT _____ PROJECT # _____ TEST DATE 8-9-91

SAMPLE LOCATION South 4 5- OPERATOR _____

AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____

% LOAD South 4-5 COMMENT 50% 0.2 0.4

RUN # 50%

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
TAKEN FROM	B-4		44.2	16.7
48 POINTS	5		42.5	16.6
	6		39.8	16.7
	7		40.2	16.8
	C-3		41.4	16.8
	4		43.0	16.8
	5		43.6	16.8
	6		41.4	16.8
			42.08 AV	16.75 AV

AVERAGE

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
11:25 AM	B-4		46.6	16.8
	5		46.4	16.7
	6		45.9	16.7
	7		43.1	17.0
	C-3		43.5	17.0
	4		46.4	16.8
	5		46.0	16.9
	6		44.1	17.0
			45.18 AV	16.86 AV

AVERAGE

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
11:51	B-4		43.9	17.0
	5		43.5	17.0
	6		43.7	17.0
	7		43.7	17.0
	C-3		47.0	16.7
	4		46.3	16.8
	5		45.7	16.9
	6		45.2	16.9
			44.88	16.9

AVERAGE

NOX FIELD DATA FORM

CLIENT C.U.O.S PROJECT # _____ TEST DATE 8-9-91
SAMPLE LOCATION _____ OPERATOR FW
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD South 65% COMMENT South 65%
RUN #

24 HOUR TIME	RUN # I	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
	B-4		38.3	16.8
	5		40.9	16.7
	6		41.0	16.7
South	7		40.3	16.8
	C-3		40.4	16.9
	4		42.0	16.7
	5		40.3	16.9
	6		37.9	17.0
			40.14	16.8
		AVERAGE		

24 HOUR TIME	RUN # II	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
	B-4		36.7	17.0
	5		38.8	16.9
	6		41.0	16.7
	7		39.7	16.9
	C-3		41.1	16.8
	4		40.0	16.7
	5		39.4	16.8
	6		38.2	16.9
			39.36	16.84
		AVERAGE		

24 HOUR TIME	RUN # III	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
	B-4		40.5	16.8
	5		43.4	16.8
	6		40.3	16.8
	7		38.1	16.9
	C-3		35.7	17.1
	4		39.7	16.9
	5		40.4	16.8
	6		39.3	16.9
			39.68	16.88
		AVERAGE		

NOX FIELD DATA FORM PAGE 2

CLIENT C.U.S PROJECT # _____ TEST DATE 8-9-91
SAMPLE LOCATION _____ OPERATOR J WRIGHT
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 80% SOUTH COMMENT 80%
RUN #

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
South -	B-4		46.1	16.6
	5		48.1	16.5
	6		46.0	16.5
	7		44.6	16.5
	C-3		41.5	16.7
	4		45.4	16.6
	5		45.4	16.5
	6		43.6	16.5
			45.08 AV	16.55 AV
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O2 (%)
SOUTH -	B-4		45.7	16.6
	5		45.2	16.5
	6		44.0	16.5
	7		42.5	16.6
	C-3		40.6	16.7
	4		44.4	16.6
	5		43.	16.7
	6		43.5	16.6
			43.63	16.60
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
South -	B-4		44.6	16.6
	5		44.6	16.5
	6		42.8	16.5
	7		41.9	16.6
	C-3		39.9	16.7
	4		39.7	16.7
	5		40.5	16.7
	6		38.6	16.8
			41.58	16.64
		AVERAGE		

NOX FIELD DATA FORM

CLIENT C. U. S. PROJECT # _____ TEST DATE 8-9-91
SAMPLE LOCATION South OPERATOR [illegible]
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 100% COMMENT 100% LOAD 0.1
RUN #

24 HOUR TIME	RUN #	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
South	B-4		51.0	16.2
Side	5		51.2	16.1
	6		51.6	16.1
	7		49.9	16.3
	C-3		50.8	16.2
	4		50.3	16.1
	5		51.0	16.1
	6		49.4	16.3
			50.65 AV	16.18 AV
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
	B-4		51.3	16.2
	5		51.6	16.1
	6		51.4	16.2
South	7		48.1	16.3
	C-3		47.1	16.3
	4		49.5	16.3
Side	5		50.2	16.2
	6		50.9	16.1
			50.08 AV	16.21 AV
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
	B-4		50.2	16.3
	5		50.5	16.3
South	6		50.8	16.1
	7		51.4	16.1
	C-3		51.1	16.2
	4		52.0	16.1
Side	5		51.8	16.1
	6		50.2	16.2
			51.06	16.18
9:10 stop		AVERAGE		

NOX
August 14, 1991

NOX FIELD DATA FORM

CLIENT C.U. OF SPRINGFIELD PROJECT # 91-126-91 TEST DATE 8-14-91
SAMPLE LOCATION North OPERATOR J WR
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 50% gas COMMENT North gas 1-2

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O_2 (%)
A-1		48 point	19.2	18.1
2		Test	19.1	18.1
3			19.1	18.1
4			19.8	18.1
5			19.9	18.0
6			20.7	17.9
7			21.6	17.9
8			21.1	17.8
9			21.0	17.9
10			19.7	18.0
11			21.9	18.0
12			22.0	18.1
B-1			21.3	17.8
2			22.3	17.9
3			22.7	17.8
4			23.9	18.0
5			25.0	17.8
6			25.7	17.7
7			25.9	17.6
8			24.9	17.7
9			23.6	17.8
10			23.0	17.9
11			22.4	17.9
12			23.2	17.8
C-1			24.0	17.4
2			23.6	17.4
3			25.3	17.3 6
4			26.6	17.2 1
5			26.9	17.2 2
6			26.1	17.2 3
7			27.6	17.2 4
8			27.0	17.2 5
9			26.0	17.3 7
10			24.4	17.4 8
11			23.6	17.5
12			23.8	17.4
D-1			21.1	17.9
2			21.8	17.9
3			22.1	17.9
4			22.3	17.9
5			21.9	17.9
6			22.3	17.9
7			23.7	17.8
8			23.2	17.8
9			23.3	17.8
10			22.8	17.8
11			22.7	17.8
12				
		AVERAGE		

NOX FIELD DATA FORM

CLIENT S.W.O.S PROJECT # 91-126 OH TEST DATE 8-14-91
SAMPLE LOCATION North stack OPERATOR TW
AMBIENT TEMPERTURE ____ RELATIVE HUMIDITY % ____ Pbar ____
% LOAD 50% gas North COMMENT North STACK
RUN #

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
C.3			22.2	17.3
4			24.3	17.3
5		*RE DONE	25.5	17.2
6		*48 point	25.2	17.1
7		test NOX	25.2	17.2
8		out.	24.9	17.3
9			23.6	17.3
10			23.6	17.4
			24.31 AV	17.26 AV
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
C.3			22.9	17.5
4			24.6	17.3
5			26.0	17.2
6			26.2	17.2
7			25.6	17.2
8			24.8	17.2
9			24.4	17.3
10			23.0	17.4
			24.69 AV	17.35 AV
		AVERAGE	41.03 AV	

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
C.3			24.3	17.3
4			26.0	17.3
5			26.9	17.2
6			26.4	17.2
7			26.1	17.2
8			25.5	17.2
9			24.3	17.3
10			23.0	17.3
			25.33	17.27
		AVERAGE	41.17	

NOX FIELD DATA FORM

CLIENT C.U.O.S PROJECT # _____ TEST DATE 8-14-91
SAMPLE LOCATION North Stack A OPERATOR _____
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 65% North COMMENT 65% North
RUN #

24 HOUR TIME	RUN # 2 TEST PORT/POINT		1 NOX (PPM)	2 O2 (%)
1:00 C-3			25.9	17.2
4			27.0	17.0
5			26.8	16.9
6			27.9	16.8
7			27.7	16.8
8			30.6	16.9
9			26.5	17.0
10			25.6	17.0
			27.25 AV	16.95
		AVERAGE		

24 HOUR TIME	RUN # 2 TEST PORT/POINT		1 NOX (PPM)	2 O2 (%)
C-3			23.2	17.2
4			22.6	17.0
5			27.5	16.9
6			28.1	16.8
7			28.1	16.8
8			27.9	16.9
9			26.8	16.9
10			26.2	17.0
			26.3	17.0
			3	
		AVERAGE	39.79	

24 HOUR TIME	RUN # 2 TEST PORT/POINT		1 NOX (PPM)	2 O2 (%)
C-3			24.9	17.2
4			27.5	16.8
5			28.2	16.7
6			28.5	16.6
7			28.1	16.9
8			26.4	16.7
9			25.4	16.8
10			25.5	16.9
			26.81 AV	16.9 AV
		AVERAGE	39.54 AV	

NOX FIELD DATA FORM

CLIENT C.U.O.S PROJECT # 91-126-014 TEST DATE 8-14-91
SAMPLE LOCATION North STACK OPERATOR Jwhite
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 90% North COMMENT _____
RUN #

24 HOUR TIME	RUN #I	TEST PORT/POINT	1 NOX (PPM)	2 O2 (%)
C-3			28.2	16.6
4			30.2	16.3
5			30.8	16.3
6			30.8	16.2
7			31.3	16.2
8			30.4	16.3
9			29.8	16.3
10			29.2	16.4
			30.1	16.4
		AVERAGE	39.49	

24 HOUR TIME	RUN #II	TEST PORT/POINT	1 NOX (PPM)	2 O2 (%)
C-3			27.2	16.7
4			29.4	16.4
5			31.2	16.3
6			32.0	16.2
7			32.1	16.2
8			30.4	16.3
9			28.3	16.4
10			29.0	16.4
			29.95 Av	16.36 Av
		AVERAGE	38.94	

24 HOUR TIME	RUN #III	TEST PORT/POINT	1 NOX (PPM)	2 O2 (%)
C-3			27.9	16.7
4			30.4	16.3
5			31.0	16.2
6			31.1	16.2
7			32.1	16.2
8			30.7	16.2
9			30.4	16.3
10			29.9	16.3
			30.43 Av	16.45 Av
		AVERAGE	40.33	

NOX FIELD DATA FORM

CLIENT C.W.O.S. PROJECT # _____ TEST DATE 8-14-91
SAMPLE LOCATION NORI stack OPERATOR J Wright
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 100% North COMMENT GAS
RUN #

24 HOUR TIME	RUN #I	TEST PORT/POINT	1 NOX (PPM)	2 O2 (%)
C 3			34.7	16.3
4			32.9	16.0
5			33.5	15.9
6			34.0	15.8
7			34.9	15.7
8			33.4	15.8
9			32.0	15.9
10			30.9	16.0
			33.28 AV	15.93 AV
		AVERAGE	39.51	

24 HOUR TIME	RUN #II	TEST PORT/POINT	1 NOX (PPM)	2 O2 (%)
C 3			31.4	16.7
4			31.7	16.0
5			32.6	15.8
6			32.7	15.8
7			33.2	15.7
8			33.5	15.7
9			33.6	15.8
10			32.9	15.8
			32.7 AV	15.83
		AVERAGE	38.05 AV	

24 HOUR TIME	RUN #III	TEST PORT/POINT	1 NOX (PPM)	2 O2 (%)
C 3			31.8	15.9
4			31.4	15.9
5			31.6	16.0
6			33.2	15.7
7			32.3	15.7
8			33.7	15.8
9			32.3	15.8
10			30.9	16.0
			32.15 AV	15.85 AV
		AVERAGE		

NOX FIELD DATA FORM

CLIENT C.U. of Springfield PROJECT # 91-126-OH TEST DATE 8-14-91
SAMPLE LOCATION South Smoke Gas OPERATOR Jack
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 50% Gas COMMENT South Gas

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O2 (%)
8:10 A-1		48 point Test	18.4	17.9
2			18.6	17.9
3			18.6	18.0
4			19.1	17.9
5			19.5	17.6
6			20.2	17.7
7			20.4	17.6
8			20.7	17.6
9			20.5	17.6
10			20.4	17.6
11			20.4	17.6
12			20.8	17.6
B-1			24.0	17.2
2			24.4	17.3
3			25.2	17.3
4			23.2	16.9 -1
5			25.1	16.9 -2
6			26.6	17.0
7			26.2	16.9 -8
8			25.8	17.1
9			25.5	17.0
10			25.7	17.1
11			24.5	17.1
12			20.1	17.1
C-1			26.2	17.1
2			26.5	17.0
3			27.5	17.0
4			28.6	16.9 -3
5			28.6	16.7
6			29.0	16.8
7			29.1	16.9 -4
8			28.7	16.9 -5
9			27.9	16.9 -6
10			27.9	16.9 -7
11			26.4	17.1
12			26.4	17.1
D-1			24.0	17.4
2			23.9	17.4
3			24.4	17.3
4			25.3	17.3
5			26.0	17.1
6			26.0	17.1
7			25.6	17.2
8			25.0	17.3
9			24.9	17.3
10			25.0	17.3
11			25.0	17.3
12				
		AVERAGE		

NOX FIELD DATA FORM

CLIENT C.U.O.S. PROJECT # _____ TEST DATE 8-14-91
SAMPLE LOCATION _____ OPERATOR TW
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 50% GAS COMMENT South
RUN #

24 HOUR TIME	RUN #	TEST PORT/POINT	4# NOX (PPM)	5# O2 (%)
B-4			25.2	16.9
5			25.1	16.9
7		FROM	26.2	16.9
C-4		48 POINTS	28.6	16.9
7		TEST	29.1	16.9
8			28.7	16.9
9			27.9	16.9
10			27.9	16.9
			27.09	16.9
		AVERAGE	27.08	16.9

24 HOUR TIME	RUN #	TEST PORT/POINT	4# NOX (PPM)	5# O2 (%)
B-4			29.2	16.8
5			30.1	16.7
7			29.7	16.6
C-4			30.5	16.7
7			30.2	16.6
8			29.8	16.7
9			28.9	16.8
10			28.3	16.9
			29.59 AV	16.75 AV
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	4# NOX (PPM)	5# O2 (%)
B-4			29.4	16.7
5			29.0	16.7
7			28.2	16.8
C-4			27.4	16.9
7			29.1	16.7
8			29.7	16.7
9			28.3	16.7
10			29.3	16.7
			28.8	16.80 AV
		AVERAGE	41.44 AV	

NOX FIELD DATA FORM

CLIENT C.U.O.S. PROJECT # _____ TEST DATE 8-14-91
SAMPLE LOCATION South Stack B OPERATOR [illegible]
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 65% South COMMENT 65% South
RUN #

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
1:09 B-4			29.5	16.4
5			29.3	16.3
7			28.8	16.3
C-4			29.7	16.4
7			30.4	16.3
8			30.0	16.3
9			29.3	16.4
10			28.9	16.4
			29.49	16.35
		AVERAGE		

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
B-4			28.5	16.5
5			29.7	16.3
7			29.6	16.4
C-4			28.8	16.5
7			28.3	16.6
8			28.8	16.5
9			29.4	16.4
10			29.4	16.3
			29.06	16.47
		AVERAGE	38.10	

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
B-4			29.1	16.5
5			30.2	16.3
7			30.4	16.3
C-4			30.3	16.4
7			30.7	16.3
8			30.0	16.4
9			29.1	16.5
10			28.6	16.6
			29.8 DK	16.45
		AVERAGE	39.5/AK	

NOX FIELD DATA FORM

CLIENT C.U.O.S. PROJECT # 91126-OH TEST DATE 8-14-91
SAMPLE LOCATION South Stack OPERATOR J Wood
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 80% South COMMENT _____
RUN #

RUN #I

24 HOUR TIME	RUN #I	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
B-4			30.3	16.1
5			30.5	16.1
7			30.8	15.9
C-4			31.4	16.0
7			30.9	16.0
8			31.0	16.1
9			30.3	16.1
10			31.5	15.9
			30.83 Av	16.0 Av
AVERAGE			37.12	

RUN #II

24 HOUR TIME	RUN #II	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
B-4			31.9	15.9
5			31.6	15.9
7			31.8	15.9
C-4			31.9	16.0
7			32.0	16.0
8			32.1	16.0
9			31.8	16.0
10			31.5	15.9
			31.82 Av	15.95 Av
AVERAGE			37.92	

RUN #III

24 HOUR TIME	RUN #III	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
B-4			31.1	15.9
5			30.6	15.9
7			31.0	16.0
C-4			31.4	15.9
7			31.2	16.0
8			30.5	16.1
9			31.8	16.0
10			32.5	15.9
			31.26 Av	16.0 Av
AVERAGE			37.64	

NOX FIELD DATA FORM

CLIENT C.O.O.S PROJECT # 91126-0H TEST DATE 8-14-91
SAMPLE LOCATION South Stack OPERATOR JW
AMBIENT TEMPERTURE ____ RELATIVE HUMIDITY % ____ Pbar ____
% LOAD 100% South COMMENT gas
RUN # 1

24 HOUR TIME	RUN # 1	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
B-4			35.6	15.3
5			35.6	15.4
7			33.0	15.6
C-4			34.6	15.5
7			33.3	15.5
8			36.5	15.6
9			32.6	15.7
10			32.0	15.8
			34.1 Av	15.6 Av
		AVERAGE	37.96	

24 HOUR TIME	RUN # 2	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
B-4			34.8	15.5
5			35.1	15.4
7			34.9	15.4
C-4			35.1	15.4
7			33.7	15.5
8			34.7	15.5
9			34.9	15.3
10			33.0	15.6
			34.52 Av	15.50 Av
		AVERAGE	37.77 Av	

24 HOUR TIME	RUN # 3	TEST PORT/POINT	NOX (PPM) 4	O2 (%) 5
B-4			30.9	15.5
5			28.9	15.6
7			29.5	15.7
C-4			32.9	15.5
7			29.9	15.8
8			29.2	15.9
9			25.8	15.9
10			28.9	15.9
			29.50 Av	15.73 Av
		AVERAGE		

NOX
August 15, 1991

NOX FIELD DATA FORM

CLIENT C.U.O.S PROJECT # 91-126.04 TEST DATE 8-15-91
SAMPLE LOCATION Stack North OPERATOR J White
AMBIENT TEMPERTURE ____ RELATIVE HUMIDITY % ____ Pbar ____
% LOAD 50% o.l North COMMENT North 50% o.l

24 HOUR TIME	RUN # 1	TEST PORT/POINT	NOX (1) (PPM)	O2 (2) (%)	
8:00 A-1			28.3	18.1	
2			29.0	18.1	
3			29.6	18.1	
4			30.5	18.1	
5			30.7	18.0	
6			31.5	17.9	
7			33.2	17.8	
8			32.7	17.8	
9			31.8	18.0	
10			31.2	18.0	
11			26.4	18.1	
12		*Change water	25.7	18.1	
B-1		on Injection	29.3	18.0	
2		System	30.6	18.0	
3			26.2	18.0	
4			22.2	18.0	
5		*Change water	23.7	17.7	
6		on Injection	39.8	17.5	3
7		System	47.2	17.4	2
8			45.3	17.3	1
9			34.3	17.4	4
10			34.7	17.5	
11			33.1	17.9	
12			33.9	17.8	
C-1			38.7	17.8	
2			40.8	17.7	
3			39.0	17.4	5
4			38.0	17.4	6
5			38.0	17.4	7
6			38.1	17.4	8
7			36.9	17.5	
8			43.0	17.6	
9			41.7	17.6	
10			40.4	17.7	
11			36.3	17.9	
12			36.9	17.8	
D-1			33.8	18.2	
2			34.6	18.2	
3			34.6	18.2	
4			35.0	18.2	
5			35.9	18.1	
6			35.5	18.0	
7			34.9	18.0	
8			36.5	18.0	
9			25.5	18.0	
10			25.5	18.0	
11			34.2	18.2	
12			35.5	18.1	
		AVERAGE			

NOX FIELD DATA FORM

CLIENT C.U.O.S PROJECT # _____ TEST DATE 8-15-91
SAMPLE LOCATION _____ OPERATOR [illegible]
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD NORTH - 12 0.L COMMENT 50% LOW LOAD 0.L
RUN # 50%

24 HOUR TIME	RUN # /	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
B-6			37.4	17.3
7			37.3	17.3
8			37.2	17.3
9			34.4	17.5
C-3			33.8	17.6
C 4			35.4	17.4
C 5			36.4	17.4
C 6			36.8	17.3
			[illegible]	17.38 AV
			36.01 AV	
		AVERAGE	60.36 corr	

50%

24 HOUR TIME	RUN # 2	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
B-6			33.6	17.6
7			35.9	17.5
8			36.7	17.3
9			36.5	17.3
C-3			38.2	17.3
4			37.4	17.3
5			37.4	17.2
6			35.3	17.5
			36.38 AV	17.38 AV
		AVERAGE	60.98 corr	

24 HOUR TIME	RUN # 3	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
B-6			38.4	17.4
7			38.0	17.3
8			37.8	17.3
9			37.3	17.4
C-3			37.5	17.4
4			35.7	17.6
5			36.3	17.4
6			37.1	17.3
			37.26 AV	17.40 AV
		AVERAGE		

NOX FIELD DATA FORM

CLIENT C.U.O.S PROJECT # 91-126-06 TEST DATE 8-15-91
SAMPLE LOCATION: North Stack OPERATOR [illegible]
AMBIENT TEMPERTURE ____ RELATIVE HUMIDITY % ____ Pbar ____
% LOAD North - oil 65% COMMENT North oil
RUN #

24 HOUR TIME	RUN #I	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
B-6			43.9	17.4
7		North	43.6	17.1
8		Stack is (B)	42.5	16.9
9			43.2	16.8
C-3			43.1	16.9
4			43.2	16.9
5			43.2	17.0
6			41.8	17.1
			43.8 AV	17.01 AV
		AVERAGE	66.47 corr	corr

12:20

65%

24 HOUR TIME	RUN #II	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
B-6			44.3	16.9
7			42.9	16.9
8			43.1	17.0
9			39.2	17.2
C-3			39.6	17.3
4			43.3	17.1
5			44.0	17.0
6			44.5	17.1
			43.25 AV	17.06 AV
		AVERAGE	66.49	

65%

24 HOUR TIME	RUN #3	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
B-6			39.1	17.4
7			41.2	17.1
8			44.9	17.0
9			45.6	16.9
C-3			46.9	16.9
4			46.8	17.0
5			45.8	16.9
6			43.9	17.0
			44.28 AV	17.03 AV
		AVERAGE		

NOX FIELD DATA FORM

CLIENT CWOS PROJECT # 91-126-04 TEST DATE 8-15-91
SAMPLE LOCATION North (B) STACK OPERATOR Trent
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 80% O.L North COMMENT _____

RUN # 1 2

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O2 (%)
B 5 14:35			50.9	15.8
6			51.2	16.2
7			48.7	16.4
8			47.7	16.5
9			49.8	16.8
10			47.1	16.6
C 4			49.8	16.5
5			49.8	16.4
			49.38	16.4
		AVERAGE	64.74	

80% North

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O2 (%)
B-5			44.9	16.8
6		North : 5	46.9	16.6
7		B side	49.7	16.5
8			48.8	16.3
9			50.6	16.3
10			52.3	16.4
C-4			50.7	16.4
5			49.9	16.4
			49.23 AV	16.46 AV
		AVERAGE		

80% North

RUN # 1 2

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O2 (%)
B-5			51.0	16.4
6			52.2	16.3
7			50.0	16.4
8			47.6	16.6
9			46.9	16.7
10			48.2	16.6
C-4			48.7	16.6
5			50.2	16.5
			49.35	16.51
		AVERAGE		

NOX FIELD DATA FORM

CLIENT CUOS PROJECT # _____ TEST DATE 8-15-91
SAMPLE LOCATION North Stack OPERATOR J White
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 100% O.L North COMMENT _____
RUN #

24 HOUR TIME	RUN # 1	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
B-6			54.7	16.4
7			54.9	16.2
8			56.4	16.1
9			58.4	16.0
C-3			60.2	15.9
4			59.5	15.9
5			61.3	15.9
6			61.9	16.0
			58.41	16.05
		AVERAGE	57.05	

100%

24 HOUR TIME	RUN # 2	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
B-6			59.6	15.8
7			58.9	15.8
8			58.5	15.8
9			57.9	15.8
C-3			57.6	15.8
4			55.0	16.2
5			54.8	16.2
6			58.5	16.1
			57.60	15.94
		AVERAGE	68.51	

24 HOUR TIME	RUN # 3	TEST PORT/POINT	NOX (PPM) 1	O2 (%) 2
			55.1	16.3
			56.2	16.0
			58.8	15.9
			60.0	15.8
			59.2	15.8
			59.8	15.8
			62.0	15.9
			56.3	15.9
			58.43	15.93
		AVERAGE		

NOX FIELD DATA FORM

CLIENT CUOS PROJECT # 91-126-04 TEST DATE 8-15-91
SAMPLE LOCATION South stack OPERATOR ZW
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD 50% 0.6 COMMENT South stack 50% 0.6

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O2 (%)
13:00 A 1			25.9	17.7
2			26.1	17.7
3			26.5	17.6
4			27.8	17.6
5			27.7	17.5
6			28.2	17.4
7			27.9	17.4
8			27.1	17.5
9			28.1	17.6
10			31.8	17.6
11			30.5	17.6
12			29.1	17.6
B-1		*Change water injection system	30.3	17.6
2			30.3	17.3
3			31.9	17.2
4			30.2	17.2
5			31.0	17.0 6
6			38.3	17.0 5
7			40.6	16.9 -1
8			40.8	16.9 -2
9			42.2	16.9 -3
10			47.0	17.0 7
11			42.9	17.3
12			45.0	17.1
C-1			45.2	17.1
2			45.6	17.1
3			47.0	17.1
4			47.8	17.0 8
5			49.0	16.9 -4
6			46.0	17.1
7			43.3	17.1
8			41.9	17.3
9			41.4	17.3
10			41.2	17.4
11			40.7	17.4
12			40.8	17.4
D-1			38.5	17.5
2			38.7	17.7
3			38.8	17.7
4			39.6	17.7
5			40.4	17.6
6			40.2	17.6
7			40.1	17.6
8			37.7	17.7
9			36.6	17.7
10			36.3	17.7
11			36.5	17.7
12			35.8	17.8
		AVERAGE		

NOX FIELD DATA FORM

CLIENT CUOS PROJECT # 91-126-04 TEST DATE 8-15-91
SAMPLE LOCATION _____ OPERATOR ZM
AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____
% LOAD South 4-5 0.L COMMENT 50% Low Load 0.L
RUN # 50%

24 HOUR TIME	RUN #	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
B-5			48.8	17.0
6			48.1	17.0
7			48.0	17.0
8			46.0	17.1
9			45.5	17.1
10			44.6	17.2
C-4			43.3	17.3
5			48.3	17.0
			46.59	17.09
		AVERAGE	72.13 CORR	

50%

24 HOUR TIME	RUN #	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
B-5			48.6	17.0
6			48.6	17.0
7			46.4	17.0
8			43.2	17.0
9			41.5	17.0
10			40.5	17.1
C-4			40.1	17.2
5			40.9	17.2
			43.6 AV	17.06 AV
		AVERAGE	66.98 CORR	

24 HOUR TIME	RUN #	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
B-5			40.3	17.3
6			40.0	17.3
7			40.0	17.3
8			39.9	17.3
9			44.1	17.1
10			44.4	17.0
C-4			44.4	17.0
5			43.9	17.1
			42.10 AV	17.18 AV
		AVERAGE	66.77 AV	

NOX FIELD DATA FORM

CLIENT C.U.O.S PROJECT # 91-126-01 TEST DATE 8-15-91
SAMPLE LOCATION South Stack OPERATOR FW
AMBIENT TEMPERTURE ____ RELATIVE HUMIDITY % ____ Pbar ____
% LOAD 65% Oil South COMMENT Oil South
RUN #

24 HOUR TIME	RUN # 1	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
B-5			51.0	16.6
6		South Stack	51.0	16.6
7		15 (A)	50.6	16.6
8			48.8	16.7
9			47.9	16.8
10			47.3	16.8
C-4			46.8	16.9
5			46.3	17.0
			48.7 Av	16.75 Av
		AVERAGE	69.23 corr	

65%

24 HOUR TIME	RUN # 2	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
B-5			50.4	16.6
6			49.8	16.7
7			49.4	16.7
8			48.3	16.7
9			48.0	16.8
10			47.5	16.9
C-4			46.0	17.1
5			44.5	16.9
			47.99 Av	16.80 Av
		AVERAGE	69.06 corr	

24 HOUR TIME	RUN # 3	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
B-5			50.4	16.7
6			50.0	16.8
7			50.9	16.7
8			50.4	16.7
9			51.2	16.7
10			49.5	16.9
C-4			48.3	16.6
5			47.3	16.8
			49.75 Av	16.74 Av
		AVERAGE		

NOX FIELD DATA FORM PAGE 2

CLIENT CUOS PROJECT # 91-126-04 TEST DATE 8-15-91
SAMPLE LOCATION SOUTH(A) STACK OPERATOR JW
AMBIENT TEMPERTURE ____ RELATIVE HUMIDITY % ____ Pbar ____
% LOAD 80% O.L South COMMENT ____
RUN # 4 5

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O2 (%)
B-6			51.6	16.3
7			51.8	16.3
8			51.8	16.2
9			51.3	16.3
C-3			50.4	16.2
4			50.8	16.3
5			49.8	16.5
6			49.3	16.4
			50.85 AV	
				16.31 AV
		AVERAGE	65.39	

80% SOUTH

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O2 (%)
B-6			49.6	16.3
7			49.6	16.5
8			49.2	16.5
9			46.6	16.4
C-3			48.5	16.3
4			50.2	16.2
5			50.1	16.3
6			49.8	16.4
			49.14 AV	16.36 AV
		AVERAGE	cont	

80%

RUN # 4 5

24 HOUR TIME	RUN #	TEST PORT/POINT	NOX (PPM)	O2 (%)
B-6			49.2	16.5
7			47.9	16.6
8			47.4	16.5
9			47.9	16.7
C-3			51.8	16.2
4			50.2	16.2
5			51.0	16.4
6			49.8	16.3
			49.46 AV	16.43 AV
		AVERAGE	cont	

NOX FIELD DATA FORM

CLIENT CUOS PROJECT # _____ TEST DATE 8-15-91

SAMPLE LOCATION _____ OPERATOR _____

AMBIENT TEMPERTURE _____ RELATIVE HUMIDITY % _____ Pbar _____

% LOAD 100% O.L South COMMENT _____

RUN #

24 HOUR TIME	RUN #	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
B - 5			60.0	15.9
6			59.3	15.9
7			57.6	16.0
8			56.0	16.1
9			54.1	16.3
10			52.7	16.3
C - 4			58.2	15.8
5			55.8	15.8
			56.71 AV	16.01 AV
		AVERAGE	65.42	

100%

24 HOUR TIME	RUN #	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
B - 5			56.7	15.8
6			56.3	15.8
7			57.8	15.7
8			55.3	15.8
9			55.6	15.8
10			51.5	15.8
C - 4			52.6	16.3
5			51.8	16.1
			54.70	15.89
		AVERAGE	64.42	

24 HOUR TIME	RUN #	TEST PORT/POINT	4 NOX (PPM)	5 O2 (%)
B - 5			56.9	15.8
6			56.4	15.9
7			55.0	15.9
8			54.1	16.2
9			53.8	16.1
10			53.4	16.0
C - 4			51.5	16.0
5			53.2	16.1
			54.29	16.00
		AVERAGE		

Particulate Test Data

Particulate
August 6 1991

Particulate Field Data Sheet

Client: Springfield Utilities				Date: 8-6-91	Page 1 of 2
Project No.: 91-126 OH	Operator: L. Keith			Orsat Analysis	
Sampling Location: Unit 2 North Stack		Run No. GAS 1		CO_2	$+O_2$ / O_2 / CO
Sampling Location: S.G. 58 ga				2.6	17.2
Filter No.: 91-163	Acetone No.:	Condensate: 205 ml		2.6	17.2
Barometric Pressure: 29.01	Static Pressure: -2.5	Probe Number: 15-A			
Nozzle Diameter: .310	Nozzle Number: 1-12	Pitot Coefficient: .79	Pitot Number: 15-A		
Meter Corr. Factor: .99	Meter-Orifice: 066 / .54				
Sample Pt. Time: 5 min	Assumed % Moisture: 7 %	Leak Test	Before: .007 @ 14" Hg	After: .011 @ 14" Hg	

Sample Point	ΔP	√ΔP	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.
Start 10:20					N/A					8	620.545
A 1	1.2	1.095	.74	737		68	244	132	131	3	626.26
2	3.0	1.732	2.23	750			232	131	132	10	635.12
3	6.1	2.470	4.53	793			279	134	130	9	648.60
4	5.1	2.258	3.61	828			319	138	132	6	661.21
5	2.4	1.549	1.70	823			283	136	131	3	669.93
6	.40	.632	.28	814			238	133	131	1	674.035
B 1	6.2	2.490	4.38	817			232	132	131	6	686.60
2	12.4	3.521	8.77	885			269	138	131	10	705.23
3	12.5	3.536	8.84	870			251	139	131	9	725.00
4	10.4	3.225	7.35	875			237	140	131	9	740.30
5	7.9	2.811	5.59	870			225	142	132	9	754.78
C	3.5	1.871	2.47	797			225	144	134	4	767.065
C 1	8.8	2.966	6.22	823			246	143	135	9	781.95
2	8.2	2.864	5.71	854			234	145	135	9	795.90
3	14.0	3.742	9.52	884			237	143	134	9	811.40
4	10.0	3.162	6.80	813			234	143	134	9	828.0
5	7.0	2.646	4.76	771			230	142	133	8	842.85
6	4.2	2.049	2.97	772			239	144	134	5	854.908
D 1	1.0	1.000	.71	762			225	136	132	2	860.70
2	4.0	2.000	2.83	782			239	135	132	4	870.21
3	5.9	2.429	4.17	795			234	133	130	6	882.70
4	3.8	1.949	2.69	754			233	133	129	4	893.57
5	1.7	1.304	1.20	675			230	135	130	2	901.00
6	.30	.548	.21	678			229	135	130	1	914.848
Stop 12:28		2.244	11.095	800.917				137.111	131.877		284.303
									134.813		

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before OK After OK

Total Source Analysis, Inc.
Environmental Testing Consultants

Particulate Field Data Sheet

(4)

Client: Springfield Utilities											Date: 8-6-91	Page 1 Of 2	
Project No.: 91-126-OH			Operator: L. Keith								Orsat Analysis		
Sampling Location: Unit 2 North						Run No.: 2 SHS					CO_2	$+O_2$	O_2 / CO
Filter No.: 91-164			Acetone No.			Condensate: 165 ml / 54 gr					2.2	19.2	17.0 /
Barometric Pressure: 29.01			Static Pressure: +2.5			Probe Number: 15A					2.2	19.4	17.2 /
Nozzle Diameter: .200		Nozzle Number: 1-89	Pitot Coefficient: .79			Pitot Number: 15-A					/	/	/
Meter Corr. Factor: .99			Meter-Orifice: 066 / .54								2.2	/	17.1 /
Sample Pt. Time: 5 min			Assumed % Moisture: 4%								Leak Test: Before .006 @ 14"	After .003 @ 14" Hg	

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.	
Start	805				N/A						905.9~~83~~	
A 1	1.1	1.049	.14	754		62	223	114	~~116~~	1	908.52	
2	2.9	1.703	.38	755		68	233	115	116	1	912.05	
3	5.2	2.280	.68	798		~~69~~	223	116	116	4	917.20	
4	4.1	2.025	.54	829		54	257	116	116	4	922.71	
5	2.0	1.414	.26	828		55	248	116	116	2	926.00	
6	1.0	1.000	.13	819		57	247	116	116	2	928.584	
B 1	11.0	3.317	1.44	800		61	246	117	117	8	938.48	
2	9.2	3.033	1.20	868		61	247	118	116	6	945.05	
3	10.2	3.194	1.33	902		60	244	117	116	8	952.21	
4	10.6	3.256	1.28	895		62	248	118	116	8	959.70	
5	8.3	2.881	1.00	859		64	246	117	116	6	966.90	
6	3.2	1.789	.40	832		65	244	116	115	3	971.221	65.31
13:10	STOPPED TO CHANGE SILICA GEL				LEAK TEST BEFORE .003 @ 14" AFTER .004 @ 14" START						971.553	
5 13:20 C 1	6.4	2.530	.76	827		~~66~~	251	113	115	5	977.53	
2	7.2	2.683	.86	835		65	247	114	114	5	983.65	
3	12.2	3.493	1.45	843		64	245	114	114	10	991.52	
4	10.2	3.194	1.22	827		64	245	116	115	9	999.15	
5	8.0	2.828	.95	799		67	244	116	115	6	005.88	
6	4.0	2.000	.50	797		67	245	116	115	4	010.794	
D 1	1.2	1.095	.15	772		67	246	115	115	2	013.83	
2	2.2	1.483	.27	783		66	250	115	115	2	016.82	
3	5.4	2.324	.67	808		65	243	115	116	4	021.74	
4	3.7	1.924	.46	797		65	244	115	116	4	026.50	
5	1.7	1.304	.21	786		66	243	115	115	2	029.63	
6	.60	.775	.07	745		66	243	114	115	2	031.398	59.84
								115.583	115.500		~~125.44~~	
Stop	4:25	2.110	.66	814.917				115.541			125.159	

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before OK After OK

Total Source Analysis, Inc.
Environmental Testing Consultants

Particulate Field Data Sheet

Client: Springfield Utilities										Date: 8-6-91	Page 1 Of 2	
Project No.: 91-126-04		Operator: L. Keith								Orsat Analysis		
Sampling Location: Unit #2 North				Run No.: 3						CO_2	$+O_2$	O_2 / CO
Filter No.: 91-165		Acetone No.:		Condensate: 125 ml 42 gr						2.3	19.2	16.9 /
Barometric Pressure: 29.01		Static Pressure: +2.5		Probe Number: 15-A						2.5	19.4	16.9 /
Nozzle Diameter: .200	Nozzle Number: 1-39	Pitot Coefficient: .79	Pitot Number: 15-A							✓		✓
Meter Corr. Factor: .99		Meter-Orifice: 066 / 1.54								2.4		16.9
Sample Pt. Time: 5 min		Assumed % Moisture: 4%		Leak Test: Before .008 @ 14" Hg				After .004 @ 14" Hg				

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.	
Start	[redacted]	5:30			NA						031.78	
A 1	1.1	1.049	.14	735		65	242	109	109	1	034.32	
2	2.2	1.483	.27	767		63	247	108	109	3	038.12	
3	4.6	2.145	.57	806		61	244	107	108	5	042.82	
4	3.9	1.975	.48	826		61	244	108	109	5	047.45	
5	1.8	1.342	.22	792		62	244	108	108	4	050.65	
6	.60	.775	.07	740		62	243	108	108	1	052.50	
B 1	6.2	2.490	.77	846		62	243	107	108	7	058.47	
2	5.4	2.324	.67	845		64	242	107	108	6	063.93	
3	12.4	3.521	1.54	896		63	244	107	107	11	072.37	
4	10.6	3.256	1.31	893		63	244	107	107	10	079.85	
5	8.0	2.828	.93	867		64	243	108	107	6	086.45	
6	4.0	2.000	.46	834		63	244	108	107	3	091.08	59.29°
Stop & Start	Silica	Gel	Change	Leak Check Before .007 @ 14"		After .007 @ 14"			Start		091.273	
C 1	6.8	2.608	.79	852		64	244	107	107	3	096.94	
2	4.2	2.490	.72	852		64	242	106	106	3	102.62	
3	13.4	3.661	1.55	891		64	242	106	106	5	110.85	
4	10.6	3.256	1.23	875		63	243	106	105	4	117.70	
5	8.4	2.898	.97	849		65	245	107	106	4	124.41	
6	4.2	2.049	.49	813		65	244	107	106	2	129.16	
D 1	1.9	1.378	.22	772		65	244	106	105	1	132.41	
2	2.0	1.414	.23	773		66	243	105	105	1	135.78	
3	5.2	2.280	.64	797		66	242	106	105	4	141.22	
4	3.6	1.897	.44	795		66	243	106	105	3	145.70	
5	1.7	1.304	.20	782		66	244	106	105	2	148.78	
6	.38	.616	.05	782		64	241	105	105	1	150.262	58.98°
		2.069	.673	820				106.875	106.708			
Stop	7:40								106.792		118.[illegible]	

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before OK After OK

Total Source Analysis, Inc.
Environmental Testing Consultants

Particulate Field Data Sheet

Client: City Utilities of Springfield	Run #: One 9M4	Date: 8-6-91	Page: (1) Of 2		
Project No.: 91-126-OH	Operator: Z. White				
Sampling Location: Stack Unit # 2 South	Initial Volume Impinger: 500ml				
Filter No.: 91-159-OH	Acetone No.: 1-1A	Condensate: [illegible] 182			
Assumed % Moisture: 7%	Barometric Pressure: 29.01	Static Pressure: +3.9			
Nozzle Diameter: .310	Nozzle Number: 1-12	Pitot Coefficient: .79	Probe/Pitot Number: 15-B		
Meter Corr. Factor: .98	Meter-Orifice: 65-2.57	Sample Pt. Time: 5 min X 24 points			
Start Time: 10:11	Stop Time: 12:28	Leak Test: Before OK .015A+15"	After OK .007A+20"		

Orsat Analysis

	CO_2	$+O_2$	O_2	CO
	2.6	19.8	17.2	
	2.6	19.6	17.0	
	2.8	19.4	16.8	
	Ave.	Ave.	Ave.	Ave.

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading
											578.029
A-1	1.4	1.183	1.02	732	N/A	69	251	94	103	5	588.023
2	3.0	1.732	2.18	758		69	252	93	105	10	593.82
3	6.4	2.530	4.66	775		68	253	101	110	15	607.81
4	5.0	2.236	3.64	789		71	256	104	113	11	619.49
5	3.2	1.789	2.33	781		70	255	101	109	11	630.20
6	1.8	1.342	1.31	767		70	244	124	109	4	638.10
B-1	11.0	3.317	8.01	823		67	240	124	107	16	656.26
2	12.2	3.493	8.80	869		71	247	126	109	16	676.53
3	8.2	2.864	5.97	798		69	239	132	112	15	693.04
4	7.6	2.757	5.53	811		67	241	133	114	15	708.61
5	6.4	2.530	4.66	824		69	249	136	114	13	723.32
6	3.6	1.897	2.76	793		69	248	136	115	8	734.42
C-1	7.8	2.793	5.98	814		71	256	132	118	16	750.60
2	9.6	3.098	7.36	864		69	259	140	119	16	768.52
3	8.4	2.898	6.44	821		69	263	141	118	16	785.34
4	6.2	2.490	4.75	801		69	273	138	124	16	799.53
5	4.8	2.191	3.68	803		65	268	134	121	14	812.12
6	3.6	1.897	2.76	764		68	240	136	120	12	824.29
D-1	1.6	1.265	1.23	756		71	238	137	118	4	831.03
2	5.2	2.280	3.54	780		73	227	124	119	11	843.37
3	6.4	2.530	4.91	790		74	224	129	121	15	857.83
4	3.6	1.897	2.76	782		71	226	130	123	9	868.64
5	1.0	1.00	.77	731		73	231	126	119	4	874.28
6	0.60	.775	.45	712		74	241	123	121	2	878.895
		2.199	4.00	789				116			300.866

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before OK After OK

TSA

Total Source Analysis, Inc.

Environmental Samplers

Particulate Field Data Sheet

Client	Run #	Date	Page	Of
Utilities OF SPRINGFIELD	TWO GAS	8-6-91	1	2

Project No.	Operator
91-126-01H	J White

Sampling Location	Initial Volume Impinger
STACK UNIT #2	500 mL

Filter No.	Acetone No.	Condensate
91-160-01H	2-2B	180 mL 24 gr.

Assumed % Moisture	Barometric Pressure	Static Pressure
4%	29.01	+3.9

Nozzle Diameter	Nozzle Number	Pitot Coefficient	Probe/Pitot Number
*.242	1-7	.79	15-B

Meter Corr. Factor	Meter-Orifice	Sample Pt. Time
.98	.65/.57	5 MIN 24 POINTS

Start Time	Stop Time	Leak Test	Before	After
2:05 pm	4:25 pm		OK .004 AT 15"	OK .002 AT 15"

Orsat Analysis

	CO_2	$+O_2$	O_2	CO
	2.4	19.2	16.8	
	2.4	19.4	17.0	
	2.4	19.4	17.0	
Ave.				

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.
											879.815
A-1	1.2	1.095	.33	746	N/A	63	254	98	92	2	883.64
2	3.4	1.844	.95	776		66	263	98	94	4	890.10
3	4.0	2.00	1.11	791		67	261	99	95	4	896.82
4	3.2	1.789	.89	789		64	257	100	96	4	903.30
5	1.8	1.342	.50	777		65	251	101	97	3	907.67
6	1.0	1.00	.28	733		68	252	102	96	2	911.13
B-1	10.0	3.162	2.78	867		70	254	103	98	5	922.23
2	11.6	3.406	3.22	883		68	257	105	98	6	934.04
3	8.0	2.828	2.22	878		65	258	106	97	5	943.95
4	7.8	2.793	2.17	876		65	268	110	101	4	953.34
5	6.2	2.490	1.63	843		68	261	112	101	4	961.81
6	4.4	2.098	1.16	847		67	263	112	103	3	968.95
C-1	8.2	2.864	2.15	829		64	249	104	99	6	978.67
2	9.8	3.130	2.57	861		67	259	107	98	11	989.46
3	8.6	2.933	2.26	832		69	254	108	99	9	999.41
4	7.2	2.683	1.89	820		72	256	109	100	8	1008.64
5	5.8	2.408	1.52	804		70	254	111	102	4	16.86
6	3.0	1.732	.79	800		73	248	112	102	3	22.23
O-1	1.4	1.183	.37	763		74	252	113	103	2	26.61
2	6.0	2.449	1.64	793		72	237	111	105	4	34.56
3	7.2	2.683	1.96	805		71	261	107	100	6	43.92
4	3.4	1.844	.93	787		69	257	110	100	3	50.32
5	1.0	1.00	.27	781		69	242	109	103	2	53.54
6	.42	.648	.11	737		70	224	106	99	2	55.874
		2.142	1.404	809.917				105.742	99.083		176.059
*	CHANGED NOZZLE SIZE .242										
									102.458		

Pitot Tube Leak Check: Before OK After _____

Integrated Bag Leak Check: Before _____ After _____

TSA

Total Source Analysis, Inc.

Environmental Samplers

Particulate Field Data Sheet

Client		Date	Page Of
Utilities of Springfield		8-6-91	(1) 2
Project No.	**Operator**		
91-126 olt	Z Zuhn		
Sampling Location	**Run No.**		
Stack unit 2 South	SAS three		
Filter No.	**Acetone No.**	**Condensate**	
91-161-OH	3-3 A	170 / 48	
Barometric Pressure	**Static Pressure**	**Probe Number**	
29.10	+3.9	15-B	
Nozzle Diameter	**Nozzle Number**	**Pitot Coefficient**	**Pitot Number**
.242	1-7	.79	15-B.P
Meter Corr. Factor	**Meter-Orifice**		
.98	.65-2 .57		

Orsat Analysis

CO_2	$+O_2$	O_2	CO
2.4	19.2	16.8	
2.6	19.4	16.8	
2.4	19.2	16.8	

Sample Pt. Time	Assumed % Moisture	Leak Test	Before	After
5m.N	4%		OK, .004 @ 20"	

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.
5:25											58.431
A-1	1.4	1.183	.40	746	N/A	67	249	98	93	2	62.60
2	3.8	1.949	1.09	786		65	247	98	94	4	69.49
3	4.1	2.025	1.16	796		68	249	98	94	4	76.63
4	3.4	1.844	.96	787		70	253	98	95	4	83.13
5	1.6	1.265	.45	782		68	260	99	96	3	87.60
6	1.2	1.095	.33	751		67	263	100	97	2	91.20
B-1	10.6	3.256	2.93	869		65	267	99	99	12	102.55
2	11.8	3.435	3.27	864		65	263	100	99	10	114.52
3	8.4	2.898	2.18	878		65	261	98	96	10	124.31
4	8.0	2.828	2.08	879		67	254	97	96	8	133.97
5	6.0	2.449	1.56	842		65	250	96	96	6	142.26
6	4.6	2.145	1.20	860		63	254	96	94	4	149.50
C-1	8.0	2.828	2.08	854		63	247	101	92	8	159.05
2	9.6	3.098	2.50	843		64	249	102	93	7	169.51
3	8.6	2.933	2.24	846		64	242	103	92	6	179.44
4	7.4	2.720	1.92	823		62	256	103	92	5	188.63
5	6.0	2.449	1.56	817		64	259	104	91	4	196.90
6	3.2	1.789	.83	806		64	259	104	91	2	202.94
D-1	1.4	1.183	.38	776		66	260	102	90	3	207.04
2	6.2	2.490	1.69	791		66	254	100	90	4	215.67
3	7.0	2.646	1.91	801		65	250	101	90	7	224.83
4	3.4	1.844	.93	787		66	262	106	92	6	231.21
5	1.2	1.095	.33	783		67	264	107	93	6	235.00
6	.60	.775	.16	741		64	264	108	94	6	237.684
7140											
		2.176	1.422	812.833				100.750	93.708		179.253
									97.229		

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before _____ After _____

Total Source Analysis, Inc.
Environmental Testing Consultants

Particulate
August 7 1991

Particulate Field Data Sheet

Client: Springfield Utilities										Date: 8-7-91	Page 1 Of 2	
Project No.: 91-126-OH		Operator: L. Keith								Orsat Analysis		
Sampling Location: Unit 2 North				Run No.: 1 oil						CO_2	$+O_2$	O_2 / CO
Filter No.: 91-167		Acetone No.:		Condensate: 145ml / 46gr.						2.3	19.2	16.9 /
Barometric Pressure: 29.07		Static Pressure: 2.5		Probe Number: 15-A						2.3	19.2	16.9 /
Nozzle Diameter: .200	Nozzle Number: 1-[illegible]37	Pitot Coefficient: .79		Pitot Number: 15-A						/	/	/ /
Meter Corr. Factor: .99		Meter-Orifice: 066 / 1.54								/	/	/ /
Sample Pt. Time: 5 min		Assumed % Moisture: 5%		Leak Test: Before .005@14"Hg			After .003@14"Hg					

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.	
Start	8:15				N/A						151.433	
A 1	1.6	1.265	.19	727		68	229	96	98	1	154.49	
2	2.2	1.483	.26	776		3968	241	97	98	1	157.65	
3	5.4	2.324	.65	822		58	228	98	100	4	162.55	
4	2.5	1.581	.28	848		58	242	99	101	1	166.25	
5	2.7	1.643	.30	845		46	238	100	102	1	169.65	
6	1.0	1.000	.11	837		46	237	102	103	1	171.91	
B 1	11.9	3.450	1.34	816		47	240	104	105	6	179.43	
2	12.0	3.464	1.38	900		47	246	105	106	6	187.00	
3	10.2	3.194	1.11	918		47	243	107	107	6	194.20	
4	9.2	3.033	1.00	907		48	240	108	108	5	200.90	
5	6.6	2.569	.72	874		48	239	109	109	3	206.70	
6	3.9	1.975	.43	846		48	238	111	111	2	211.625	60.19
stop 9:30	Silica Gel Change			Leak Check Before .007@14"			After .003@19"			START→	212.009	
C 1	7.9	2.811	.91	831		52	224	118	119	3	218.25	
2	7.6	2.757	.90	883		52	270	121	120	3	224.63	
3	13.0	3.606	1.51	911		52	259	123	121	4	232.65	
4	10.0	3.162	1.16	885		52	242	125	122	4	280.19	
5	7.2	2.683	.83	846		52	228	125	123	3	246.88	
6	4.0	2.000	.47	842		53	229	126	124	2	251.56	
D 1	1.3	1.140	.15	772		53	232	126	126	1	254.88	
2	2.1	1.449	.26	792		54	227	126	126	1	258.10	
3	6.4	2.530	.79	820		57	239	130	129	2	263.95	
4	4.1	2.025	.51	815		56	235	132	130	2	268.82	
5	1.6	1.265	.20	804		57	237	132	131	1	271.87	
6	.30	.548	.04	804		58	232	133	132	1	278.205	61.20
		2.207	.646	838.375				114.667				
Stop	10:34										121.390	

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before OK After OK

TSA

Total Source Analysis, Inc.

Environmental Testing Consultants

Particulate Field Data Sheet

Client: Springfield Utilities				Date: 8-7-91	Page 1 Of 2
Project No.: 91-126-OH	Operator: L. Keith			Orsat Analysis	
Sampling Location: Unit 2 North			Run No.: 2 of 2	CO_2 / $+O_2$ / O_2 / CO	
Filter No.: 91-168	Acetone No.:	Condensate: 90 ml / 42 g.		2.3 / — / 16.9 / —	
Barometric Pressure: 29.07	Static Pressure: +2.5	Probe Number: 15-A		2.3 / — / 16.9 / —	
Nozzle Diameter: .200	Nozzle Number: ~~1-40~~ 1-37	Pitot Coefficient: .79	Pitot Number: 15-A	/ / /	
Meter Corr. Factor: .99	Meter-Orifice: 066 / 1.54			2.3 / — / 16.9 / —	
Sample Pt. Time: 5 min	Assumed % Moisture: [redacted] 6%	Leak Test: Before .004 @ 14" Hg		After .005 @ 14" Hg	

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.	
Start	11:40				N/A						273.728	
A 1	1.1	1.049	.14	776		54	229	133	135	1	276.30	
2	3.0	1.732	.37	796		54	273	134	135	2	280.00	
3	2.9	1.703	.37	854		54	272	136	137	3	284.05	
4	3.2	1.789	.41	869		54	246	136	136	4	288.59	
5	1.8	1.342	.23	863		54	227	135	135	1	291.84	
6	.60	.775	.08	853		54	224	135	135	1	293.925	
B 1	5.8	2.408	.74	836		54	249	135	135	5	299.32	
2	11.2	3.347	1.42	909		54	244	137	136	6	306.30	
3	11	3.317	1.29	880		53	237	138	135	6	313.85	
4	8.0	2.828	.98	850		53	228	139	136	5	320.70	
5	5.6	2.366	.68	846		53	239	138	136	3	326.39	
6	2.8	1.673	.34	830		54	234	138	136	2	330.403	56.6
STOP 12:43 START 12:52	Silica Gel Change Leak Before				.003 @ 14"	After	.007 @ 14" Hg			Start @	330.854	
C 1	8.0	2.828	.98	842		52	230	130	129	3	337.13	
2	10.8	3.286	1.32	891		52	242	127	130	4	344.45	
3	6.0	2.449	.73	853		51	231	124	126	3	350.28	
4	9.0	3.000	1.10	896		51	233	124	125	4	357.41	
5	7.8	2.793	.95	887		50	233	123	124	3	363.90	
6	3.8	1.949	.46	857		50	231	122	122	1	368.714	
D 1	1.0	1.000	.12	775		48	231	120	121	1	371.16	
2	1.8	1.342	.23	796		49	232	118	120	1	374.55	
3	6.0	2.449	.72	799		50	230	118	120	1	380.12	
4	3.6	1.897	.43	782		50	231	119	120	1	384.98	
5	1.7	1.304	.21	780		50	231	120	121	1	388.10	
6	.34	.583	.04	775		50	231	119	120	1	389.359	58.5
		2.050	.598	856.500				121.083			115.180	
Stop	2:00											

Pitot Tube Leak Check: Before OK After

Integrated Bag Leak Check: Before OK After

Total Source Analysis, Inc.
Environmental Testing Consultants

Particulate Field Data Sheet

Client: Springfield Utilities										Date: 8-7-91	Page 1 Of 2	
Project No.: 91-126-OH		Operator: L. Keith								Orsat Analysis		
Sampling Location: Unit 2 North									Run No.: 3 of 4	CO_2	$+O_2$	O_2 / CO
Filter No.: 91-139		Acetone No.:		Condensate: 100 ml. 969.						2.6	___	17.2 / ___
Barometric Pressure: 29.07		Static Pressure: +2.5		Probe Number: 15-A						2.6	___	17.2 / ___
Nozzle Diameter: .200		Nozzle Number: ~~1-10~~ 1-37		Pitot Coefficient: .79		Pitot Number: 15-A				/	___	/ ___
Meter Corr. Factor: .99				Meter-Orifice: 066 / 1.54						2.6	___	17.2 / ___
Sample Pt. Time: 5 min		Assumed % Moisture: 6%				Leak Test: Before 0.005 @ 14"		After .005 @ 14" Hg				

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.	
Start	3:52				N/A						389.775	
A 1	1.1	1.049	.13	813		48	266	114	114	1	392.40	
2	2.2	1.483	.27	798		48	233	113	114	4	395.91	
3	2.6	1.612	.31	782		48	227	113	114	4	399.69	
4	2.3	1.517	.27	832		49	260	113	114	3	403.24	
5	1.9	1.378	.23	819		50	226	113	114	3	406.47	
6	.60	.775	.07	833		50	244	113	114	1	408.29	
B 1	12.0	3.464	1.42	885		50	239	114	114	4	416.41	
2	12.4	3.521	1.47	909		49	238	115	114	4	424.66	
3	11.4	3.376	1.35	930		49	236	116	114	4	432.57	
4	8.4	2.898	1.00	846		49	235	117	114	3	439.36	
5	5.2	2.280	.62	846		51	240	117	114	4	444.70	
6	3.0	1.732	.36	808		49	233	115	113	2	448.76	58.9
STOP 4:53 START 4:59		Silica Gel Change		Leak Check	.005@14"	After	.005@14"			Start →	449.065	
C 1	11.6	3.406	1.38	897		48	238	110	110	4	456.89	
2	12.4	3.521	1.41	894		48	237	110	110	5	464.98	
3	13.0	3.606	1.48	906		48	237	110	110	6	473.11	
4	9.2	3.033	1.05	850		48	238	111	110	4	480.08	
5	7.4	2.720	.84	835		55	235	110	109	3	486.33	
6	3.3	1.817	.38	841		55	238	110	109	2	490.50	
D 1	2.2	1.483	.26	789		58	245	109	109	1	493.98	
2	1.9	1.378	.23	782		60	236	109	109	1	497.21	
3	5.6	2.366	.66	811		61	235	109	109	3	502.78	
4	5.9	2.429	.70	800		61	234	109	109	3	508.47	
5	3.0	1.732	.36	798		61	236	109	109	1	512.53	
6	1.3	1.140	.15	801		61	234	109	109	1	515.243	66.4
		2.238	.693	837.708				109.438			125.168	
Stop	6:02											

Pitot Tube Leak Check: Before _____ After _____

Integrated Bag Leak Check: Before _____ After _____

TSA
Total Source Analysis, Inc.
Environmental Testing Consultants

Particulate Field Data Sheet

Client: Utilities of Springfield										Date: 8-7-91	Page: (1) Of 2	
Project No.: 91-126-OH	Operator: Fuhrer									Orsat Analysis		
Sampling Location: South stack Unit #2								Run No.: One		CO_2	$+O_2$	O_2 / CO
Filter No.: 91-154-OH	Acetone No.: 1-1A-2					Condensate: 135 mL 72 gr				2.4	19.6	17.2 /
Barometric Pressure: 29.07			Static Pressure: +3.9		Probe Number: 15-B					2.0	19.2	17.2 /
Nozzle Diameter: .242	Nozzle Number: 1-7		Pitot Coefficient: .79		Pitot Number: 15-B.P					—	—	— /
Meter Corr. Factor: .98			Meter-Orifice: 65-2 1.57									
Sample Pt. Time: 5 min 24 points			Assumed % Moisture: 5%					Leak Test: Before OK .004 at 15"		After OK .003 at 20"		

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.
8:15 am	-	-	-	-	N/A	-	-	-	-	-	263.849
A-1	1.4	1.183	.37	734		52	254	78	78	2	267.92
2	4.2	2.049	1.10	761		52	249	81	79	8	274.81
3	3.8	1.949	.97	786		46	257	83	79	4	281.40
4	2.4	1.549	.62	772		43	261	85	80	3	286.63
5	1.2	1.095	.31	761		40	264	87	82	2	290.52
6	.80	.894	.21	730		42	262	88	83	2	293.59
B-1	11.4	3.376	2.92	819		41	253	90	85	7	304.72
2	12.2	3.493	3.06	824		43	255	96	87	8	316.10
3	10.6	3.256	2.66	875		45	249	97	88	6	326.57
4	9.4	3.066	2.36	881		47	251	98	90	6	336.83
5	7.0	2.646	1.76	897		49	249	99	91	4	345.71
6	6.2	2.490	1.56	852		50	257	103	92	4	354.00
C-1	5.8	2.408	1.46	845		56	249	101	97	4	361.89
2	10.2	3.194	2.56	851		57	251	104	98	6	372.50
3	11.4	3.376	2.86	880		58	247	111	100	7	383.61
4	9.6	3.098	2.41	867		59	251	112	101	6	393.69
5	7.4	2.720	1.86	843		56	252	113	102	4	402.22
6	5.6	2.366	1.41	821		54	260	112	102	4	410.56
D-1	1.6	1.265	.40	760		49	256	104	96	2	414.81
2	6.0	2.449	1.51	783		51	257	102	98	3	422.86
3	7.2	2.683	1.81	814		52	260	103	99	5	431.48
4	4.4	2.098	1.10	797		54	259	108	103	4	438.63
5	1.2	1.095	.30	767		57	253	109	104	2	442.26
6	.45	.671	.11	760		59	256	111	106	2	444.693
10:32 am		2.270	1.487	811.667	↓			98.758 / 95.729	92.500		180.844

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before _____ After _____

Total Source Analysis, Inc.
Environmental Testing Consultants

Particulate Field Data Sheet

Client: Utilities of Springfield										Date: 8-7-91	Page: 1 Of 2		
Project No.: 91-126-04	Operator: T. White									Orsat Analysis			
Sampling Location: Stack South Unit #2	Run No.: Two/oil									CO_2	$+O_2$	O_2	CO
Filter No.: 91-162	Acetone No.: 2-2A-B	Condensate: 125 mL / 84 gr								2.8	19.0		N/A
Barometric Pressure: 29.07	Static Pressure: +3.9	Probe Number: 15-B								3.0	20.2	17.2	
Nozzle Diameter: .242	Nozzle Number: 1-7	Pitot Coefficient: .79	Pitot Number: 15-B.P							2.8		17.0	
Meter Corr. Factor: .98	Meter-Orifice: 65-2 .57									2.9 Av		17.1 Av	
Sample Pt. Time: 5 Min. 24 points	Assumed % Moisture: 5%	Leak Test	Before: ok .003 at 25"	After: ok .00 / at 20"									

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.
11:42	-	-	-	-	-	-	-	-	-	-	460.623
A-1	1.4	1.183	.35	762	N/A	67	242	111	104	2	464.94
2	5.0	2.236	1.25	804		69	251	113	106	5	472.10
3	4.4	2.098	1.10	823		70	256	114	105	5	479.19
4	2.8	1.673	.70	817		69	254	115	106	4	484.83
5	1.2	1.095	.30	796		67	256	115	107	3	488.46
6	1.0	1.00	.25	787		65	259	115	106	2	491.80
B-1	11.8	3.435	2.96	885		61	261	115	107	9	503.13
2	12.4	3.521	3.11	909		59	260	117	108	9	514.81
3	10.8	3.286	2.71	911		58	259	119	108	10	525.64
4	9.8	3.130	2.46	902		58	254	122	109	9	536.03
5	6.8	2.608	1.71	867		59	253	126	110	6	544.71
6	3.6	1.897	.90	824		60	250	127	112	6	551.04
C-1	6.0	2449	1.72	851		63	252	126	110	4	559.22
2	9.8	3.130	2.80	888		64	254	126	108	5	570.74
3	11.0	3.317	3.07	905		67	261	127	110	6	582.35
4	9.8	3.130	2.74	849		69	267	127	111	5	593.28
5	6.8	2.608	1.90	831		67	252	122	108	4	602.40
6	6.0	2.449	1.68	824		68	250	121	107	3	611.03
D-1	1.2	1.095	.34	800		67	246	120	106	2	614.92
2	6.4	2.530	1.86	812		66	254	118	105	4	624.01
3	6.8	2.608	1.98	793		65	252	111	109	4	633.35
4	3.8	1.949	1.10	781		66	254	110	105	3	640.51
5	1.2	1.095	.35	775		69	253	112	103	2	644.60
6	.45	.671	.13	742		68	251	113	101	2	647.028
1:56											
		2.258	1.561	830.750				118.417	107.125		186.405
								112.771			

Pitot Tube Leak Check: Before ok After ok

Integrated Bag Leak Check: Before ____ After ____

Total Source Analysis, Inc.
Environmental Testing Consultants

Particulate Field Data Sheet

Client	Run #	Date	Page
Utilities of Springfield	Three 0-L	8-7-91	1 of 2

Project No.	Operator
91-126-01	J White

Sampling Location	Initial Volume Impinger
South Stack (0-L)	500

Filter No.	Acetone No.	Condensate
91-134	3-3A-B	140 / 70 gr

Assumed % Moisture	Barometric Pressure	Static Pressure
5%	29.07	+3.9

Nozzle Diameter	Nozzle Number	Pitot Coefficient	Probe/Pitot Number
.242	1-7	.79	15-B-P

Meter Corr. Factor	Meter-Orifice	Sample Pt. Time
.98	65.57	5 min

Start Time	Stop Time	Leak Test	Before	After
3:50 pm			OK .002 At 20"	OK .003 At 15"

Orsat Analysis

	CO_2	$+O_2$	O_2	CO
	2.8	19.8	16.8	
	2.6	19.8	17.2	
	2.6	19.6	17.0	
	Ave. 2.7	Ave.	Ave. 17.0	Ave.

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.
3:50 pm	-	-	-	-	-	-	-	-	-	-	647.632
A-1	1.2	1.095	.33	753	N/A	58	260	101	96	4	651.41
2	5.0	2.236	1.36	799		57	261	102	96	7	659.12
3	4.2	2.049	1.14	822		54	260	103	96	5	666.19
4	3.0	1.732	.81	828		51	254	103	96	4	672.16
5	1.2	1.095	.33	800		50	250	104	97	3	675.94
6	1.4	1.183	.38	803		52	253	106	98	3	680.02
B-1	12.0	3.464	3.25	889		54	256	106	100	3	691.96
2	12.2	3.493	3.31	903		56	260	107	100	9	704.00
3	11.0	3.317	2.98	912		55	260	109	101	8	715.44
4	9.6	3.098	2.60	872		57	263	110	102	9	726.12
5	6.8	2.608	1.84	881		59	264	112	103	6	735.11
6	3.4	1.844	.92	872		60	258	114	104	5	741.47
C-1	6.2	2.490	1.68	821		62	249	115	105	8	750.06
2	9.6	3.098	2.60	873		62	251	115	105	9	760.74
3	11.2	3.347	3.04	900		63	250	115	105	10	772.28
4	10.0	3.162	2.71	854		64	247	116	105	9	783.18
5	6.6	2.569	1.79	851		64	246	117	105	7	792.04
6	5.8	2.408	1.57	843		66	249	118	106	6	800.34
D-1	1.4	1.183	.38	810		64	246	116	104	5	804.42
2	6.6	2.569	1.79	815		65	243	117	104	8	813.28
3	6.8	2.608	1.84	796		66	250	114	101	8	822.27
4	4.0	2.00	1.08	817		67	253	110	100	7	829.18
5	1.4	1.183	.38	785		67	250	109	100	3	833.26
6	.40	.632	.11	769		67	249	108	100	2	835.45
		2.269	1.593	836.167				110.292	101.208		187.909
									105.750		

Pitot Tube Leak Check: Before OK OK After OK

Integrated Bag Leak Check: Before ____ After ____

Total Source Analysis, Inc.
Environmental Samplers

Particulate
August 12 1991

Particulate Field Data Sheet

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Client		Date	Page 1 Of 2
Springfield Utilities		8-12-91	
Project No. 91-126-OH	**Operator** L Keith	**Orsat Analysis**	
Sampling Location Unit 1 North	**Run No.** 1 GAS	CO_2 / $+O_2$ / O_2 / CO	
Filter No. 91-129	**Acetone No.**	**Condensate** 140ml / 38g.	2.6 / — / 17.0 / —
Barometric Pressure 29.97	**Static Pressure** +4.0	**Probe Number** 15-A	2.6 / — / 17.0 / —
Nozzle Diameter .200	**Nozzle Number** 1-37	**Pitot Coefficient** .79 **Pitot Number** 15-A	~~2.6~~ / — / — / —
Meter Corr. Factor .99	**Meter-Orifice** 066 / .54		~~[illegible]~~ / — / 17.0 / —
Sample Pt. Time 5 min	**Assumed % Moisture** 6%	**Leak Test** Before .005 @ 14" Hg	After .004 @ 14" Hg

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.	
Start	9:39 am				N/A						515.415	
A 1	.80	.894	.09	763		48	247	93	92	1	517.88	
2	2.0	1.414	.23	771		46	238	95	93	1	520.94	
3	2.6	1.612	.30	813		53	245	95	93	1	524.55	
4	3.8	1.949	.45	822		50	239	96	94	1	528.90	
5	1.4	1.265	.19	817		51	229	97	95	1	532.35	
6	.50	.707	.06	809		54	249	98	97	1	534.04	
B 1	6.2	2.490	.75	845		48	233	101	99	2	539.00	
2	4.0	2.000	.49	888		49	252	103	101	2	543.80	
3	11.8	3.435	1.35	900		50	240	106	103	3	551.71	
4	10.2	3.194	1.17	888		53	243	109	105	4	556.65	
5	6.4	2.530	.77	862		55	246	112	107	2	562.57	
6	4.4	2.098	.53	834		51	245	111	108	1	567.37	51.96
10138 10142	Silica Gel Change			Leak Check	.005 @ 14"	After	.006 @ 14"			Start	567.46	
C 1	4.0	2.000	.48	865		52	254	116	112	1	572.17	
2	7.6	2.757	.91	867		52	248	118	114	2	578.00	
3	12.9	3.592	1.59	890		53	243	120	114	4	586.58	
4	9.2	3.033	1.13	880		54	243	122	115	3	594.25	
5	6.6	2.569	.83	864		53	240	123	117	1	600.34	
6	3.6	1.897	.45	832		52	250	122	117	1	604.78	
D 1	1.9	1.378	.24	783		52	241	122	118	1	607.92	
2	4.4	2.098	.55	804		52	242	120	118	1	612.35	
3	5.6	2.236	.63	783		52	236	117	117	2	617.68	
4	3.4	1.844	.43	809		52	241	115	116	1	622.07	
5	2.7	1.304	.21	778		51	242	114	115	1	625.28	
6	.40	.632	.05	776		51	242	113	115	1	627.005	5.725
		2.039	.580	830.7				108.458			111.540	
Stop	11:46											

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before OK After OK

Total Source Analysis, Inc.
Environmental Testing Consultants

Particulate Field Data Sheet

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Client				Date	Page 1 Of 2
Springfield Utilities				8-12-91	
Project No.	Operator			Orsat Analysis	
91-126-OH	L. Keith				
Sampling Location		Run No.		CO_2	$+O_2$ / O_2 / CO
Unit 1 North		2 Gas			
Filter No.	Acetone No.	Condensate		3	16.2
91-137		135 / 136 g.			
Barometric Pressure	Static Pressure	Probe Number		3	16.4
29.97	+4.0	1S-A			
Nozzle Diameter	Nozzle Number	Pitot Coefficient	Pitot Number	/	/ / /
.200	1-37	.79	1S-1		
Meter Corr. Factor	Meter-Orifice			3.0	16.3
.99	066 / .54				
Sample Pt. Time	Assumed % Moisture	Leak Test	Before	After	
5 min	7%		.003 @ 14" Hg	.005 @ 19" Hg	

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.	
Start	12:50 PM				N/A						627.434	
A 1	1.2	1.095	.13	748		53	232	124	123	1	629.90	
2	3.6	1.897	.42	806		53	247	124	124	2	634.39	
3	6.8	2.608	.79	811		53	265	124	124	4	638.39	
4	5.2	2.280	.60	800		52	237	124	124	3	643.41	
5	2.6	1.612	.30	816		53	224	124	124	1	647.20	
6	.80	.894	.09	814		54	251	124	124	1	649.26	
B 1	2.6	1.612	.30	823		57	242	123	123	1	652.79	
2	3.0	1.732	.35	864		57	236	122	123	1	656.82	
3	10.6	3.256	1.23	899		58	231	120	121	5	664.37	
4	10.2	3.194	1.18	887		57	255	120	121	5	671.78	
5	6.2	2.490	.72	862		57	243	119	120	4	677.40	
6	5.2	2.280	.60	830		53	235	119	120	3	682.73	55.30
11:52 11:58	Silica Gel Change	Leak Check Before .003 @ 14"			After .003 @ 14"						682.861	
C 1	4.0	2.000	.46	836		55	240	112	113	2	687.36	
2	7.2	2.683	.79	863		54	237	111	111	2	693.33	
3	10.6	3.256	1.16	869		51	239	109	110	5	700.45	
4	8.9	2.983	.95	882		55	234	108	107	4	705.12	
5	6.2	2.490	.66	858		56	238	107	107	3	711.00	
6	3.2	1.789	.34	800		53	237	108	107	1	714.91	
D 1	1.7	1.304	.18	790		57	234	107	107	1	717.98	
2	3.6	1.897	.43	781		60	245	107	107	2	722.27	
3	5.2	2.280	.58	799		58	235	107	107	3	727.20	
4	3.2	1.789	.36	806		55	233	107	106	2	731.26	
5	1.9	1.378	.21	793		54	238	106	105	1	734.39	
6	.50	.707	.06	770		54	236	106	105	1	736.009	53.15
		2.063	.537	825				115	104		108.150	
Stop	3:00											

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before OK After OK

TSA

Total Source Analysis, Inc.

Environmental Testing Consultants

Particulate Field Data Sheet

Client: Springfield Utilities				Date: 8-12-21	Page 1 Of 2
Project No.: 91-126-OH	Operator: L Keith			Orsat Analysis	
Sampling Location: Unit 1 North			Run No.: 3 GAS	CO_2	$+O_2$ / O_2 / CO
Filter No.: 91-088	Acetone No.:	Condensate: 140 ml / 40 g Silica		2.6	16.8
Barometric Pressure: 29.97	Static Pressure: +4.0	Probe Number: S-A		2.6	16.7
Nozzle Diameter: .200	Nozzle Number: 1-37	Pitot Coefficient: .79	Pitot Number: 15-A	/	/
Meter Corr. Factor: .99	Meter-Orifice: 066 / .54			2.6	16.75
Sample Pt. Time: 5 min	Assumed % Moisture: 7%	Leak Test: Before .007 @ 14" Hg	After .002 @ 14" Hg		

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.	
Start	3:32				N/A						736.382	
A 1	1.9	1.378	.21	735		55	260	102	103	1	739.39	
2	3.2	1.789	.34	795		55	252	102	102	1	743.37	
3	4.4	2.098	.47	834		54	236	102	102	2	748.05	
4	3.7	1.924	.40	797		54	237	103	103	2	752.25	
5	2.0	1.414	.21	804		54	230	103	103	1	755.79	
6	.35	.592	.04	773		54	254	103	103	1	757.12	
B 1	3.9	1.975	.42	838		55	229	102	102	1	761.58	
2	6.8	2.608	.73	868		56	233	102	102	3	766.95	
3	7.6	2.757	.78	863		55	235	102	101	3	772.45	
4	8.5	2.915	.88	895		54	245	103	102	4	778.70	
5	6.4	2.530	.66	865		63	239	103	101	3	784.23	
6	3.6	1.897	.37	795		50	238	103	102	2	788.38	52.
4:23 4:39	Silica Gel Change Before .006 @ 14"					After .005 @ 14"				start	786.588	
C 1	2.2	1.483	.23	815		48	237	102	102	1	791.85	
2	3.5	1.871	.38	852		48	223	102	102	1	795.93	
3	11.4	3.376	1.17	881		46	251	102	101	4	803.30	
4	9.0	3.000	.93	845		47	231	103	101	4	809.85	
5	6.6	2.569	.68	808		47	234	104	102	3	815.57	
6	5.0	2.236	.54	803		49	234	104	102	2	820.55	
D 1	1.4	1.183	.15	782		48	243	103	102	1	823.20	
2	3.0	1.732	.32	806		48	232	103	102	1	827.07	
3	6.0	2.449	.65	821		48	231	103	102	3	832.50	
4	4.2	2.049	.45	805		49	235	103	102	3	837.05	
5	1.9	1.378	.20	800		49	234	103	102	1	840.11	
6	.60	.775	.06	794		49	230	103	102	1	841.882	53.774
		1.999	.470	819.75				102.354			105.274	
Stop	5:39											

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before OK After OK

Particulate Field Data Sheet

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Client	Run #	Date	Page
U.O.S. Utilites of Springfield	One 3hrs	8-8-12-91	1 Of 2

Project No.	Operator
91-126-OH	J White

Sampling Location	Initial Volume Impinger
South stack Unit #1	500 mL

Filter No.	Acetone No.	Condensate
91-155	1-1A 8-12	145 / 72 sg

Assumed % Moisture	Barometric Pressure	Static Pressure
6%	29.97	+ 2.6

Nozzle Diameter	Nozzle Number	Pitot Coefficient	Probe/Pitot Number
.242	1-7	.79	15-2 A

Meter Corr. Factor	Meter-Orifice	Sample Pt. Time
.98	65-2 / .57	5 min 24 X

Start Time	Stop Time	Leak Test Before	Leak Test After
9:35 am	11:46	OK .002 At 20"	OK .001 At 20"

Orsat Analysis

	CO_2	$+O_2$	O_2	CO
	2.4		16.8	
	2.5		16.7	
	2.5		16.7	
Ave.	2.45	Ave.	Ave. 16.75	Ave.

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.
-	-	-	-	-	-	-	-	-	-	-	860.315
A-1	2.0	1.414	.46	786	N/A	65	260	74	76	2	864.81
2	2.4	1.549	.58	791		60	258	78	77	2	869.87
3	4.0	2.000	.97	789		62	256	79	77	4	876.40
4	4.8	2.191	1.17	796		61	252	80	78	4	883.64
5	3.0	1.732	.73	779		64	255	84	81	3	889.30
6	1.4	1.183	.34	769		63	259	85	82	2	893.23
B-1	8.8	2.966	2.14	953		61	261	87	84	4	903.10
2	11.2	3.347	2.72	847		62	263	90	87	6	914.03
3	12.4	3.521	3.02	886		63	265	90	87	7	925.54
4	8.4	2.898	2.04	891		64	260	91	87	6	935.04
5	9.8	3.130	2.38	901		66	259	94	88	6	945.27
6	6.2	2.490	1.58	878		64	256	94	88	4	953.60
C-1	12.4	3.521	3.16	927		66	257	96	88	9	965.41
2	12.8	3.578	2.84	932		66	259	96	89	10	976.32
3	11.4	3.376	2.53	934		66	263	97	89	10	986.91
4	9.6	3.098	2.13	942		67	264	96	91	8	996.59
5	6.2	2.490	1.38	913		69	253	99	94	5	4.14
6	6.4	2.530	1.42	886		67	253	106	97	4	11.53
D-1	3.6	1.897	.80	846		69	264	103	97	3	17.45
2	5.2	2.280	1.23	886		69	250	101	96	4	24.57
3	7.6	2.757	1.80	983		69	250	99	94	5	33.35
4	5.8	2.408	1.34	897		71	254	101	96	4	41.32
5	3.0	1.732	.69	825		70	256	102	92	3	47.55
6	1.6	1.265	.37	825		68	257	103	93	2	52.243
AVG's		2.473	1.576	862.6				90.3			191.928

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before ____ After ____

Total Source Analysis, Inc.

Environmental Samplers

Particulate Field Data Sheet

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Client: Utilities of Spring Field				Run # GAS TWO				Date: 8-12-91		Page (1) Of 2	
Project No.: 91-126-01				Operator: J White				Orsat Analysis			
Sampling Location: South Stack Unit #1				Initial Volume Impinger: 500mL				CO_2	$+O_2$	O_2	CO
Filter No.: 91-156		Acetone No.: 2-2A-8-12		Condensate: 188 / 54 sg				2.60	19.0	16.4	
Assumed % Moisture: 6%		Barometric Pressure: 29.97		Static Pressure: +2.6				3.0	19.2	16.2	
Nozzle Diameter: .242	Nozzle Number: 1-7	Pitot Coefficient: .79		Probe/Pitot Number: 15-2-A				2.8	19.2	16.4	
Meter Corr. Factor: .98	Meter-Orifice: 65-2 / .57	Sample Pt. Time: 5 min 24 X						Ave. 2.8	Ave.	Ave. 16.3	Ave.
Start Time: 12:50		Stop Time: 3:04		Leak Test: Before ok 0.000 @ 15"				After ok .001 @ 20"			

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.
-	-	-	-	-	-	-	-	-	-	-	53.013
A-1	2.2	1.483	.51	793	N/A	63	248	99	93	4	57.75
2	3.6	1.897	.83	786		62	251	100	94	4	63.79
3	4.0	2.000	.95	821		59	253	101	96	5	70.24
4	5.2	2.280	1.23	830		58	256	102	96	6	77.59
5	4.2	2.049	.99	842		57	254	103	98	6	84.20
6	3.8	1.949	.90	831		58	255	103	99	7	90.50
B-1	9.0	3.00	2.13	883		59	258	103	99	8	100.17
2	11.4	3.376	2.70	903		59	259	104	99	11	111.05
3	12.0	3.464	2.84	926		61	263	105	99	12	122.23
4	8.2	2.864	1.94	935		62	267	106	100	10	131.46
5	9.4	3.066	2.23	931		60	268	107	100	11	141.34
6	6.6	2.569	1.56	900		61	269	106	101	8	149.62
C-1	12.2	3.493	2.89	937		60	261	108	100	9	160.88
2	13.0	3.606	3.08	921		63	257	108	100	12	172.50
3	11.2	3.347	2.65	913		64	260	109	101	11	183.31
4	9.2	3.033	2.18	946		64	254	108	102	10	193.10
5	6.0	2.449	1.42	921		62	253	107	103	9	201.03
6	6.8	2.608	1.61	884		61	256	108	102	9	209.40
D-1	3.4	1.844	.81	846		65	260	109	106	4	215.34
2	5.0	2.236	1.18	890		67	254	109	108	6	222.58
3	6.2	2.490	1.47	892		69	253	110	108	7	230.61
4	6.0	2.449	1.42	884		67	251	110	108	7	238.52
5	3.4	1.844	.81	861		66	250	110	108	6	244.26
6	1.4	1.183	.33	830		66	248	110	109	3	248.074
AVG's		2.524	1.611	879.4				103.6			195.061

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before ____ After ____

TSA

Total Source Analysis, Inc.

Environmental Samplers

Particulate Field Data Sheet

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Client: Utilities of Springfield				Run # 9AS Three			Date: 8-12-91		Page 1 Of 2		
Project No.: 91-126			Operator: Zwrett				Orsat Analysis				
Sampling Location: South Stack Unit #1				Initial Volume Impinger: 500mL			CO_2	$+O_2$	O_2	CO	
Filter No.: 91-153	Acetone No.: 3-3A 8-12			Condensate: 148 ml / 82 sg			3.2	19.4	16.2		
Assumed % Moisture: 6%	Barometric Pressure: 29.97			Static Pressure: +2.6			3.4	19.6	16.2		
Nozzle Diameter: .242	Nozzle Number: 1-7	Pitot Coefficient: .79		Probe/Pitot Number: 15-B-A			3.0	19.4	16.4		
Meter Corr. Factor: .98	Meter-Orifice: 65-2 .57	Sample Pt. Time: 5 Min 24X					Ave. 3.2	Ave.	Ave. 16.27	Ave.	
Start Time: 3:30	Stop Time: 5:43	Leak Test: Before OK .003 @ 15"					After OK .003 @ 20"				

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.
-	-	-	-	-	-	-	-	-	-	-	253.652
A-1	2.2	1.483	.51	790	N/A	59	248	92	90	3	258.79
2	3.4	1.844	.81	793		58	251	92	90	8	264.73
3	4.2	2.049	.99	812		57	259	93	91	4	271.39
4	5.0	2.236	1.18	831		57	260	93	92	4	278.60
5	4.4	2.098	1.04	846		56	258	95	93	4	285.36
6	4.0	2.00	.95	841		56	259	96	93	4	291.81
B-1	8.6	2.933	2.04	889		54	250	94	92	8	301.26
2	11.6	3.406	2.75	901		52	247	93	91	10	312.24
3	12.4	3.521	2.94	929		53	250	93	90	13	323.59
4	8.2	2.864	1.94	936		51	254	95	91	9	333.68
5	9.8	3.130	2.32	941		54	253	94	90	10	343.27
6	6.2	2.490	1.47	901		56	251	95	91	7	351.80
C-1	12.6	3.550	2.98	937		54	257	94	92	12	363.24
2	12.8	3.578	3.03	928		53	251	93	92	14	374.28
3	10.8	3.286	2.56	913		56	254	94	93	8	385.37
4	9.6	3.098	2.27	950		57	255	95	93	6	395.39
5	6.2	2.490	1.47	927		58	259	95	94	4	403.54
6	6.4	2.530	1.52	910		59	257	96	94	4	411.59
D-1	3.8	1.949	.90	851		59	256	97	94	2	417.87
2	4.6	2.145	1.09	890		60	259	98	93	2	424.28
3	6.4	2.530	1.52	892		61	260	99	94	4	432.93
4	5.8	2.408	1.37	887		60	261	99	94	4	440.74
5	3.6	1.897	.85	860		60	264	99	95	3	446.86
6	1.2	1.095	.28	831		59	261	100	96	2	450.421
		2.525	1.616	882.8				93.8			196.819

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before _____ After _____

TSA

Total Source Analysis, Inc.

Environmental Samplers

Particulate
August 13 1991

Particulate Field Data Sheet

Client: Springfield Utilities				Date: 8-13-91	Page 1 Of 2
Project No.: 91-126-OH	Operator: L. Keith			Orsat Analysis	
Sampling Location: Unit 1 North			Run No.: 1 0,1	CO_2	$+O_2$ / O_2 / CO
Filter No.: 91 148	Acetone No.:		Condensate: 100ml / 32g.	2.8	16.6
Barometric Pressure: 29.92	Static Pressure: + 4.0	Probe Number: 15-A		2.6	16.8
Nozzle Diameter: .200	Nozzle Number: 1-37	Pitot Coefficient: .79	Pitot Number: 15-A	/	/
Meter Corr. Factor: .99	Meter-Orifice: 066 / .54			2.7	16.7
Sample Pt. Time: 5 MIN	Assumed % Moisture: 7%	Leak Test	Before: .008 @ 14" Hg	After: .01 @ 14" Hg	

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.
Start	8:05 AM				NA						842.222
A 1	1.6	1.265	.17	755		44	240	83	82	1	845.26
2	1.9	1.378	.20	801		45	269	84	83	2	848.50
3	2.6	1.612	.27	819		45	247	84	83	2	852.26
4	3.0	1.732	.31	808		48	235	85	84	2	856.30
5	2.2	1.483	.23	815		46	249	86	84	1	859.03
6	1.0	1.000	.10	800		45	233	86	85	1	861.19
B 1	3.9	1.975	.40	854		44	233	87	86	2	865.43
2	4.0	2.000	.40	870		41	237	87	86	2	869.75
3	11.0	3.317	1.10	892		45	235	88	87	4	876.87
4	9.6	3.098	.96	880		45	236	89	87	3	883.52
5	6.3	2.510	.63	845		45	236	90	87	3	888.91
6	5.6	2.366	.56	835		45	237	90	87	2	893.99
C 1	4.2	2.049	.42	852		46	236	90	88	2	898.39
2	7.0	2.646	.70	861		45	242	90	88	3	904.10
3	11.4	3.376	1.14	885		45	243	92	88	4	911.34
4	8.2	2.864	.82	870		46	239	92	89	3	917.49
5	6.4	2.530	.64	858		48	245	92	89	2	922.84
6	3.9	1.975	.39	836		47	244	92	89	2	927.17
D 1	2.0	1.414	.20	791		47	246	91	89	1	930.10
2	4.4	2.098	.46	812		46	244	91	90	2	934.50
3	5.8	2.408	.60	802		46	242	93	91	2	939.87
4	3.8	1.949	.39	800		46	243	93	91	2	944.30
5	1.8	1.342	.19	793		46	244	92	91	1	947.05
6	.40	.632	.04	780		46	243	92	91	1	948.671
		2.042	.472	830				88			
Stop	10:10										106.449

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before OK After OK

Total Source Analysis, Inc.
Environmental Testing Consultants

Particulate Field Data Sheet

U3

Client		Date	Page	Of
Spring Field Utilities		8-13-91	1	2

Project No.	Operator
91-126-OH	L. Keith

Sampling Location	Run No.
Unit 1 North	2 0;1

Filter No.	Acetone No.	Condensate
91-166		115ml / 36

Barometric Pressure	Static Pressure	Probe Number
29.92	+ 4.0	15-A

Nozzle Diameter	Nozzle Number	Pitot Coefficient	Pitot Number
.200	1-37	.79	15-A

Meter Corr. Factor	Meter-Orifice
.99	dH@ / .54

Sample Pt. Time	Assumed % Moisture	Leak Test	Before	After
5 min	6%		.007@ 14"Hg	.003@ 14"Hg

Orsat Analysis

CO_2	$+O_2$	O_2	CO
3.0	___	17.2	___
3.2	___	17.3	___
/	___	/	___
3.1	___	17.25	___

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.
Start	10:40 am				N/A						949.019
A 1	1.9	1.378	.20	765		49	230	97	97	1	952.355
2	4.2	2.049	.46	803		49	255	96	96	2	956.84
3	6.0	2.449	.65	823		49	273	97	97	4	962.33
4	4.4	2.098	.48	820		49	234	97	96	3	967.03
5	1.9	1.378	.21	814		48	235	97	96	1	970.12
6	.50	.707	.05	800		48	228	97	96	1	971.70
B 1	4.0	2.000	.43	850		48	234	101	99	2	976.12
2	4.5	2.121	.47	875		48	230	103	99	2	980.81
3	12.4	3.521	1.31	890		48	234	105	101	6	988.48
4	9.4	3.066	.96	884		49	232	109	102	4	995.33
5	6.8	2.608	.73	840		49	229	112	105	3	001.15
6	4.0	2.000	.43	832		49	236	113	107	2	005.68
C 1	4.5	2.121	.50	847		50	244	112	108	2	010.45
2	6.8	2.608	.74	858		50	239	112	108	3	016.32
3	12.2	3.493	1.33	890		50	260	114	109	6	024.18
4	8.6	2.933	.94	884		51	237	114	108	5	030.78
5	6.2	2.490	.68	855		55	234	113	108	4	036.38
6	4.0	2.000	.44	840		55	233	112	108	3	040.88
D 1	1.4	1.183	.16	764		52	232	109	106	1	043.59
2	1.9	1.378	.22	811		52	232	109	106	1	046.75
3	2.8	1.673	.32	824		52	232	108	106	2	050.59
4	3.9	1.975	.44	810		50	232	107	105	3	055.12
5	1.7	1.304	.19	805		50	232	106	104	1	058.11
6	1.0	1.000	.11	804		50	232	107	105	1	060.433
		2.064	.519	834				105			
Stop	12:45 pm										111.414

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before OK After OK

Total Source Analysis, Inc.
Environmental Testing Consultants

Particulate Field Data Sheet

Client: Springfield Utilities				Date: 8-13-91	Page 1 Of 2
Project No.: 91-126-OH	Operator: L. Keith				
Sampling Location: Unit 1 North			Run No.: 3 Oil	Orsat Analysis	
Filter No.: 91-149	Acetone No.:	Condensate: 95ml / 42g		CO_2	$+O_2$ / O_2 / CO
Barometric Pressure: 29.92	Static Pressure: +4.0	Probe Number: 15-A		3.0	17.6
Nozzle Diameter: .200	Nozzle Number: 1-37	Pitot Coefficient: .79	Pitot Number: 15-A	3.2	17.4
Meter Corr. Factor: .99	Meter-Orifice: 066 / .54			/	17.4
Sample Pt. Time: 5 min	Assumed % Moisture: 6 a/6	Leak Test: Before .007@14"Hg	After .005@14"Hg	3.1	17.5

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.
Start	1130				N/A						61.230
A 1	1.4	1.183	.16	786		47	240	104	104	1	63.92
2	1.8	1.342	.20	796		47	242	103	103	1	66.97
3	2.4	1.549	.27	815		47	250	102	102	3	70.43
4	4.2	2.049	.45	811		46	259	103	103	3	75.02
5	1.8	1.342	.19	807		46	224	103	102	1	78.02
6	1.2	1.095	.13	800		45	257	102	102	1	80.47
B 1	4.2	2.049	.45	855		45	236	103	103	3	85.06
2	4.8	2.191	.52	873		45	226	104	103	3	89.97
3	11.9	3.450	1.29	887		46	227	104	102	5	97.69
4	9.0	3.000	.97	885		46	237	104	103	4	104.41
5	6.3	2.510	.68	841		46	232	105	103	3	110.03
6	4.7	2.168	.51	830		47	233	104	102	2	114.88
C 1	4.5	2.121	.49	847		47	238	103	102	2	119.63
2	6.5	2.550	.70	854		47	231	102	101	3	125.34
3	12.0	3.464	1.30	891		47	232	103	101	5	133.10
4	8.4	2.898	.91	880		46	233	104	102	4	139.59
5	6.4	2.530	.69	856		46	231	105	102	2	145.25
6	4.6	2.145	.50	835		46	237	105	102	2	150.05
D 1	1.8	1.342	.19	767		46	239	104	102	1	153.05
2	3.9	1.975	.42	800		46	230	103	102	2	157.47
3	5.8	2.408	.63	825		46	231	103	102	4	162.86
4	3.7	1.924	.40	821		46	236	103	102	2	167.17
5	2.0	1.414	.22	815		46	235	103	102	1	170.34
6	.55	.742	.06	803		46	251	103	102	1	172.005
		2.060	.514	833				102.83			~~110.78~~
Stop	3:40										110.775

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before OK After OK

Total Source Analysis, Inc.
Environmental Testing Consultants

Particulate Field Data Sheet

Client	Run #	Date	Page	Of
C.U.O. SPRINGFIELD	I	8-13-91	1	2

Project No.	Operator
91-126-OH:O	TWR

Sampling Location	Initial Volume Impinger
STACK South UN.7 I (0.2)	500 ml

Filter No.	Acetone No.	Condensate
91-152	II-I-A (8-13)	155 ml / 68 sg

Assumed % Moisture	Barometric Pressure	Static Pressure
6%	29.92	+2.9

Nozzle Diameter	Nozzle Number	Pitot Coefficient	Probe/Pitot Number
.242	1-7	.79	15-2A

Meter Corr. Factor	Meter-Orifice	Sample Pt. Time
.98	65-2 . 57	5m:N - 24XS

Start Time	Stop Time	Leak Test	Before	After
8:00 AM	10:11 AM		OK .003 AT 15"	OK .002 AT 15"

Orsat Analysis

	CO_2 %	$+O_2$ %	O_2 %	CO %
	2.6	19.2	16.6	N/A
	2.6	19.4	16.8	
Ave.	2.6%	19.3	16.7%	Ave.

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.
											453.695
A 1	2.0	1.414	.47	778	[illegible]	51	248	76	71	2	458.26
2	2.6	1.612	.62	786	N/A	52	250	76	70	2	463.51
3	5.6	2.366	1.33	812		52	254	76	71	3	471.14
4	6.0	2.449	1.42	843		52	256	76	71	3	479.06
5	3.2	1.789	.76	840		51	259	76	72	4	484.96
6	2.2	1.483	.52	833		54	253	79	72	2	489.75
B-1	12.8	3.578	3.03	888		53	256	79	73	6	501.28
2	13.4	3.661	300	906		54	252	79	75	7	512.76
3	12.0	3.464	2.69	918		54	253	81	77	6	523.62
4	11.4	3.376	2.55	904		56	254	81	77	5	534.21
5	8.6	2.933	1.93	900		57	259	81	78	4	543.40
6	7.0	2.646	1.57	841		58	254	83	79	4	551.25
C-1	13.2	3.633	2.96	887		60	251	82	78	8	563.14
2	12.8	3.578	2.87	897		61	253	82	79	8	574.36
3	11.6	3.406	2.60	924		61	254	83	80	8	585.04
4	12.2	3.493	2.73	931		62	256	83	81	9	595.99
5	6.8	2.608	1.52	901		63	259	84	81	6	604.17
6	5.6	2.366	1.26	883		62	258	84	81	5	611.63
D-1	5.2	2.280	1.17	821		63	260	85	82	3	618.28
2	6.4	2.530	1.43	813		64	257	86	83	4	626.71
3	6.8	2.608	1.52	829		64	259	87	84	5	634.93
4	5.2	2.280	1.22	815		64	254	89	83	4	642.25
5	3.0	1.732	.70	807		65	253	90	84	4	647.80
6	1.4	1.183	.33	801		67	254	91	85	4	651.613
		2.603	1.675	857 Av				80	80		197.918

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before _____ After _____

Total Source Analysis, Inc.
Environmental Samplers

Particulate Field Data Sheet

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Client	Run #	Date	Page	Of
C. U. OF SPRINGFIELD	TWO	8-13-91	1	2

Project No.	Operator
91-126-OHIO	TWHITE

Sampling Location	Initial Volume Impinger
STACK SOUTH UNIT #1 (OIL)	500 mL

Filter No.	Acetone No.	Condensate
91-158	2-2A 8-13	135mL / 89 SS

Assumed % Moisture	Barometric Pressure	Static Pressure
6%	29.92	+2.9

Nozzle Diameter	Nozzle Number	Pitot Coefficient	Probe/Pitot Number
.242	1-7	.79	IS-2A

Meter Corr. Factor	Meter-Orifice	Sample Pt. Time
.98	65-2 / .57	5 min. / 24 X

Start Time	Stop Time	Leak Test
10:40	12:48	Before OK, 005 AT 15" / After

Orsat Analysis

CO_2	$+O_2$	O_2	CO
2.8	19.4	16.6	N/A
2.8	19.3	16.5	
Ave.	Ave.	Ave. 16.55	Ave. X

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.
	–	–	–	–	N/A	–	–	–	–	–	654.031
A-1	2.2	1.483	.50	785		64	249	81	81	2	658.70
2	2.8	1.673	.64	793		61	254	82	81	2	664.02
3	5.4	2.324	1.24	825		63	256	83	81	2	671.40
4	6.2	2.490	1.42	851		61	260	84	82	3	679.29
5	3.6	1.897	.82	843		62	260	85	83	2	685.30
6	2.6	1.612	.60	837		63	264	85	83	2	690.41
B-1	12.6	3.550	2.88	890		64	261	85	83	4	701.66
2	13.2	3.633	3.02	908		65	264	86	84	5	713.17
3	12.4	3.521	2.84	922		63	260	86	84	6	724.36
4	11.0	3.317	2.52	914		62	255	87	85	6	734.87
5	8.2	2.864	1.88	906		63	252	86	85	5	743.14
6	6.6	2.569	1.51	851		64	253	87	85	6	751.28
C-1	13.0	3.606	2.98	864		64	254	88	86	7	762.70
2	12.6	3.550	2.88	914		64	256	88	87	8	773.95
3	11.4	3.376	2.61	936		65	257	90	88	8	784.65
4	12.4	3.521	2.84	930		66	259	91	88	10	795.81
5	6.6	2.569	1.51	904		65	257	91	88	6	803.95
6	5.6	2.366	1.28	889		66	253	90	88	6	811.48
D-1	5.4	2.324	1.24	824		66	250	92	90	6	818.84
2	6.2	2.490	1.42	816		67	251	93	90	7	826.73
3	6.4	2.530	1.46	830		67	252	95	91	7	834.75
4	5.0	2.236	1.14	813		68	256	97	91	7	841.83
5	2.4	1.549	.55	808		67	254	98	91	6	846.72
6	1.2	1.095	.27	800		68	250	98	92	2	850.021
AVG's		2.589	1.637	~~860~~ 860 AV				87.4			195.990

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before ____ After ____

Total Source Analysis, Inc.
Environmental Samplers

Particulate Field Data Sheet

L1

Client	Run #	Date	Page	Of
C. U. OF SPRINGFIELD	THREE	8-13-91	1	2

Project No.	Operator
91-126-01	J WHEE

Sampling Location	Initial Volume Impinger
STACK SOUTH UNIT I (0.2)	500mL

Filter No.	Acetone No.	Condensate
91-150	3-3A (8-13)	158 mL / 70 sg

Assumed % Moisture	Barometric Pressure	Static Pressure
6%	29.92	+2.9

Nozzle Diameter	Nozzle Number	Pitot Coefficient	Probe/Pitot Number
.242	1-7	.79	15-2.A

Meter Corr. Factor	Meter-Orifice	Sample Pt. Time
.98	65-2 .57	5 MIN 24X

Start Time	Stop Time	Leak Test	Before	After
1:25 pm / 13:25	3:38 pm / 15:38		OK .003 AT 15"	OK .005 AT 15"

Orsat Analysis

	CO_2	$+O_2$	O_2	CO
	2.8	19.2	16.4	
	2.8	19.1	16.3	
Ave.	2.8	19.15	16.35	Ave.

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr (in. HG)	Dry Gas Meter Reading in Cu. Ft.
					N/A						851.284
A-1	2.0	1.414	.46	791		59	253	83	86	2	855.81
2	2.6	1.612	.60	800		58	254	82	82	2	860.98
3	5.8	2.408	1.34	831		59	256	83	81	4	868.65
4	6.6	2.569	1.53	864		61	257	86	84	6	876.83
5	3.6	1.897	.83	846		60	253	87	84	6	882.87
6	2.8	1.673	.65	861		60	254	89	85	3	888.24
B-1	12.6	3.550	2.91	896		60	250	91	87	6	899.58
2	13.6	3.688	3.14	914		62	247	92	87	8	911.32
3	12.0	3.464	2.77	930		63	245	93	86	7	922.38
4	11.4	3.376	2.64	924		64	246	94	87	6	933.13
5	9.4	2.898	1.94	911		67	250	95	86	5	942.36
6	6.2	2.490	1.43	900		66	254	95	86	4	950.30
C-1	12.6	3.550	2.91	872		61	253	92	83	8	961.60
2	12.2	3.493	2.82	919		62	256	93	84	8	972.74
3	11.6	3.406	2.68	909		60	254	91	83	7	983.60
4	12.0	3.464	2.77	927		60	257	92	84	8	994.63
5	7.0	2.646	1.62	910		60	255	93	84	4	003.06
6	5.6	2.366	1.29	900		61	258	93	85	3	10.60
D-1	5.0	2.236	1.16	830		62	260	92	84	3	17.72
2	6.6	2.569	1.53	821		61	258	93	84	3	25.90
3	6.4	2.530	1.48	841		63	257	94	85	3	33.96
4	5.2	2.280	1.20	815		65	259	96	85	3	41.22
5	2.8	1.673	.65	812		66	259	97	85	2	46.55
6	1.0	1.00	.23	798		67	256	97	85	2	49.744
		2.594	1.691	871 AV				91. 90 AV	88		198.460

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before ____ After ____

Total Source Analysis, Inc.
Environmental Samplers

CYCLONIC FLOW DETERMINATION DATA

Client C. U. O. Springfield — Operator TR
Project No. 91-126-01 — Date 8-12-91
Location Unit #1 South Stack — Checked By

STACK ☑ DUCT ☐

CIRCULAR ☐ RECTANGULAR ☑ SQUARE ☐

Inside Dimension(s): Diameter — Length 13' — Width 11'
Equivalent Diameter — Upstream Distance — Downstream Distance
Number of Diameters Upstream (A) — Number of Diameters Downstream (B)
Total Number of Traverse Points 24 — Total Number of Test Ports 4

ROTATION ANGLE, α
(± 90° Yaw Angle)

Traverse Point Number	Test Ports A	B	C	D			
1	-15	+30	+15	-10			
2	+25	+15	-5	+35			
3	+20	+5	+15	+20			
4	+30	-20	-10	-5			
5	+20	-5	+5	+15			
6	+15	+10	-25	+20			
7	~~X~~	~~X~~	~~X~~	~~X~~			
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							

Absolute α Value Average (< 10°) 16.25°

CYCLONIC FLOW DETERMINATION DATA

Client Springfield Utilities — Operator L. Keith
Project No. 91-126-CH — Date 8-6-9
Location Unit 2 North — Checked By

STACK ☒ DUCT ☐

CIRCULAR ☐ RECTANGULAR ☒ SQUARE ☐

Inside Dimension(s): Diameter ____ Length 13 Width 11
Equivalent Diameter ____ Upstream Distance ____ Downstream Distance ____
Number of Diameters Upstream (A) ____ Number of Diameters Downstream (B) ____
Total Number of Traverse Points 24 Total Number of Test Ports 4

ROTATION ANGLE, α
(± 90° Yaw Angle)

Traverse Point Number	Test Ports A	B	C	D			
1	3	6	8	35			
2	5	7	10	25			
3	5	15	23	36			
4	12	22	25	22			
5	15	18	24	25			
6	11	10	0	20			
7	~~6~~ 8.6	~~13~~ 13.0	~~15~~ 15.0	~~27~~ 27.2			
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							

Absolute α Value, Average (≤ 10°) 16 °

CYCLONIC FLOW DETERMINATION DATA

Client City Utilities of Springfield — Operator J White
Project No. 91-126-04 — Date 8-6-91
Location Stack Unit 2 South — Checked By

STACK ☑ DUCT ☐

CIRCULAR ☐ RECTANGULAR ☐ SQUARE ☑

Inside Dimension(s): Diameter ✓ Length 13' Ft Width 11' 3" Ft
Equivalent Diameter ____ Upstream Distance ____ Downstream Distance ____
Number of Diameters Upstream (A) ____ Number of Diameters Downstream (B) ____
Total Number of Traverse Points 24. Total Number of Test Ports 4.

ROTATION ANGLE, α
(± 90° Yaw Angle)

Traverse Point Number	Test Ports A	B	C	D			
1	+5	+5	+20	+15			
2	+32	+15	+5	+25			
3	+30	+15	+15	+25			
4	+15	+20	+35	+30			
5	+20	+20	+25	+20			
6	+15	+20	+30	+15			
7	✓	✓	✓	✓			
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							

Absolute α Value, Average (≤ 10°) 19.67 °

CYCLONIC FLOW DETERMINATION DATA

Client Springfield Utilities — Operator L. Keith
Project No. 91-126-OH — Date 8-12-91
Location Unit 1 North — Checked By

STACK ☑ DUCT ☐

CIRCULAR ☐ RECTANGULAR ☑ SQUARE ☐

Inside Dimension(s): Diameter ____ Length 13' Width 11'
Equivalent Diameter ____ Upstream Distance ____ Downstream Distance ____
Number of Diameters Upstream (A) ____ Number of Diameters Downstream (B) ____
Total Number of Traverse Points ____ Total Number of Test Ports ____

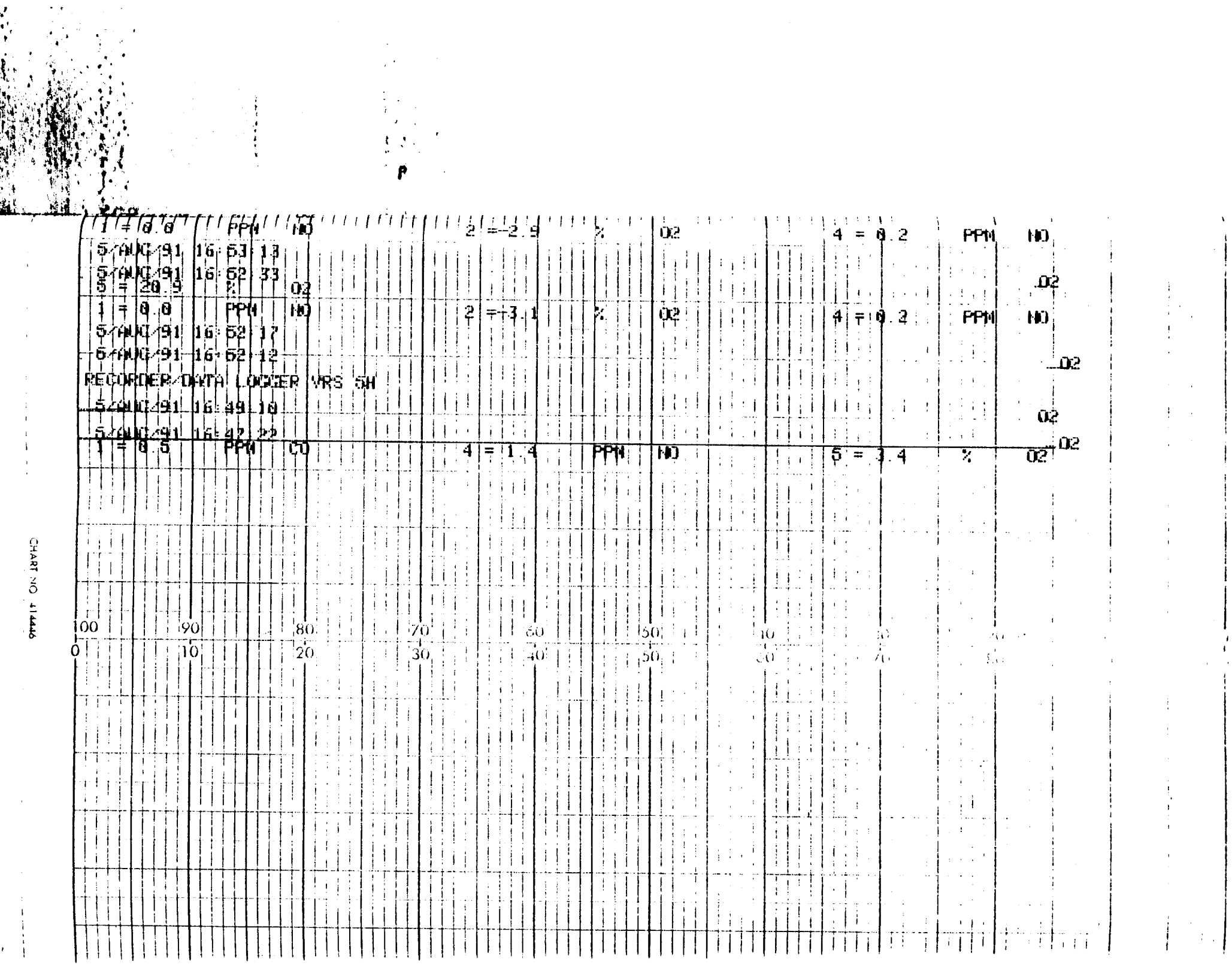
ROTATION ANGLE, α
(± 90° Yaw Angle)

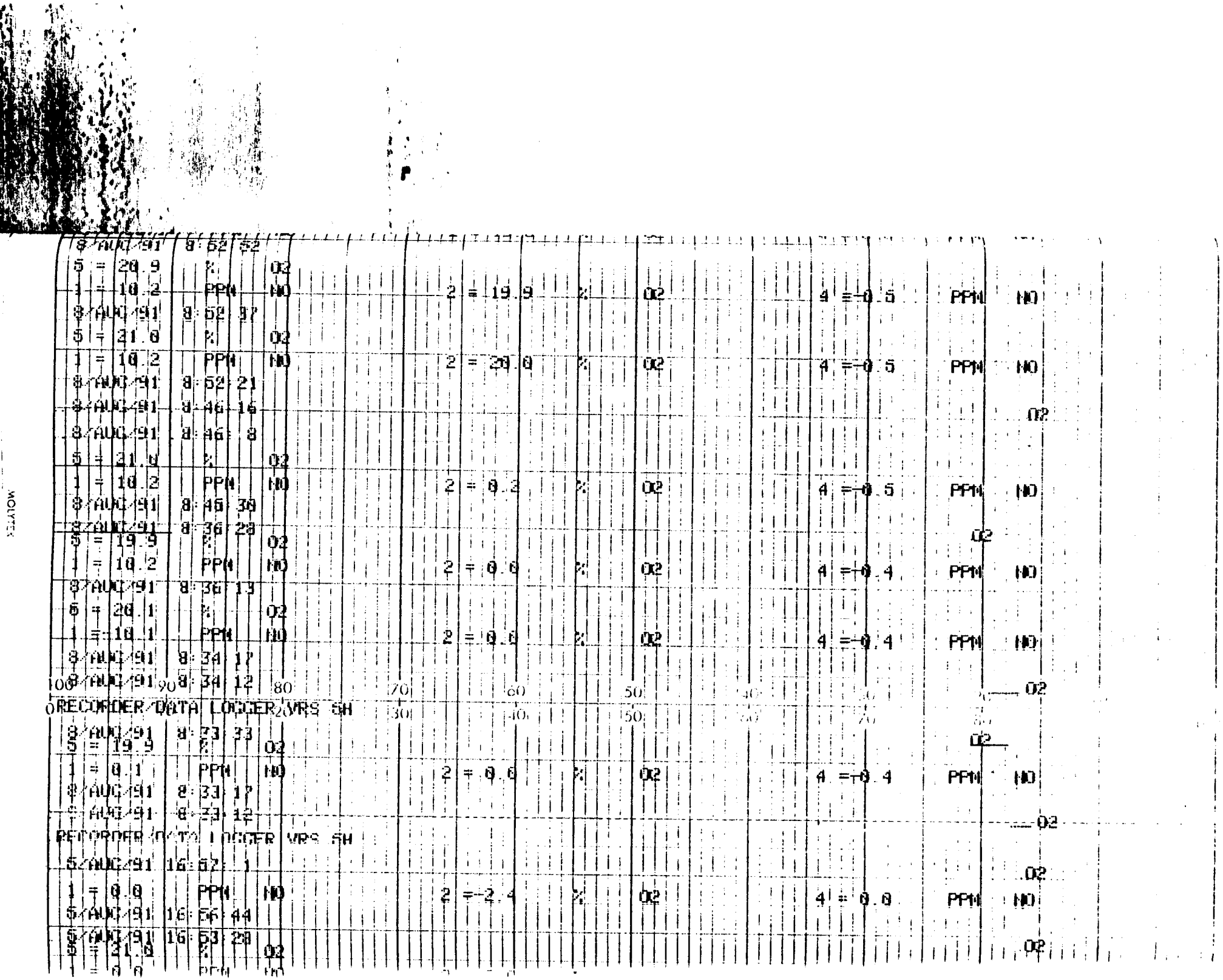
Traverse Point Number		Test Ports A	B	C	D			
1		[illegible]9	28	28	33			
2		15	25	-2	33			
3		3	13	-3	23			
4		10	-12	0	0			
5		20	13	-7	17			
6		30	-4	29	-5			
7	Avg	14.5	10.5	7.5	17.7			
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

12.5°

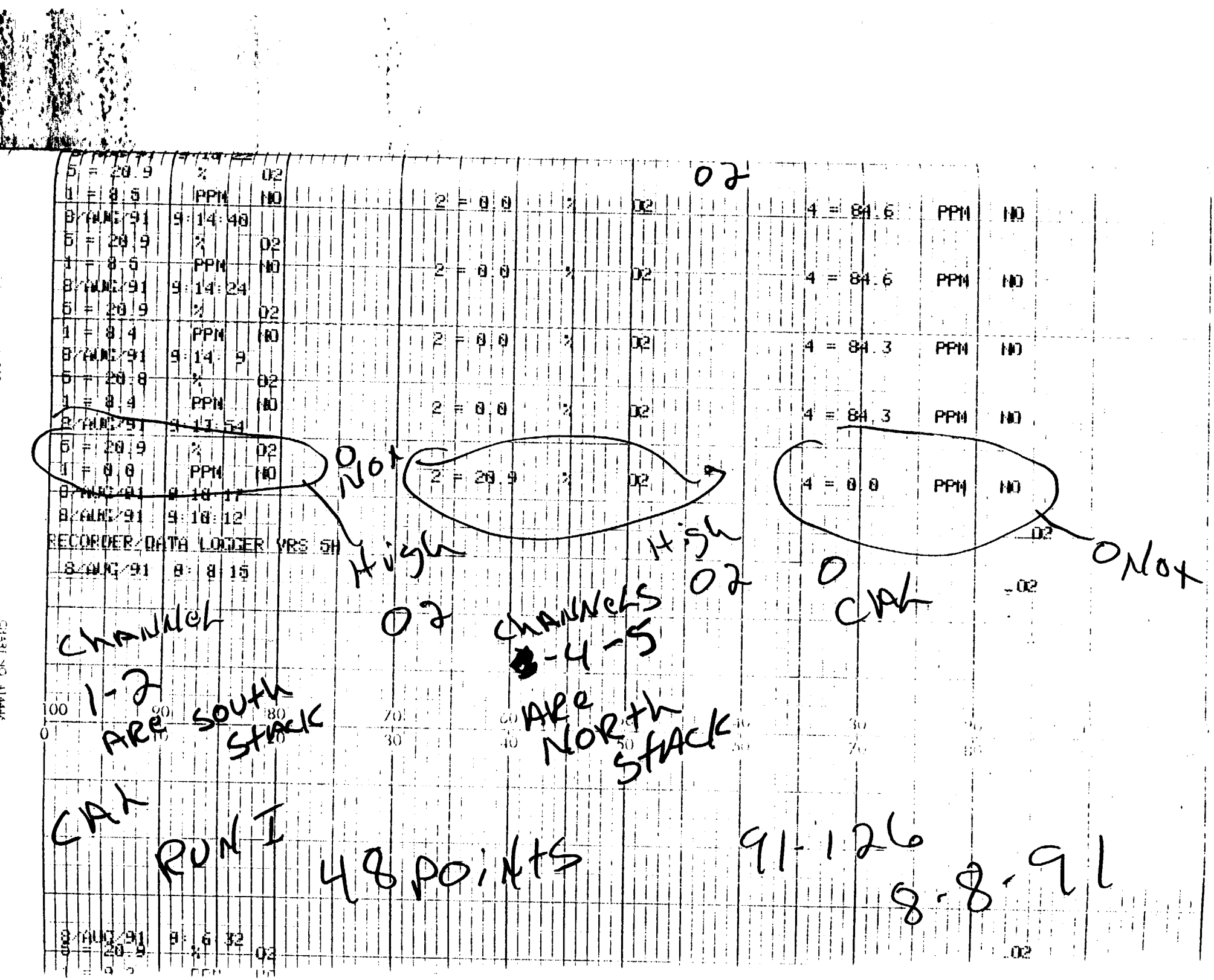
Absolute α Value Average (< 10°) °

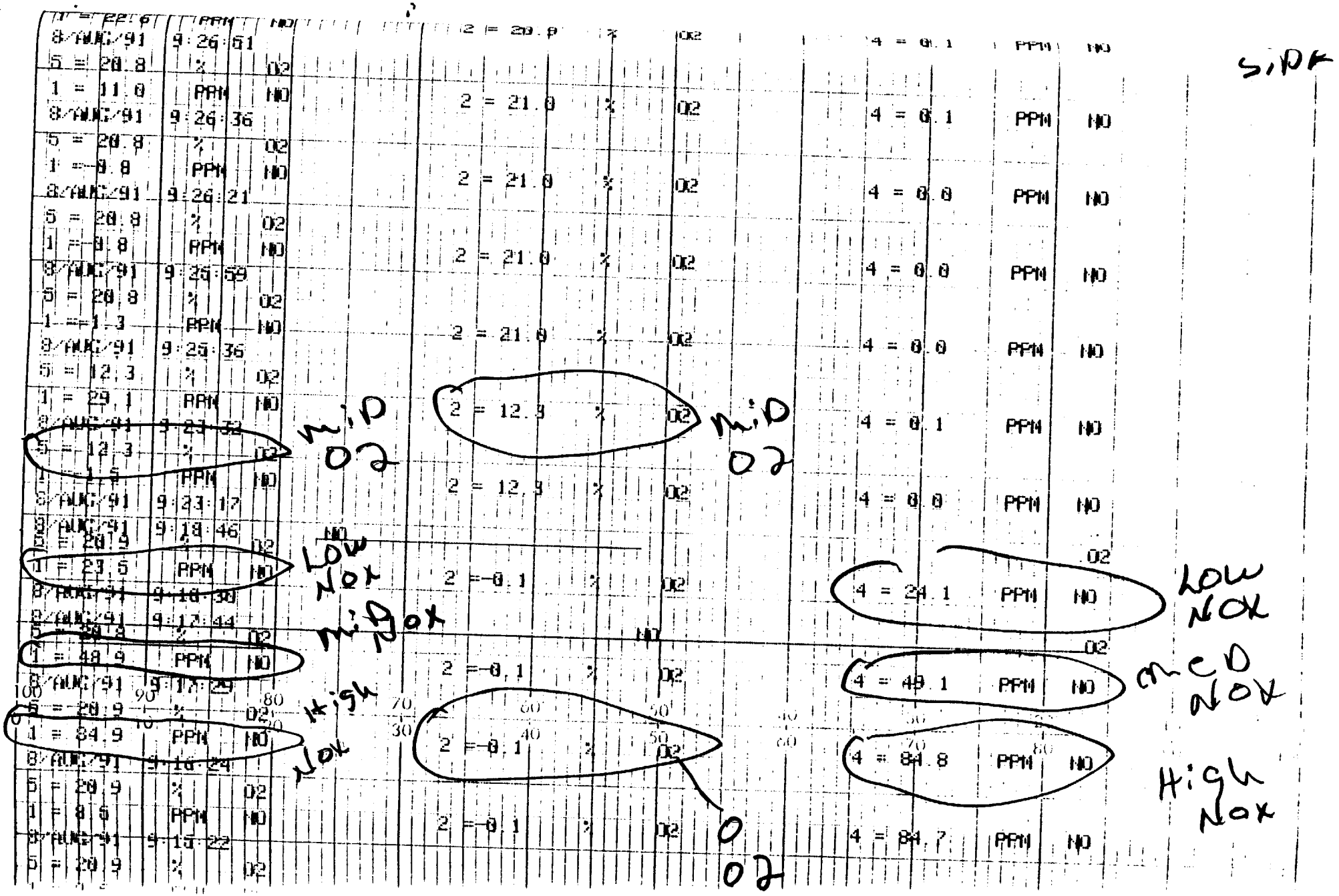
TSA Stripcharts

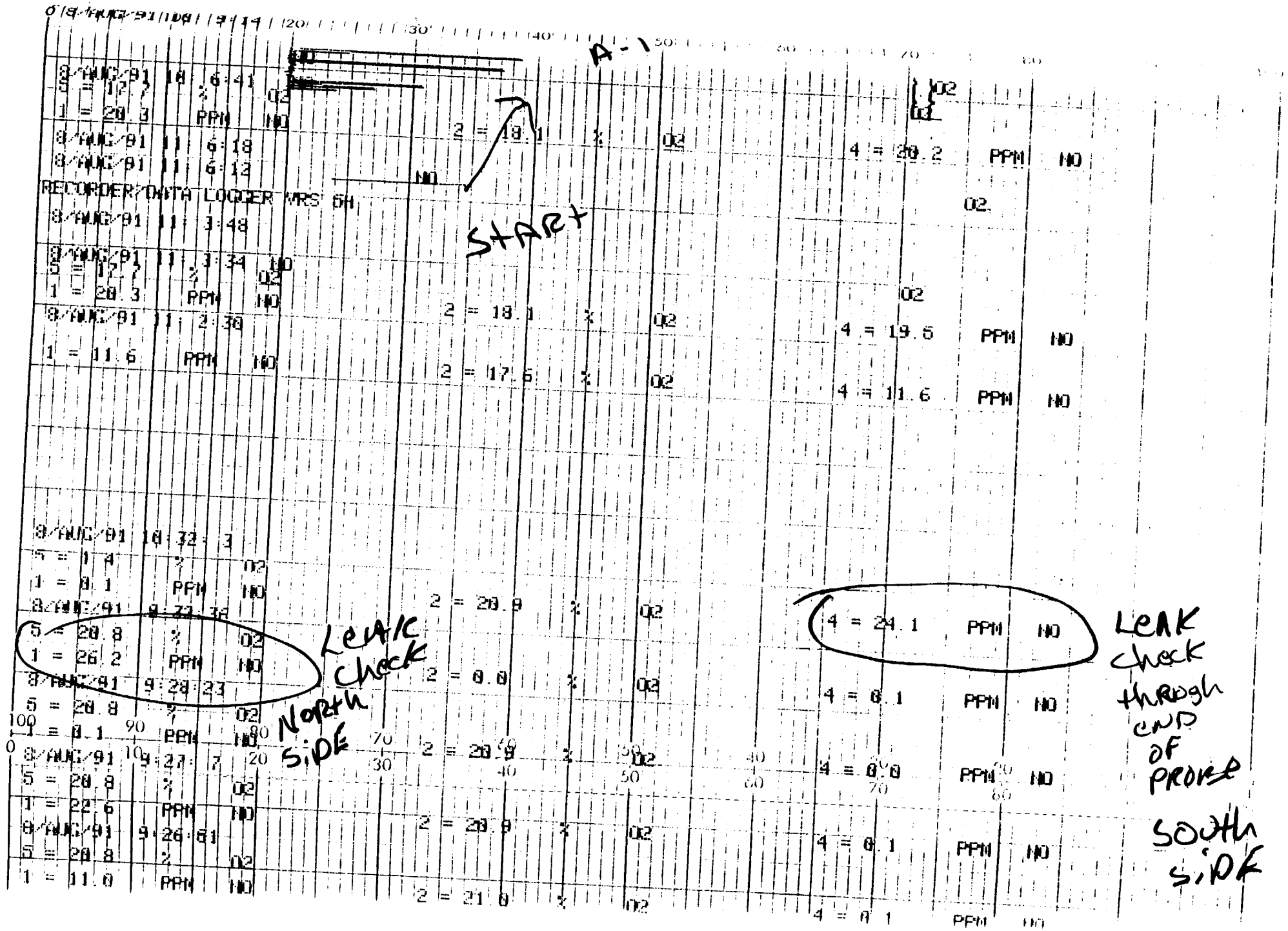

1 = 0.0 PPM NO
5/AUG/91 16:53:13
5/AUG/91 16:52:33
5 = 20.9 % O2
1 = 0.0 PPM NO
5/AUG/91 16:52:17
5/AUG/91 16:52:12
RECORDER/DATA LOGGER VRS 5H
5/AUG/91 16:49:10
5/AUG/91 16:47:22
1 = 0.5 PPM CO
2 = -2.9 % O2
2 = +3.1 % O2
4 = 1.4 PPM NO
4 = 0.2 PPM NO
4 = 0.2 PPM NO
5 = 3.4 % O2
O2
O2
O2
O2
100
90
80
70
60
50
0
10
20
30
40
50
CHART NO 414446


8/AUG/91 8:52:52
5 = 20.9 % O2
1 = 10.2 PPM NO
2 = 19.9 % O2
4 = 0.5 PPM NO
8/AUG/91 8:52:37
5 = 21.0 % O2
1 = 10.2 PPM NO
2 = 20.0 % O2
4 = 0.5 PPM NO
8/AUG/91 8:52:21
8/AUG/91 8:46:16
8/AUG/91 8:46:8
5 = 21.0 % O2
1 = 10.2 PPM NO
2 = 0.2 % O2
4 = 0.5 PPM NO
8/AUG/91 8:46:30
8/AUG/91 8:36:28
5 = 19.9 % O2
1 = 10.2 PPM NO
2 = 0.0 % O2
4 = 0.4 PPM NO
8/AUG/91 8:36:13
5 = 20.1 % O2
1 = 10.1 PPM NO
2 = 0.0 % O2
4 = 0.4 PPM NO
8/AUG/91 8:34:17
8/AUG/91 8:34:12
RECORDER/DATA LOGGER VRS 5H
8/AUG/91 8:33:33
5 = 19.9 % O2
1 = 0.1 PPM NO
2 = 0.0 % O2
4 = 0.4 PPM NO
8/AUG/91 8:33:17
8/AUG/91 8:33:12
RECORDER/DATA LOGGER VRS 5H
5/AUG/91 16:52:1
1 = 0.0 PPM NO
2 = -2.4 % O2
4 = 0.0 PPM NO
5/AUG/91 16:56:44
5/AUG/91 16:53:28
5 = 21.0 % O2
1 = 0.0 PPM NO

8/AUG/91	9:6:32																		.02
5 = 20.9	%	O2																	
1 = 9.2	PPM	NO							2 = 20.8	%	O2					4 = 0.1	PPM	NO	
8/AUG/91	9:6:17																		
8/AUG/91	9:4:32																		
5 = 20.9	%	O2																	
1 = 10.2	PPM	NO							2 = 20.8	%	O2					4 = 0.0	PPM	NO	
8/AUG/91	9:4:17																		
8/AUG/91	9:2:32																		.02
5 = 21.0	%	O2																	
1 = 10.2	PPM	NO							2 = 20.9	%	O2					4 = -0.1	PPM	NO	
8/AUG/91	9:2:17																		
8/AUG/91	9:0:32																		.02
5 = 21.0	%	O2																	
1 = 10.2	PPM	NO							2 = 20.8	%	O2					4 = -0.5	PPM	NO	
8/AUG/91	9:0:17																		
8/AUG/91	8:58:32																		.02
5 = 21.0	%	O2																	
1 = 10.2	PPM	NO							2 = 19.8	%	O2					4 = -0.5	PPM	NO	
8/AUG/91	8:58:17																		
8/AUG/91	8:56:32																		.02
5 = 21.0	%	O2																	
1 = 10.1	PPM	NO							2 = 19.9	%	O2					4 = -0.5	PPM	NO	
8/AUG/91	8:56:17																		
8/AUG/91	8:54:32																		.02
5 = 21.1	%	O2																	
1 = 10.2	PPM	NO							2 = 19.9	%	O2					4 = -0.5	PPM	NO	
8/AUG/91	8:54:23																		
8/AUG/91	8:53:23																		.02
5 = 21.0	%	O2																	
1 = 10.2	PPM	NO							2 = 20.0	%	O2					4 = -0.5	PPM	NO	
8/AUG/91	8:53:8																		
5 = 21.0	%	O2																	
1 = 10.1	PPM	NO							2 = 19.8	%	O2					4 = -0.5	PPM	NO	
8/AUG/91	8:52:52																		
5 = 20.9	%	O2																	
1 = 10.2	PPM	NO							2 = 19.9	%	O2					4 = -0.5	PPM	NO	


5 = 20.9 % O2
1 = 8.5 PPM NO
8/AUG/91 9:14:40
5 = 20.9 % O2
1 = 8.5 PPM NO
8/AUG/91 9:14:24
5 = 20.9 % O2
1 = 8.4 PPM NO
8/AUG/91 9:14:9
5 = 20.8 % O2
1 = 8.4 PPM NO
8/AUG/91 9:13:54
5 = 20.9 % O2
1 = 0.0 PPM NO
8/AUG/91 9:10:17
8/AUG/91 9:10:12
RECORDER/DATA LOGGER VRS 5H
8/AUG/91 8:8:15
2 = 0.0 % O2
2 = 0.0 % O2
2 = 0.0 % O2
2 = 0.0 % O2
2 = 20.9 % O2
4 = 84.6 PPM NO
4 = 84.6 PPM NO
4 = 84.3 PPM NO
4 = 84.3 PPM NO
4 = 0.0 PPM NO
O2
NOx
High
O2
High
O2
O2
NOx
CHANNEL 1-2 ARE SOUTH STACK
O2 CHANNELS 3-4-5 ARE NORTH STACK
CAL RUN I
48 POINTS
91-126
8-8-91
8/AUG/91 8:6:32
5 = 20.9 % O2


8/AUG/91 9:26:51
5 = 20.8 % O2
1 = 11.0 PPM NO
8/AUG/91 9:26:36
5 = 20.8 % O2
1 = 9.8 PPM NO
8/AUG/91 9:26:21
5 = 20.8 % O2
1 = 9.8 PPM NO
8/AUG/91 9:25:59
5 = 20.8 % O2
1 = 1.3 PPM NO
8/AUG/91 9:25:36
5 = 12.3 % O2
1 = 29.1 PPM NO
8/AUG/91 9:23:32
5 = 12.3 % O2
1 = 1.5 PPM NO
8/AUG/91 9:23:17
8/AUG/91 9:18:46
5 = 20.9 % O2
1 = 23.5 PPM NO
8/AUG/91 9:18:30
8/AUG/91 9:12:44
5 = 20.8 % O2
1 = 48.9 PPM NO
8/AUG/91 9:17:29
5 = 20.9 % O2
1 = 84.9 PPM NO
8/AUG/91 9:16:24
5 = 20.9 % O2
1 = 8.5 PPM NO
8/AUG/91 9:15:22
5 = 20.9 % O2
2 = 20.9 % O2
2 = 21.0 % O2
2 = 21.0 % O2
2 = 21.0 % O2
2 = 12.3 % O2
2 = 12.3 % O2
2 = -0.1 % O2
2 = -0.1 % O2
2 = -0.1 % O2
2 = -0.1 % O2
4 = 0.1 PPM NO
4 = 0.1 PPM NO
4 = 0.0 PPM NO
4 = 0.0 PPM NO
4 = 0.0 PPM NO
4 = 0.1 PPM NO
4 = 0.0 PPM NO
4 = 24.1 PPM NO
4 = 48.1 PPM NO
4 = 84.8 PPM NO
4 = 84.7 PPM NO
SIDE
MID O2
MID O2
LOW NOx
MID NOx
HIGH NOx
LOW NOx
MID NOx
HIGH NOx
O2


8/AUG/91 10: 6:41
5 = 12.7 % O2
1 = 20.3 PPM NO
8/AUG/91 11: 6:18
8/AUG/91 11: 6:12
RECORDER/DATA LOGGER WRS 6H
8/AUG/91 11: 3:48
8/AUG/91 11: 3:34 NO
5 = 12.7 % O2
1 = 20.3 PPM NO
8/AUG/91 11: 2:38
1 = 11.6 PPM NO
8/AUG/91 10:32: 3
5 = 1.4 % O2
1 = 0.1 PPM NO
8/AUG/91 9:33:38
5 = 20.8 % O2
1 = 26.2 PPM NO
8/AUG/91 9:28:23
5 = 20.8 % O2
1 = 0.1 PPM NO
8/AUG/91 9:27: 7
5 = 20.8 % O2
1 = 22.6 PPM NO
8/AUG/91 9:26:51
5 = 20.8 % O2
1 = 11.0 PPM NO
2 = 18.1 % O2
NO
START
2 = 18.1 % O2
2 = 17.6 % O2
2 = 20.9 % O2
2 = 0.0 % O2
2 = 20.9 % O2
2 = 20.9 % O2
2 = 21.0 % O2
4 = 20.2 PPM NO
O2
O2
4 = 19.5 PPM NO
4 = 11.6 PPM NO
4 = 24.1 PPM NO
4 = 0.1 PPM NO
4 = 0.0 PPM NO
4 = 0.1 PPM NO
4 = 0.1 PPM NO
A-1
LEAK CHECK NORTH SIDE
LEAK CHECK THROUGH END OF PROBE
SOUTH SIDE

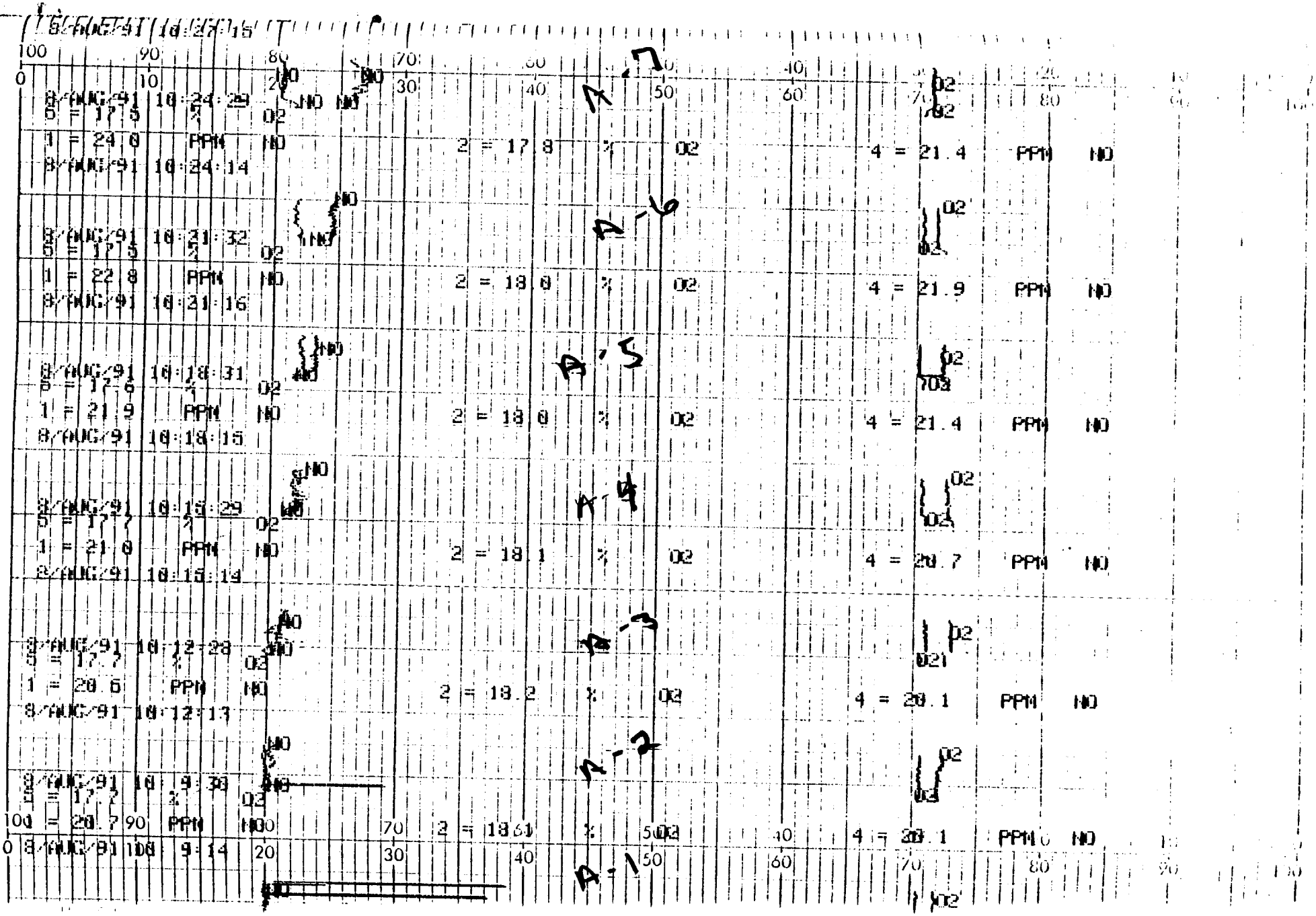


CHART NO. 414446

PRINTED IN U.S.A.

MCLYTEK

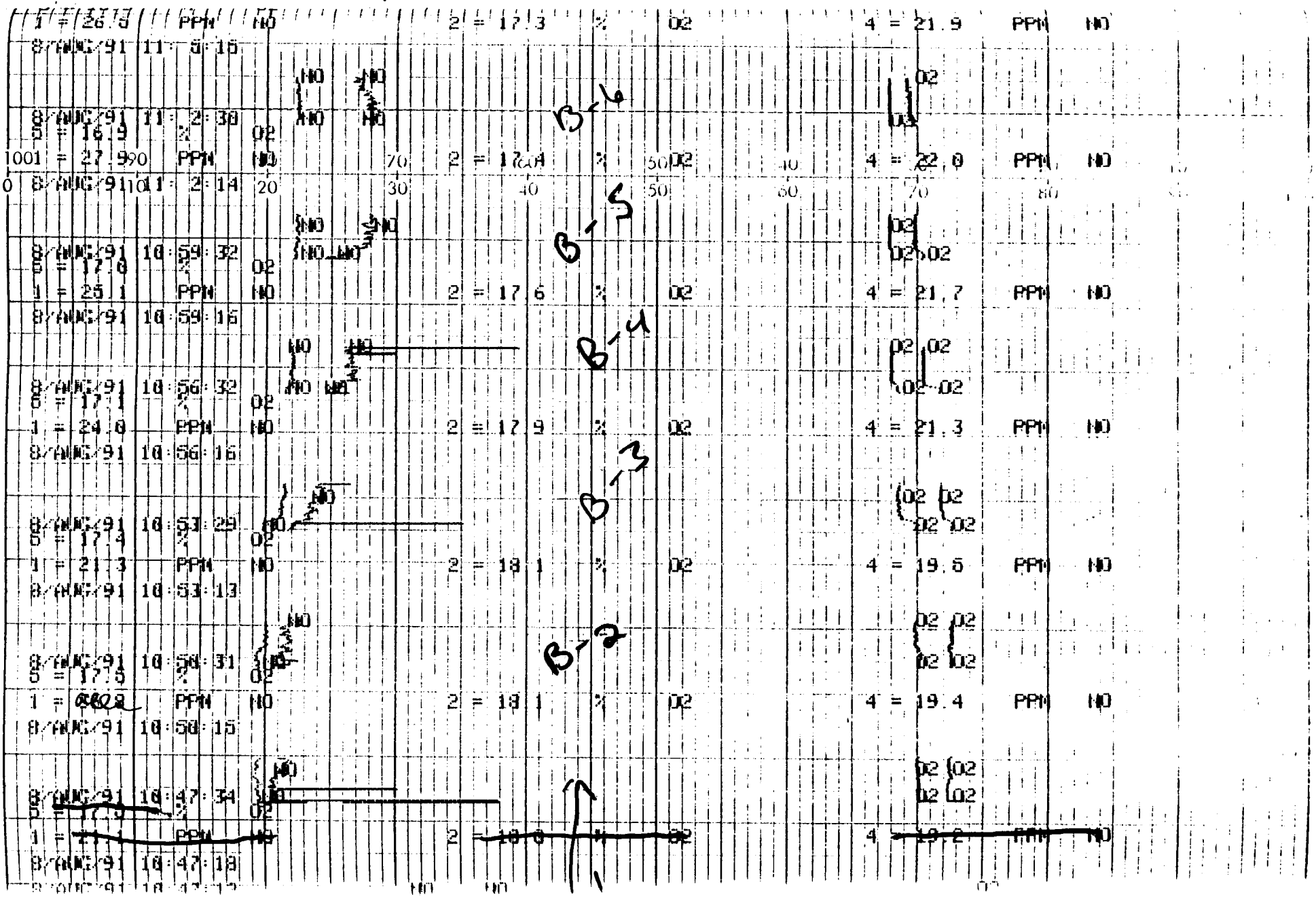
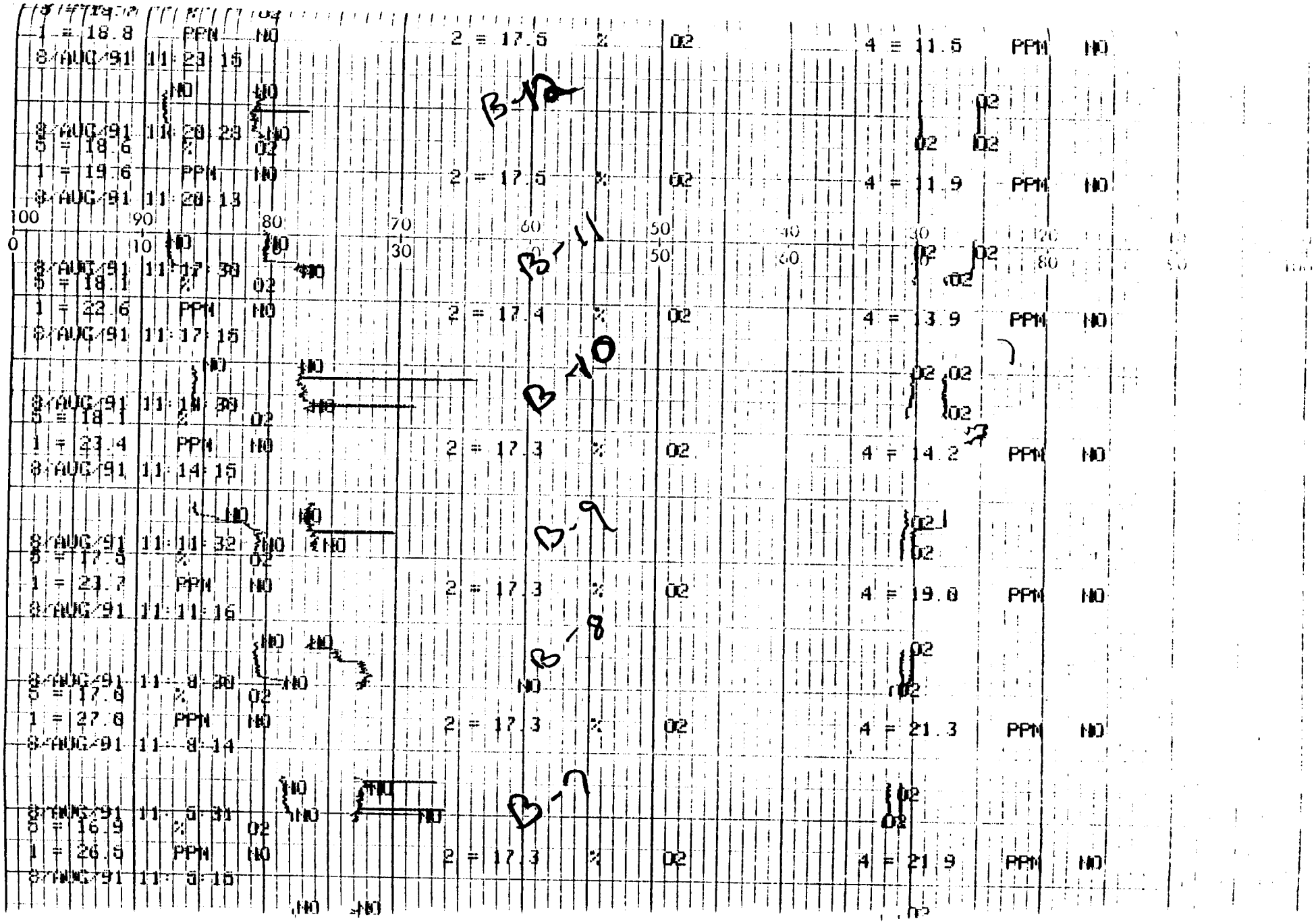
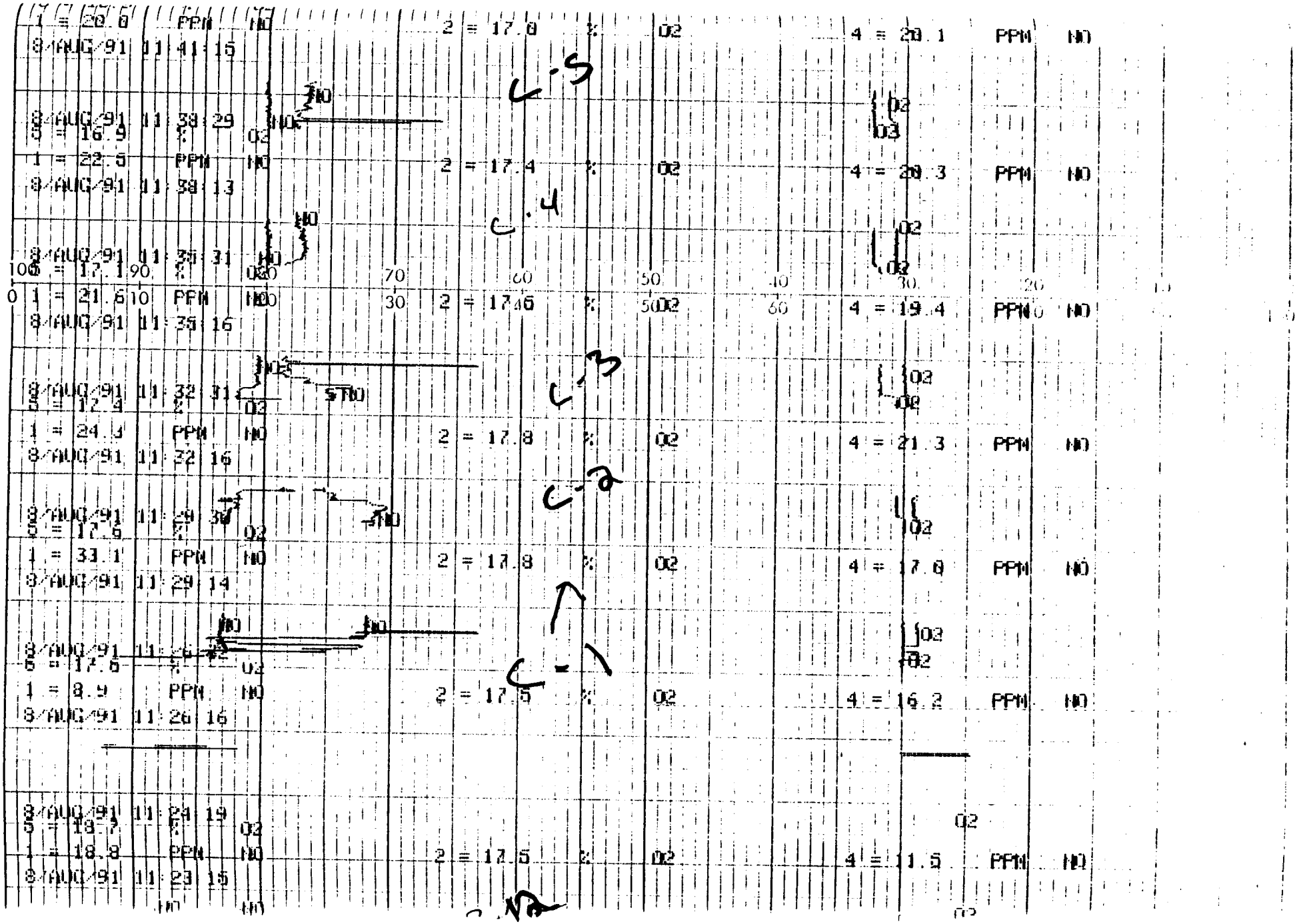


CHART NO 11446
1 = 26.8 PPM HO
8/AUG/91 11:8:16
8/AUG/91 11:2:30
5 = 16.9 % 02
1001 = 27.990 PPM HO
8/AUG/91 11:2:14
8/AUG/91 10:59:32
5 = 17.0 % 02
1 = 25.1 PPM HO
8/AUG/91 10:59:16
8/AUG/91 10:56:32
5 = 17.1 % 02
1 = 24.0 PPM HO
8/AUG/91 10:56:16
8/AUG/91 10:53:29
5 = 17.4 % 02
1 = 21.3 PPM HO
8/AUG/91 10:53:13
8/AUG/91 10:50:31
5 = 17.6 % 02
1 = 20.2 PPM HO
8/AUG/91 10:50:15
8/AUG/91 10:47:34
5 = 17.9 % 02
1 = 21.1 PPM HO
8/AUG/91 10:47:18
2 = 17.3 % 02
2 = 17.4 % 02
2 = 17.6 % 02
2 = 17.9 % 02
2 = 18.1 % 02
2 = 18.1 % 02
2 = 18.0 % 02
4 = 21.9 PPM HO
4 = 22.0 PPM HO
4 = 21.7 PPM HO
4 = 21.3 PPM HO
4 = 19.6 PPM HO
4 = 19.4 PPM HO
4 = 19.2 PPM HO
B-6
B-5
B-4
B-3
B-2
B-1


1 = 18.8 PPM NO
8/AUG/91 11:23:15
8/AUG/91 11:20:23 NO
5 = 18.6 % 02
1 = 19.6 PPM NO
8/AUG/91 11:20:13
8/AUG/91 11:17:30
5 = 18.1 % 02
1 = 22.6 PPM NO
8/AUG/91 11:17:15
8/AUG/91 11:14:30
5 = 18.1 % 02
1 = 23.4 PPM NO
8/AUG/91 11:14:15
8/AUG/91 11:11:32
5 = 17.5 % 02
1 = 23.7 PPM NO
8/AUG/91 11:11:16
8/AUG/91 11:8:30
5 = 17.6 % 02
1 = 27.6 PPM NO
8/AUG/91 11:8:14
8/AUG/91 11:5:31
5 = 16.9 % 02
1 = 26.9 PPM NO
8/AUG/91 11:5:15
2 = 17.5 % 02
2 = 17.5 % 02
2 = 17.4 % 02
2 = 17.3 % 02
2 = 17.3 % 02
2 = 17.3 % 02
2 = 17.3 % 02
4 = 11.5 PPM NO
4 = 11.9 PPM NO
4 = 13.9 PPM NO
4 = 14.2 PPM NO
4 = 19.0 PPM NO
4 = 21.3 PPM NO
4 = 21.9 PPM NO
B-12
B-11
B-10
B-9
B-8
B-7


1 = 20.6 PPM NO
8/AUG/91 11:41:16
8/AUG/91 11:38:29
5 = 16.9 % 02
1 = 22.5 PPM NO
8/AUG/91 11:38:13
8/AUG/91 11:35:31
5 = 17.1 % 02
1 = 21.6 PPM NO
8/AUG/91 11:35:16
8/AUG/91 11:32:31
5 = 17.4 % 02
1 = 24.4 PPM NO
8/AUG/91 11:32:16
8/AUG/91 11:29:30
5 = 17.6 % 02
1 = 33.1 PPM NO
8/AUG/91 11:29:14
8/AUG/91 11:26:30
5 = 17.6 % 02
1 = 8.9 PPM NO
8/AUG/91 11:26:16
8/AUG/91 11:24:19
5 = 18.2 % 02
1 = 18.8 PPM NO
8/AUG/91 11:23:16
2 = 17.8 % 02
2 = 17.4 % 02
2 = 17.6 % 02
2 = 17.8 % 02
2 = 17.8 % 02
2 = 17.5 % 02
2 = 17.5 % 02
4 = 20.1 PPM NO
4 = 20.3 PPM NO
4 = 19.4 PPM NO
4 = 21.3 PPM NO
4 = 17.8 PPM NO
4 = 16.2 PPM NO
4 = 11.5 PPM NO
C-5
C-4
C-3
C-2
C-1
C-0

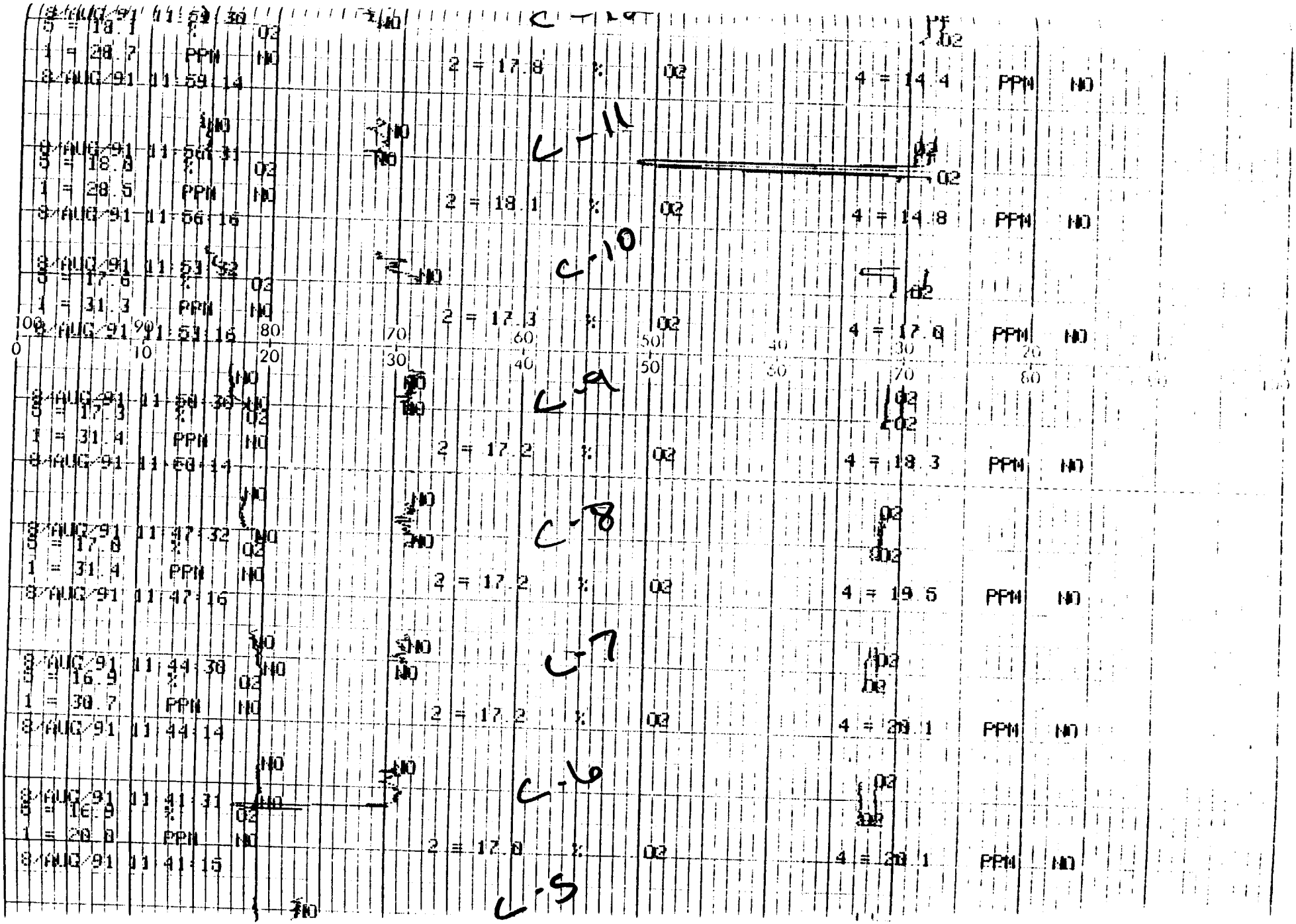
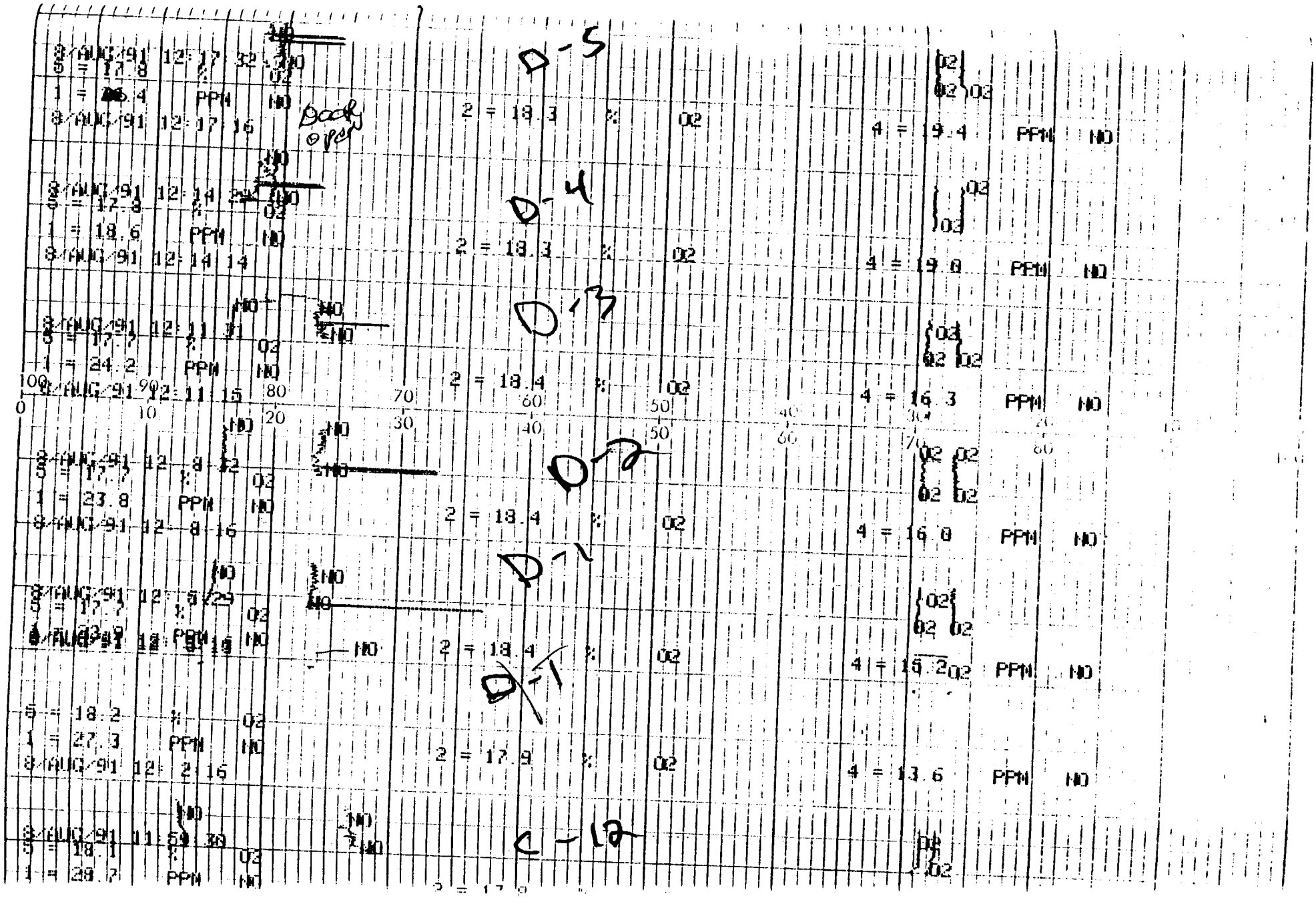
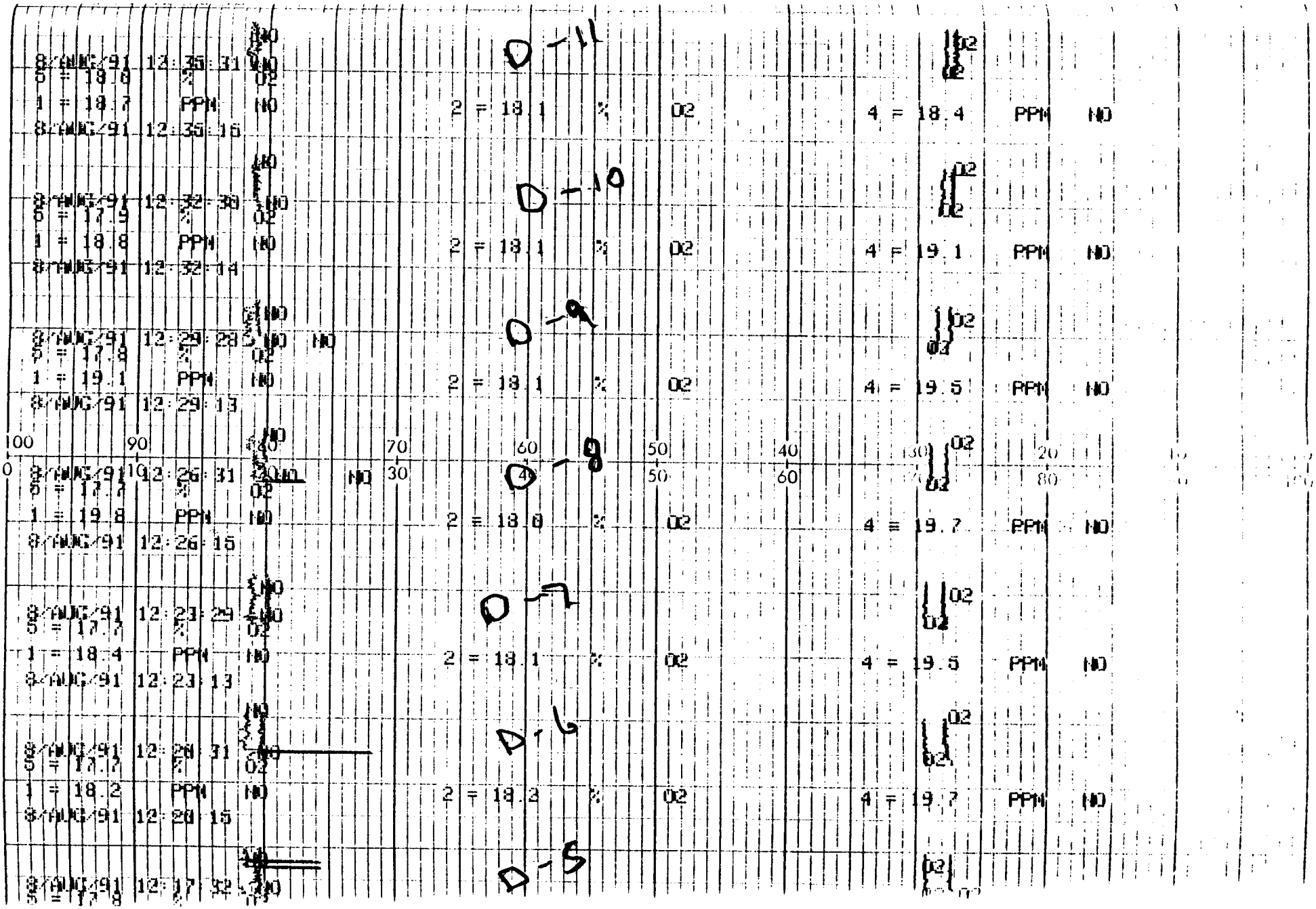


CHART NO 41446


D-5
D-4
D-13
D-9
D-7
D-1
C-12
Back
open
8/AUG/91 12:17:32
5 = 17.8 % 02
1 = 26.4 PPM NO
2 = 18.3 % 02
4 = 19.4 PPM NO
8/AUG/91 12:17:16
8/AUG/91 12:14:29
5 = 12.8 % 02
1 = 18.6 PPM NO
2 = 18.3 % 02
4 = 19.8 PPM NO
8/AUG/91 12:14:14
8/AUG/91 12:11:31
5 = 17.7 % 02
1 = 24.2 PPM NO
2 = 18.4 % 02
4 = 16.3 PPM NO
8/AUG/91 12:11:15
8/AUG/91 12:8:32
5 = 17.7 % 02
1 = 23.8 PPM NO
2 = 18.4 % 02
4 = 16.0 PPM NO
8/AUG/91 12:8:16
8/AUG/91 12:5:29
5 = 17.7 % 02
2 = 18.4 % 02
4 = 15.2 PPM NO
5 = 18.2 % 02
1 = 27.3 PPM NO
2 = 17.9 % 02
4 = 13.6 PPM NO
8/AUG/91 12:2:16
8/AUG/91 11:59:30
5 = 18.1 % 02
1 = 28.2 PPM NO
2 = 17.9 % 02
4 = PPM NO


8/AUG/91 12:35:31
5 = 18.8 %
1 = 18.7 PPM
8/AUG/91 12:35:16
8/AUG/91 12:32:30
5 = 17.9 %
1 = 18.8 PPM
8/AUG/91 12:32:14
8/AUG/91 12:29:28
5 = 17.8 %
1 = 19.1 PPM
8/AUG/91 12:29:13
8/AUG/91 12:26:31
5 = 17.7 %
1 = 19.8 PPM
8/AUG/91 12:26:15
8/AUG/91 12:23:29
5 = 17.7 %
1 = 18.4 PPM
8/AUG/91 12:23:13
8/AUG/91 12:20:31
5 = 17.7 %
1 = 18.2 PPM
8/AUG/91 12:20:15
8/AUG/91 12:17:32
5 = 17.8 %
2 = 18.1 % 02
2 = 18.1 % 02
2 = 18.1 % 02
2 = 18.0 % 02
2 = 18.1 % 02
2 = 18.2 % 02
4 = 18.4 PPM NO
4 = 19.1 PPM NO
4 = 19.5 PPM NO
4 = 19.7 PPM NO
4 = 19.5 PPM NO
4 = 19.7 PPM NO
D-11
D-10
D-9
D-8
D-7
D-6
D-5
100 90 70 60 50 40 30 20
0 10 30 50 60 80

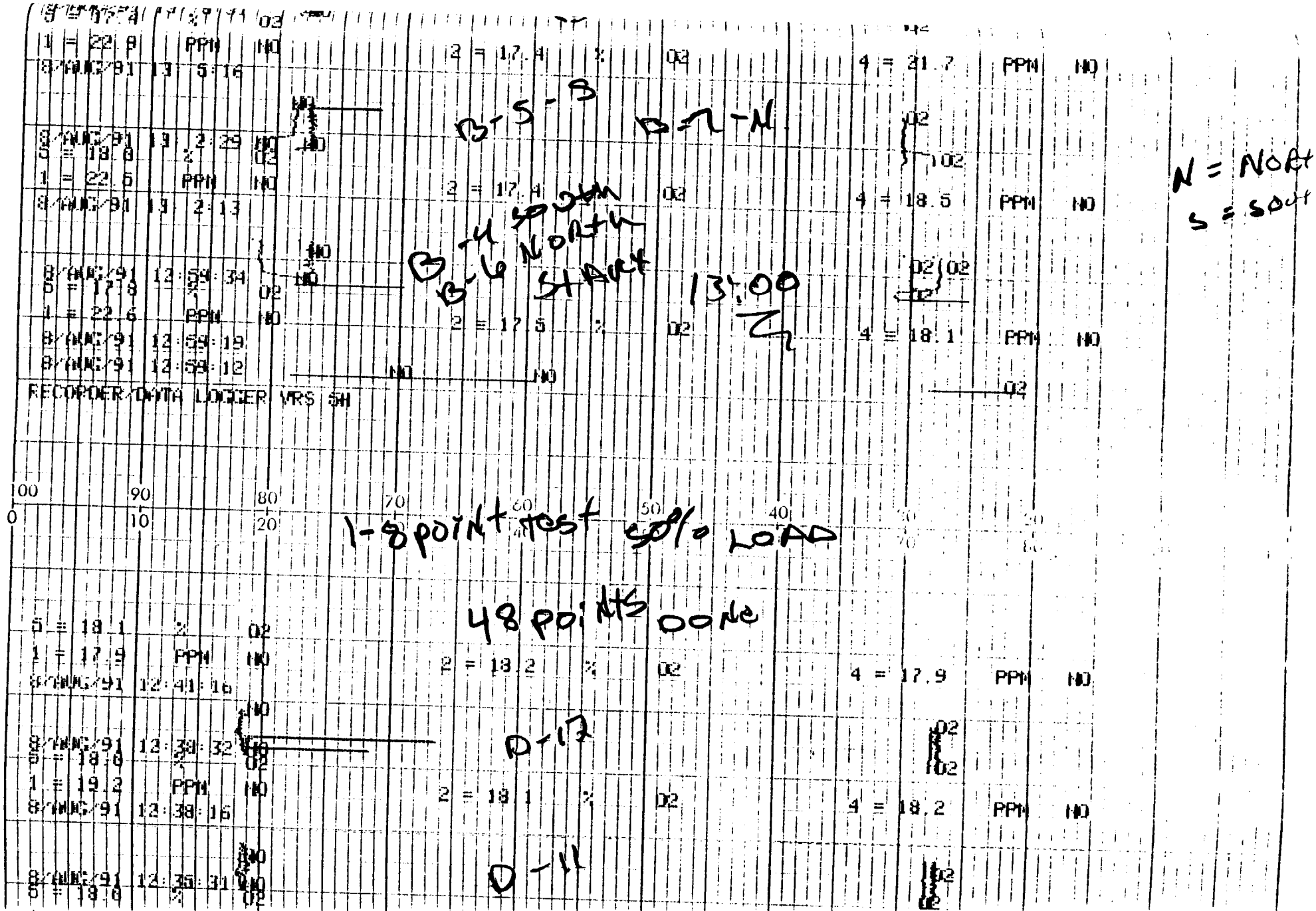


CHART NO 414446

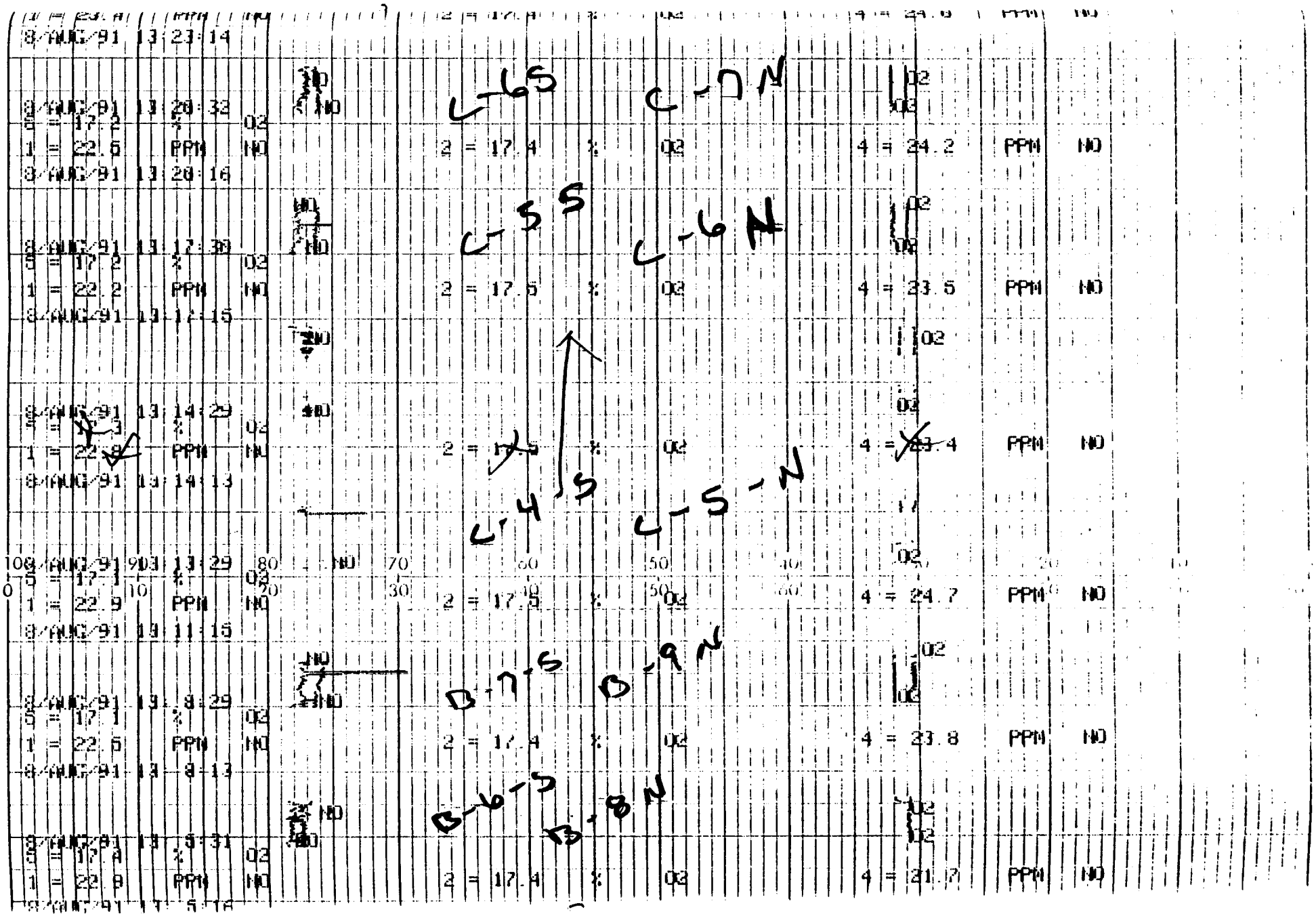

8/AUG/91 13:23:14
8/AUG/91 13:20:33
5 = 17.2 %
1 = 22.6 PPM
8/AUG/91 13:20:16
8/AUG/91 13:12:30
5 = 17.2 %
1 = 22.2 PPM
8/AUG/91 13:12:15
8/AUG/91 13:14:29
5 = 17.3 %
1 = 22.9 PPM
8/AUG/91 13:14:13
8/AUG/91 13:13:29
5 = 17.1 %
1 = 22.9 PPM
8/AUG/91 13:11:15
8/AUG/91 13:8:29
5 = 17.1 %
1 = 22.5 PPM
8/AUG/91 13:8:13
8/AUG/91 13:5:31
5 = 17.4 %
1 = 22.8 PPM
2 = 17.4 % O2
4 = 24.2 PPM NO
2 = 17.5 % O2
4 = 23.5 PPM NO
2 = 17.5 % O2
4 = 24.7 PPM NO
2 = 17.4 % O2
4 = 23.8 PPM NO
2 = 17.4 % O2
4 = 21.7 PPM NO
L-6 C-2 N
L-5 L-6 N
L-4 L-5 L-7 N
D-7 D-9 N
B-6-7 B-8 N

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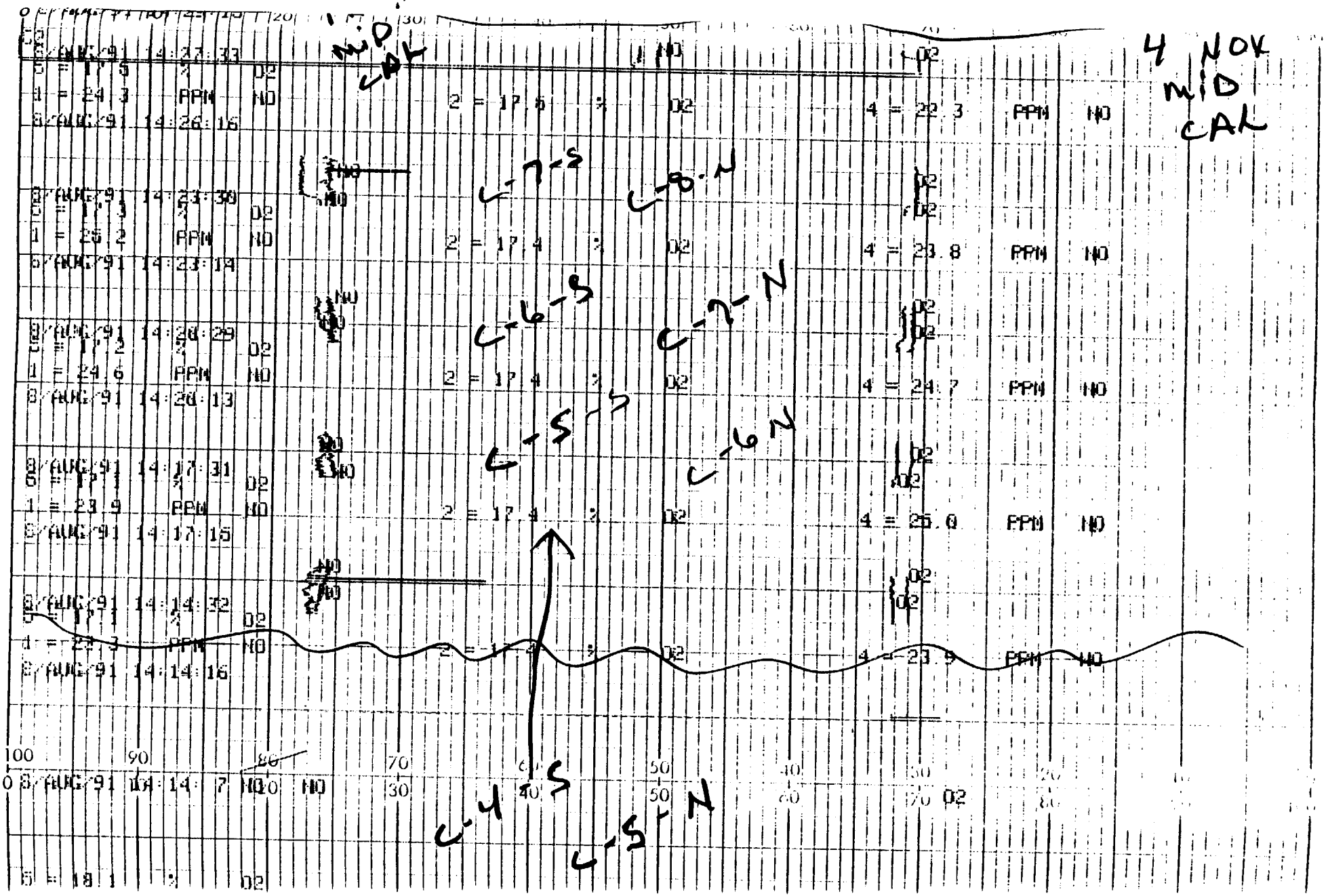
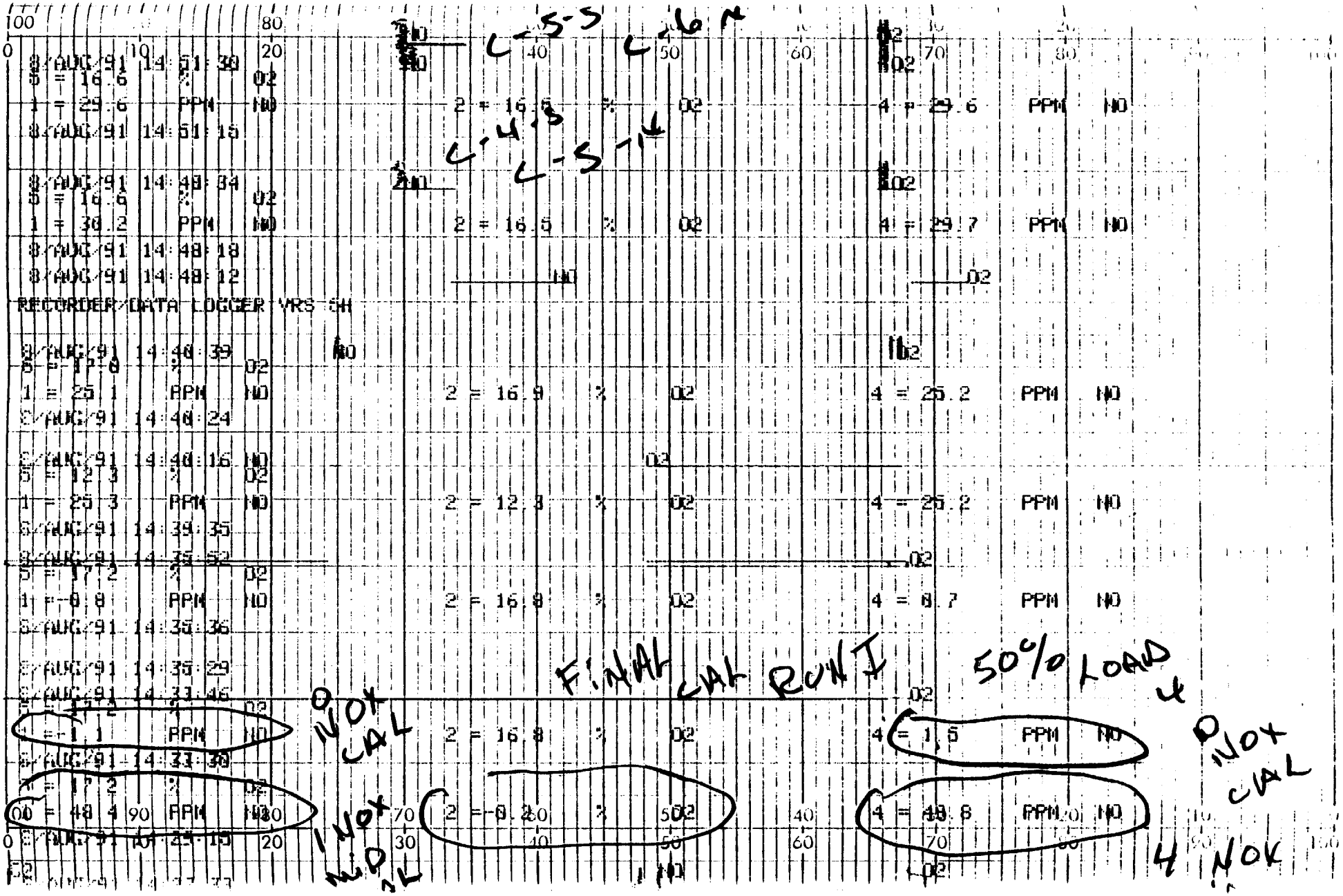
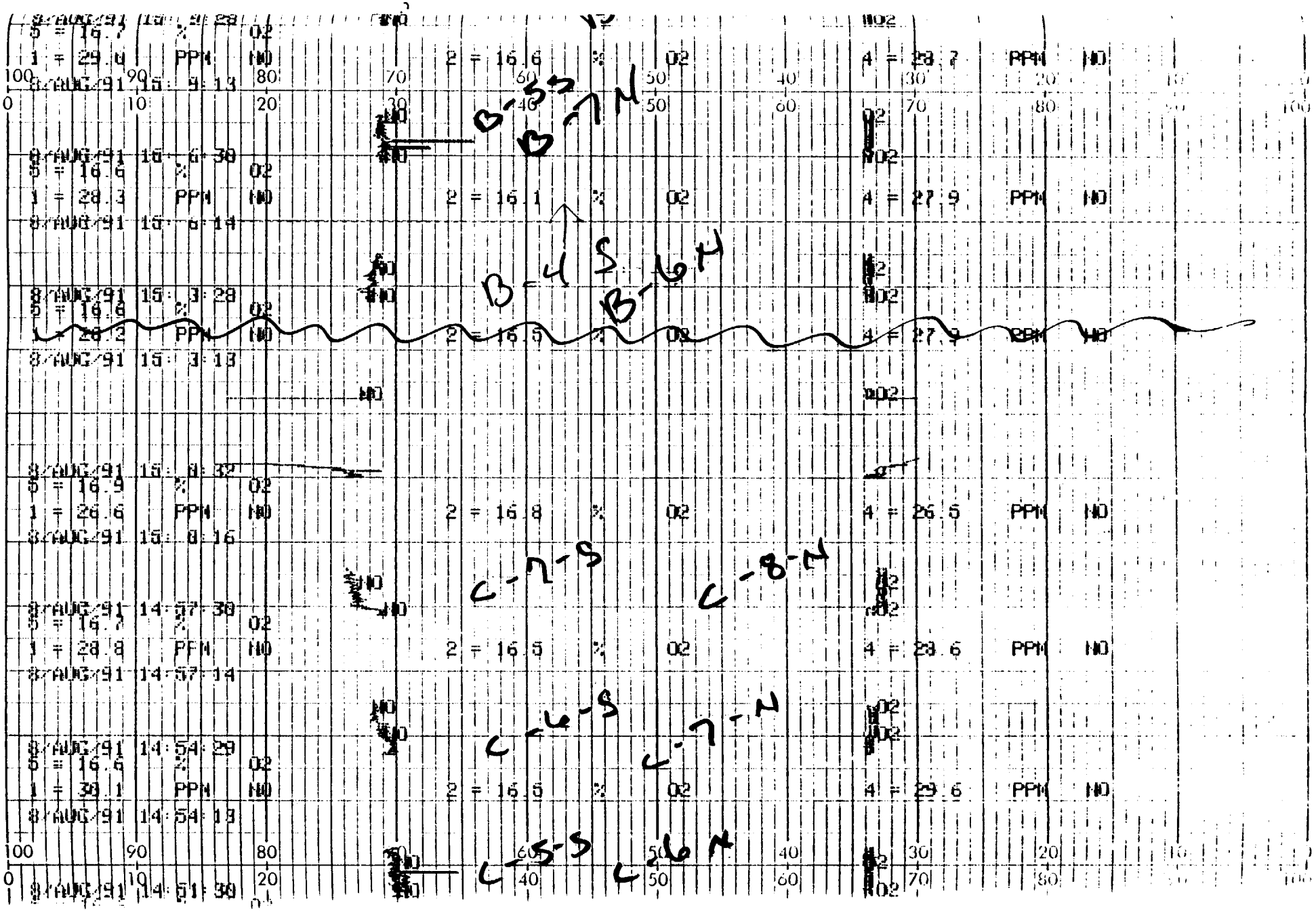
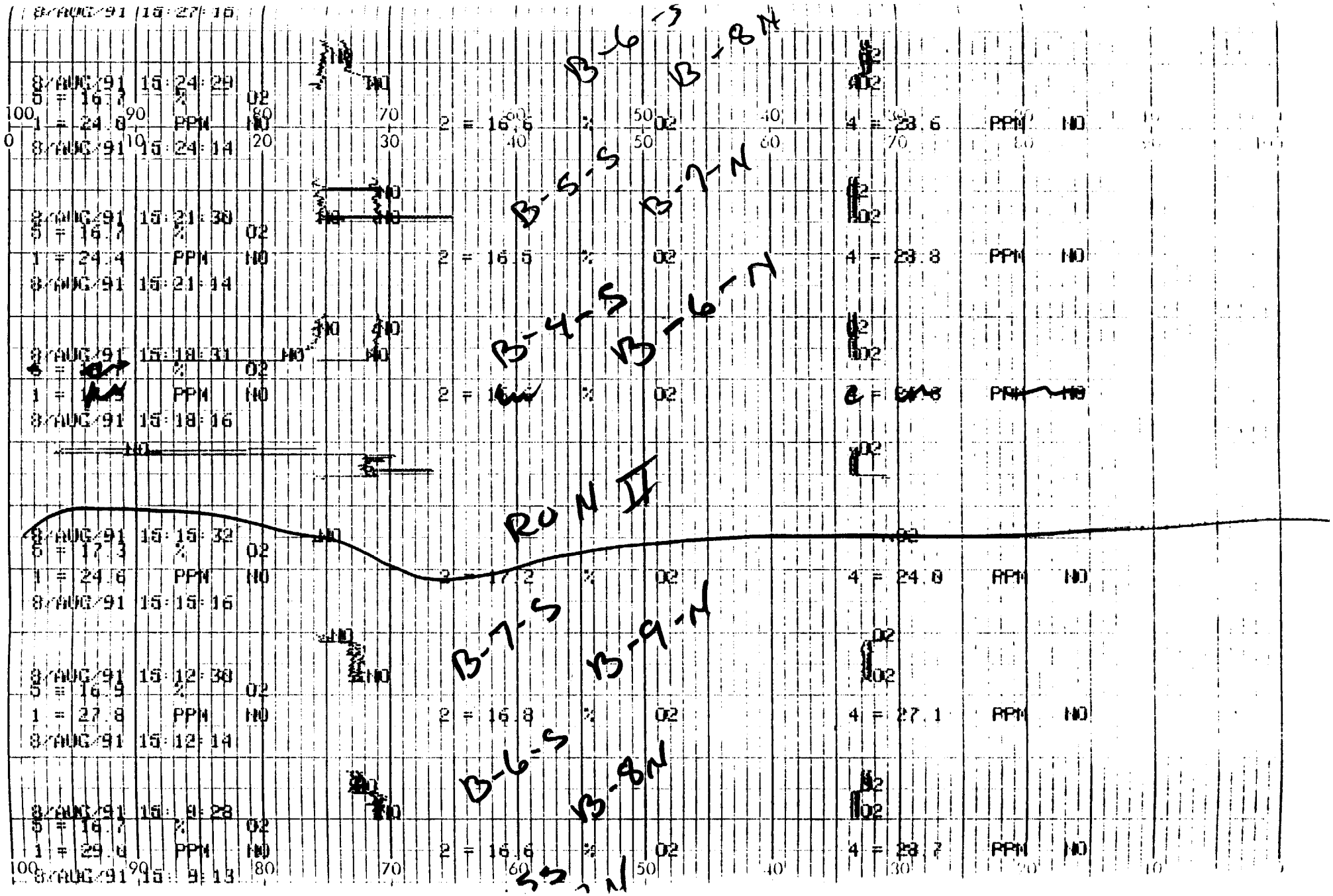
CHART NO. 114446

PPM
NO
D2
RUN #1
MOLYTEK

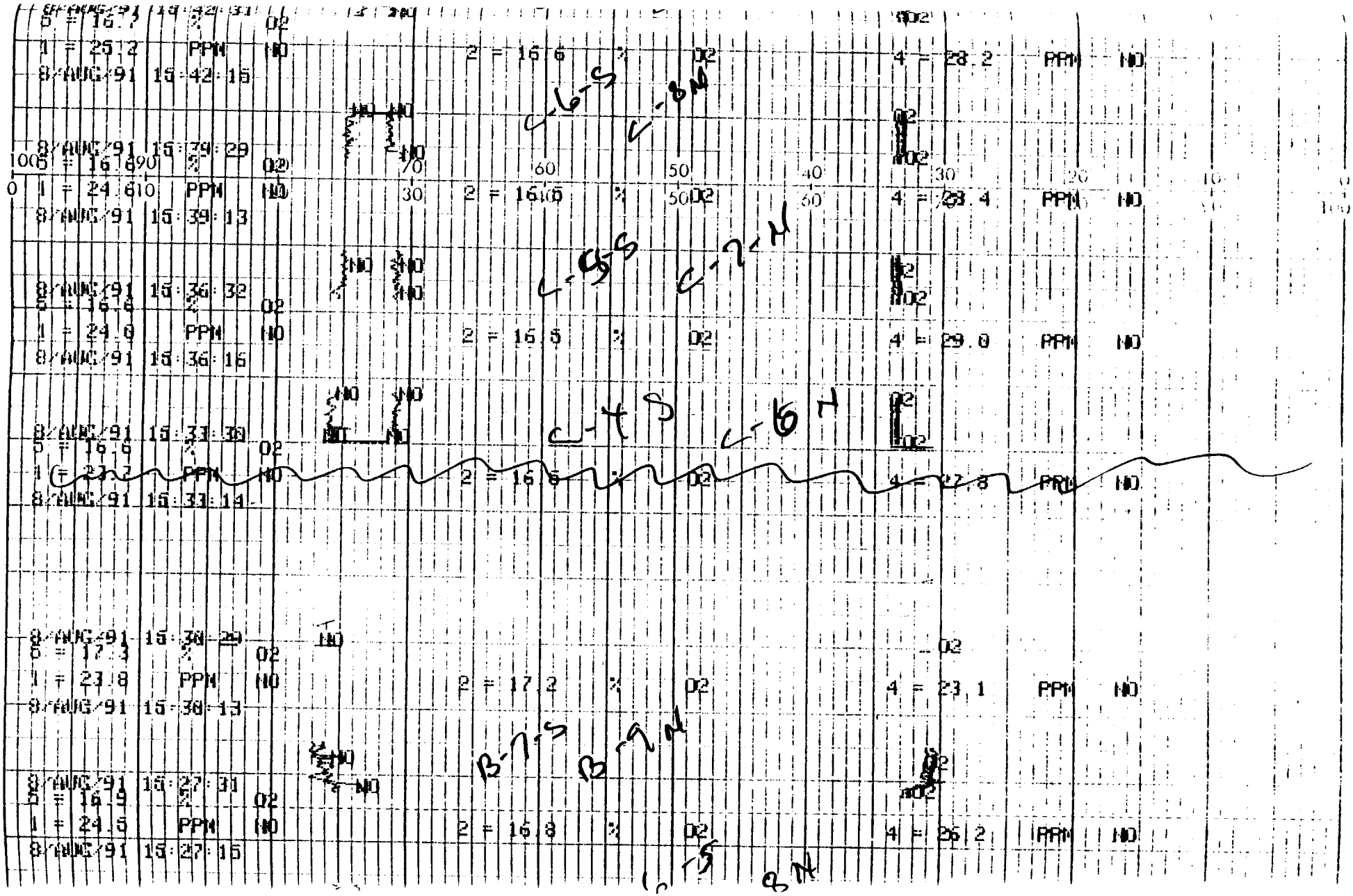

4 NOX MID CAL
8/AUG/91 14:22:33
0 = 17.5 % O2
1 = 24.3 PPM NO
8/AUG/91 14:26:16
8/AUG/91 14:23:30
0 = 17.5 % O2
1 = 25.2 PPM NO
8/AUG/91 14:23:19
8/AUG/91 14:20:29
0 = 17.2 % O2
1 = 24.6 PPM NO
8/AUG/91 14:20:13
8/AUG/91 14:17:31
0 = 17.1 % O2
1 = 23.9 PPM NO
8/AUG/91 14:17:15
8/AUG/91 14:14:32
0 = 17.1 % O2
1 = 23.3 PPM NO
8/AUG/91 14:14:16
8/AUG/91 14:14:7
0 = 18.1 % O2
2 = 17.5 % O2
4 = 22.3 PPM NO
2 = 17.4 % O2
4 = 23.8 PPM NO
2 = 17.4 % O2
4 = 24.7 PPM NO
2 = 17.4 % O2
4 = 25.0 PPM NO
2 = 17.4 % O2
4 = 23.9 PPM NO
4.5
4.5
4.5

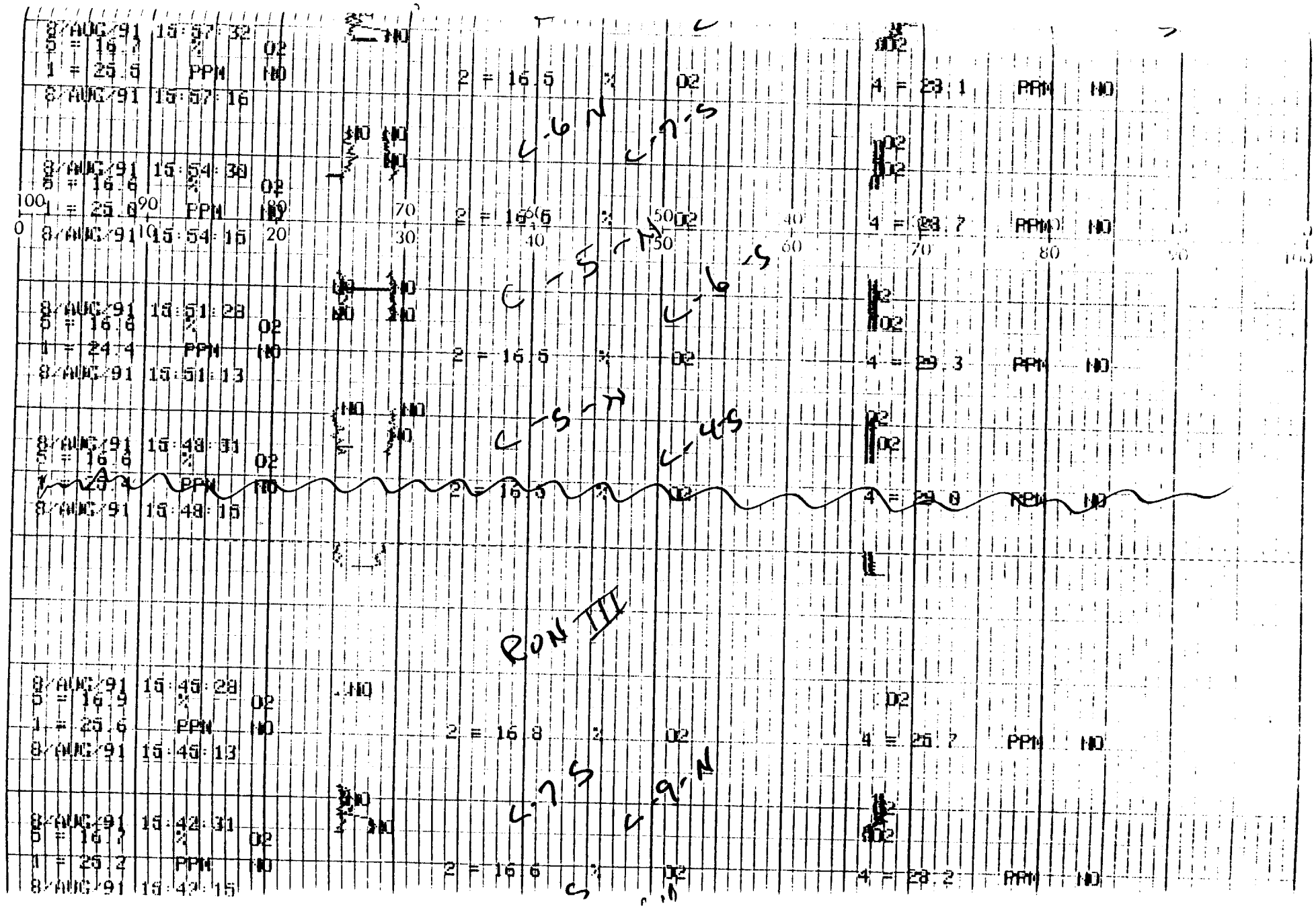

C-5-3
C-4-6
C-4-5
C-5-1
8/AUG/91 14:51:39
5 = 16.6 % O2
1 = 29.6 PPM NO
4 = 29.6 PPM NO
8/AUG/91 14:51:15
8/AUG/91 14:48:34
5 = 16.6 % O2
1 = 30.2 PPM NO
2 = 16.5 % O2
4 = 29.7 PPM NO
8/AUG/91 14:48:18
8/AUG/91 14:48:12
RECORDER/DATA LOGGER VRS 6H
8/AUG/91 14:48:39
5 = 17.8 % O2
1 = 25.1 PPM NO
2 = 16.9 % O2
4 = 25.2 PPM NO
8/AUG/91 14:48:24
8/AUG/91 14:48:16
5 = 12.3 % O2
1 = 25.3 PPM NO
2 = 12.8 % O2
4 = 25.2 PPM NO
8/AUG/91 14:39:35
8/AUG/91 14:35:52
5 = 17.2 % O2
1 = -0.8 PPM NO
2 = 16.8 % O2
4 = 8.7 PPM NO
8/AUG/91 14:35:36
8/AUG/91 14:35:29
8/AUG/91 14:33:46
5 = 17.2 % O2
1 = -1.1 PPM NO
2 = 16.8 % O2
4 = 1.5 PPM NO
8/AUG/91 14:33:30
5 = 17.2 % O2
00 = 48.490 PPM NO
2 = -0.280 % O2
4 = 48.8 PPM NO
8/AUG/91 14:29:15
FINAL CAL RUN I
50% LOAD
O2 NOX CAL
NOX CAL
O2 NOX CAL
NOX CAL


8/AUG/91 15: 9:28
5 = 16.7 % O2
1 = 29.0 PPM NO
2 = 16.6 % O2
4 = 28.7 PPM NO
8/AUG/91 15: 9:13
8/AUG/91 15: 6:30
5 = 16.6 % O2
1 = 28.3 PPM NO
2 = 16.1 % O2
4 = 27.9 PPM NO
8/AUG/91 15: 6:14
8/AUG/91 15: 3:28
5 = 16.9 % O2
1 = 28.2 PPM NO
2 = 16.5 % O2
4 = 27.9 PPM NO
8/AUG/91 15: 3:13
8/AUG/91 15: 0:32
5 = 16.9 % O2
1 = 28.6 PPM NO
2 = 16.8 % O2
4 = 26.5 PPM NO
8/AUG/91 15: 0:16
8/AUG/91 14:57:30
5 = 16.7 % O2
1 = 28.8 PPM NO
2 = 16.5 % O2
4 = 28.6 PPM NO
8/AUG/91 14:57:14
8/AUG/91 14:54:29
5 = 16.6 % O2
1 = 30.1 PPM NO
2 = 16.5 % O2
4 = 29.6 PPM NO
8/AUG/91 14:54:13
8/AUG/91 14:51:30



PART NO 414446


8/AUG/91 15:42:15
1 = 25.2 PPM
8/AUG/91 15:39:29
1 = 24.6 PPM
8/AUG/91 15:39:13
8/AUG/91 15:36:32
1 = 24.0 PPM
8/AUG/91 15:36:16
8/AUG/91 15:33:30
1 = 23.2 PPM
8/AUG/91 15:33:14
8/AUG/91 15:30:29
1 = 23.8 PPM
8/AUG/91 15:30:13
8/AUG/91 15:27:31
1 = 24.5 PPM
8/AUG/91 15:27:15
2 = 16.6
2 = 16.5
2 = 16.5
2 = 17.2
2 = 16.8
4 = 28.2 PPM
4 = 28.4 PPM
4 = 29.0 PPM
4 = 27.8 PPM
4 = 23.1 PPM
4 = 26.2 PPM
100
90
80
70
60
50
40
30
20
10
0


8/AUG/91 15:57:32
5 = 16.7 % O2
1 = 25.5 PPM HD
8/AUG/91 15:57:16
8/AUG/91 15:54:30
5 = 16.6 % O2
1 = 25.0 PPM HD
8/AUG/91 15:54:15
8/AUG/91 15:51:28
5 = 16.8 % O2
1 = 24.4 PPM HD
8/AUG/91 15:51:13
8/AUG/91 15:48:31
5 = 16.6 % O2
1 = 25.3 PPM HD
8/AUG/91 15:48:15
8/AUG/91 15:45:28
5 = 16.9 % O2
1 = 25.6 PPM HD
8/AUG/91 15:45:13
8/AUG/91 15:42:31
5 = 16.7 % O2
1 = 25.2 PPM HD
8/AUG/91 15:42:15
2 = 16.5 % O2
2 = 16.6 % O2
2 = 16.5 % O2
2 = 16.5 % O2
2 = 16.8 % O2
2 = 16.6 % O2
4 = 23.1 PPM HD
4 = 23.7 PPM HD
4 = 29.3 PPM HD
4 = 29.8 PPM HD
4 = 25.7 PPM HD
4 = 28.2 PPM HD
RON III

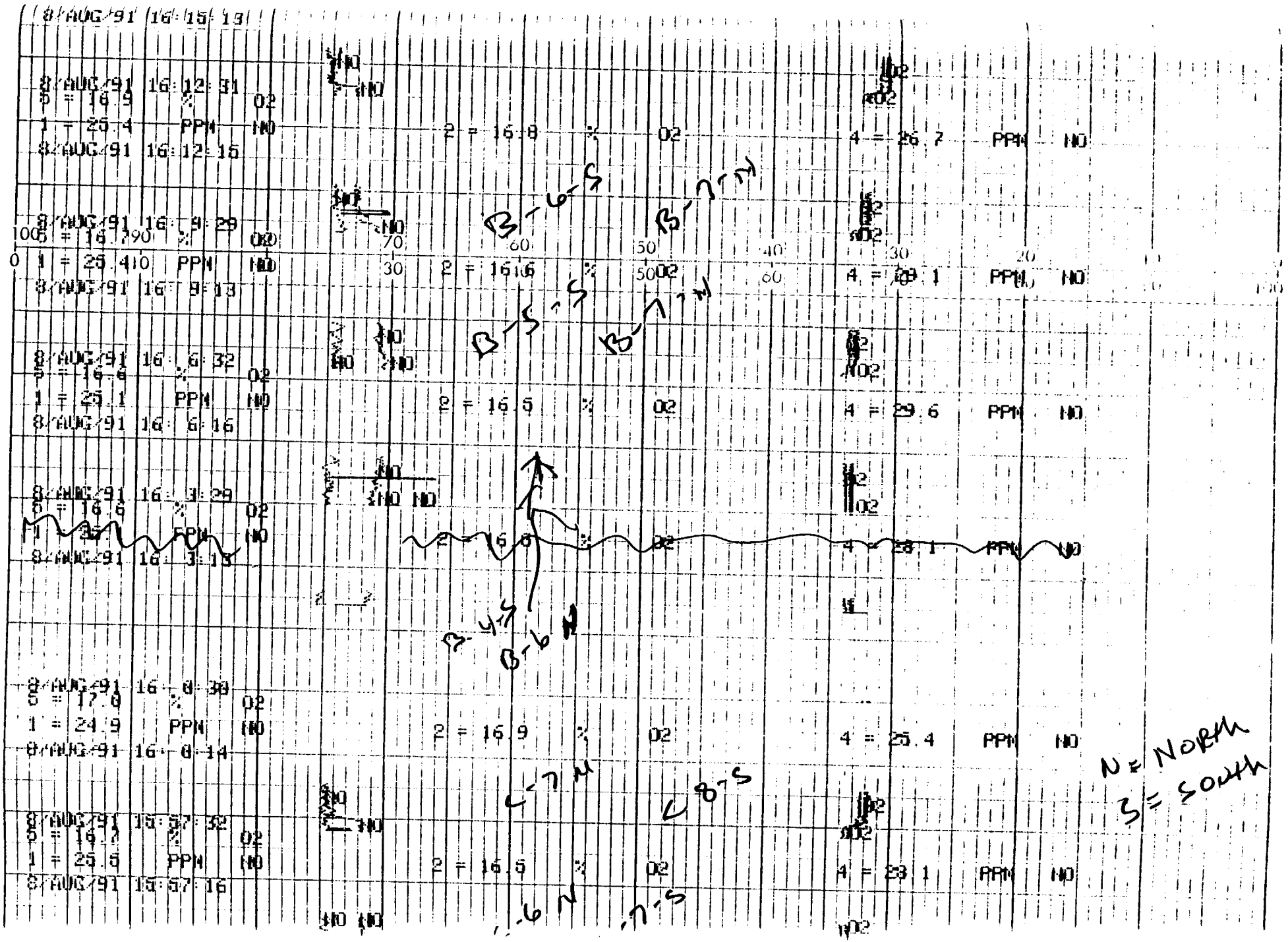
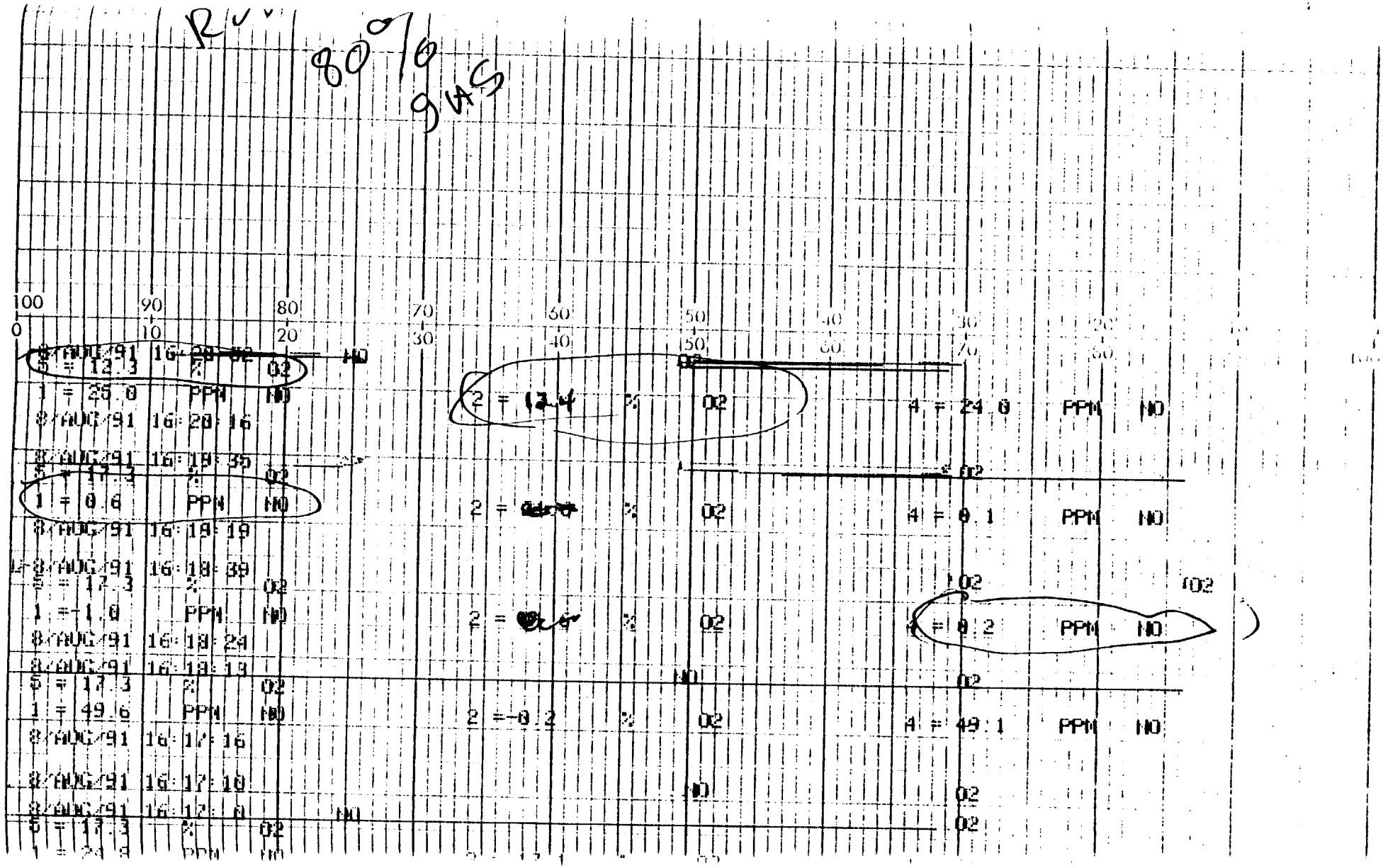
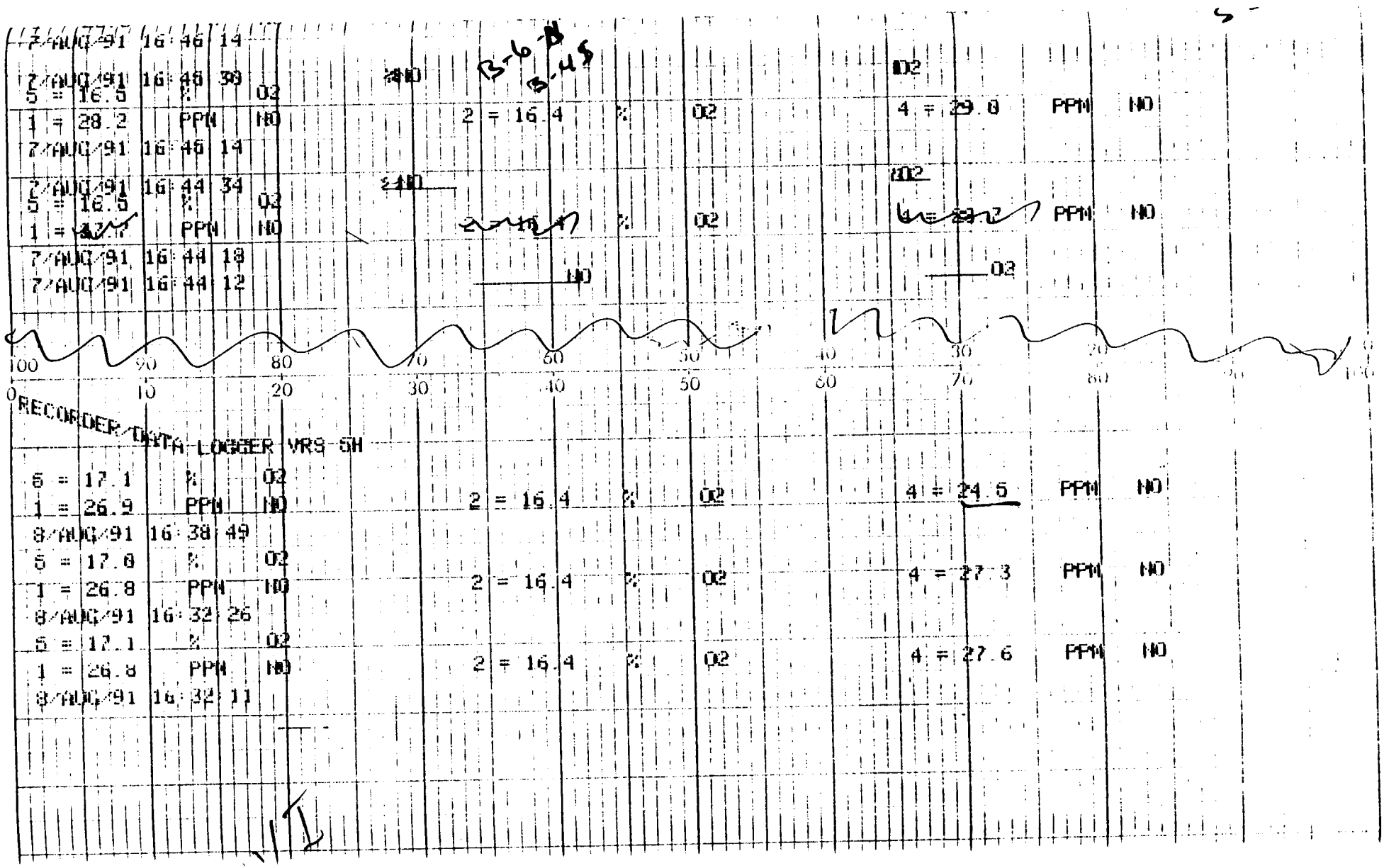


CHART NO 41446


RUN
80/10
gas
100
90
80
70
60
50
40
30
20
10
0
8/AUG/91 16:20:02
S = 12.3 % 02
1 = 25.0 PPM NO
8/AUG/91 16:20:16
8/AUG/91 16:19:35
S = 17.3 % 02
1 = 0.6 PPM NO
8/AUG/91 16:19:19
8/AUG/91 16:18:39
S = 12.3 % 02
1 = 1.0 PPM NO
8/AUG/91 16:18:24
8/AUG/91 16:18:13
S = 17.3 % 02
1 = 49.6 PPM NO
8/AUG/91 16:17:16
8/AUG/91 16:17:10
8/AUG/91 16:17:0
S = 17.3 % 02
2 = 12.4 % 02
2 = 0.4 % 02
2 = 0.2 % 02
2 = -0.2 % 02
4 = 24.0 PPM NO
4 = 0.1 PPM NO
4 = 0.2 PPM NO
4 = 49.1 PPM NO
02
02
02
02
02
02
02
02
NO
NO
NO
NO


7/AUG/91 16:46:14
7/AUG/91 16:46:38
5 = 16.5 % O2
1 = 28.2 PPM NO
7/AUG/91 16:46:14
7/AUG/91 16:44:34
5 = 16.5 % O2
1 = 4.7 PPM NO
7/AUG/91 16:44:18
7/AUG/91 16:44:12
RECORDER/DATA LOGGER VRS 5H
5 = 17.1 % O2
1 = 26.9 PPM NO
8/AUG/91 16:38:49
5 = 17.0 % O2
1 = 26.8 PPM NO
8/AUG/91 16:32:26
5 = 17.1 % O2
1 = 26.8 PPM NO
8/AUG/91 16:32:11
2 = 16.4 % O2
4 = 24.5 PPM NO
2 = 16.4 % O2
4 = 27.3 PPM NO
2 = 16.4 % O2
4 = 27.6 PPM NO
O2
NO
100 90 80 70 60 50 40 30 20 10 0
0 10 20 30 40 50 60 70 80 90 100

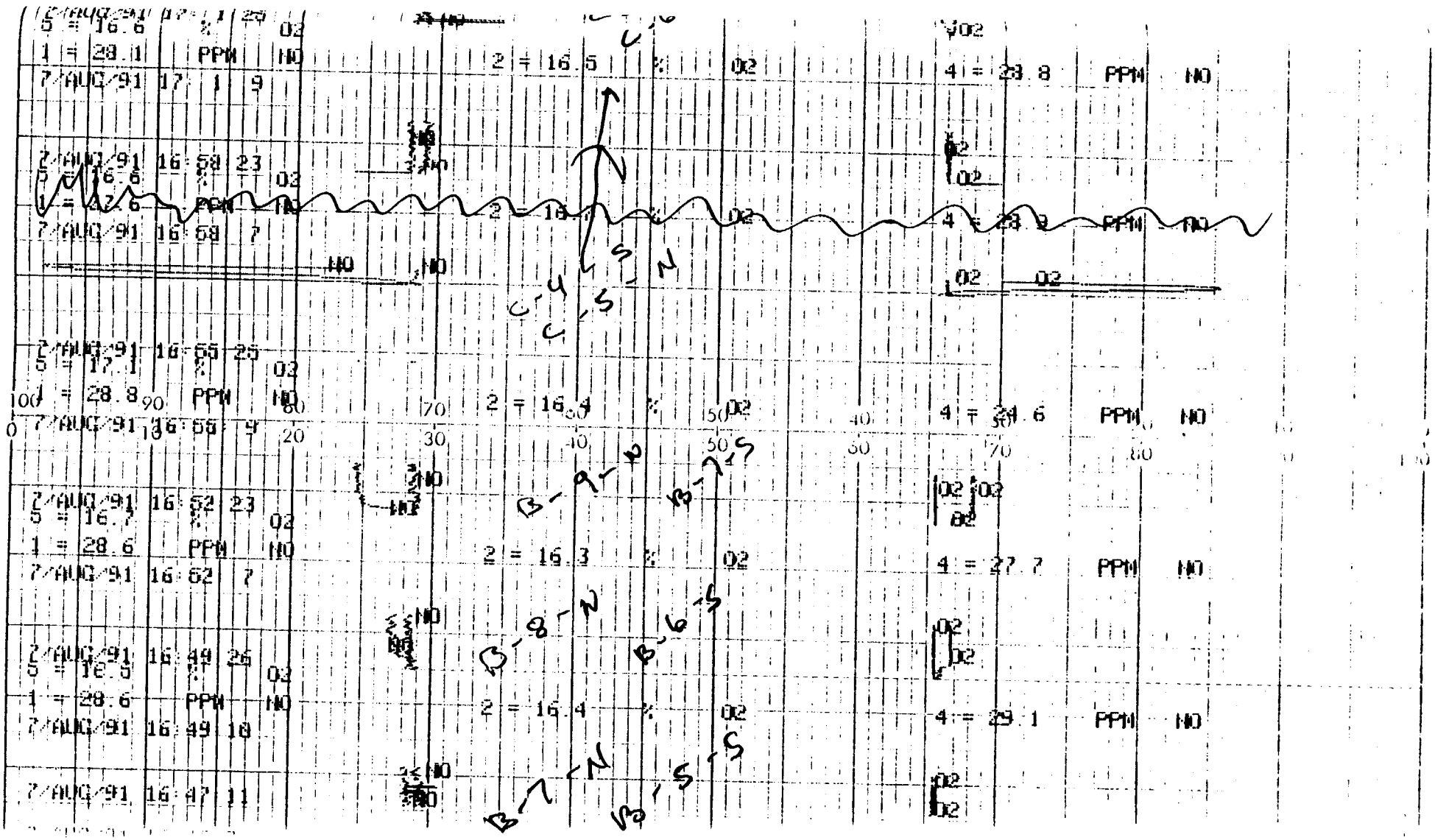
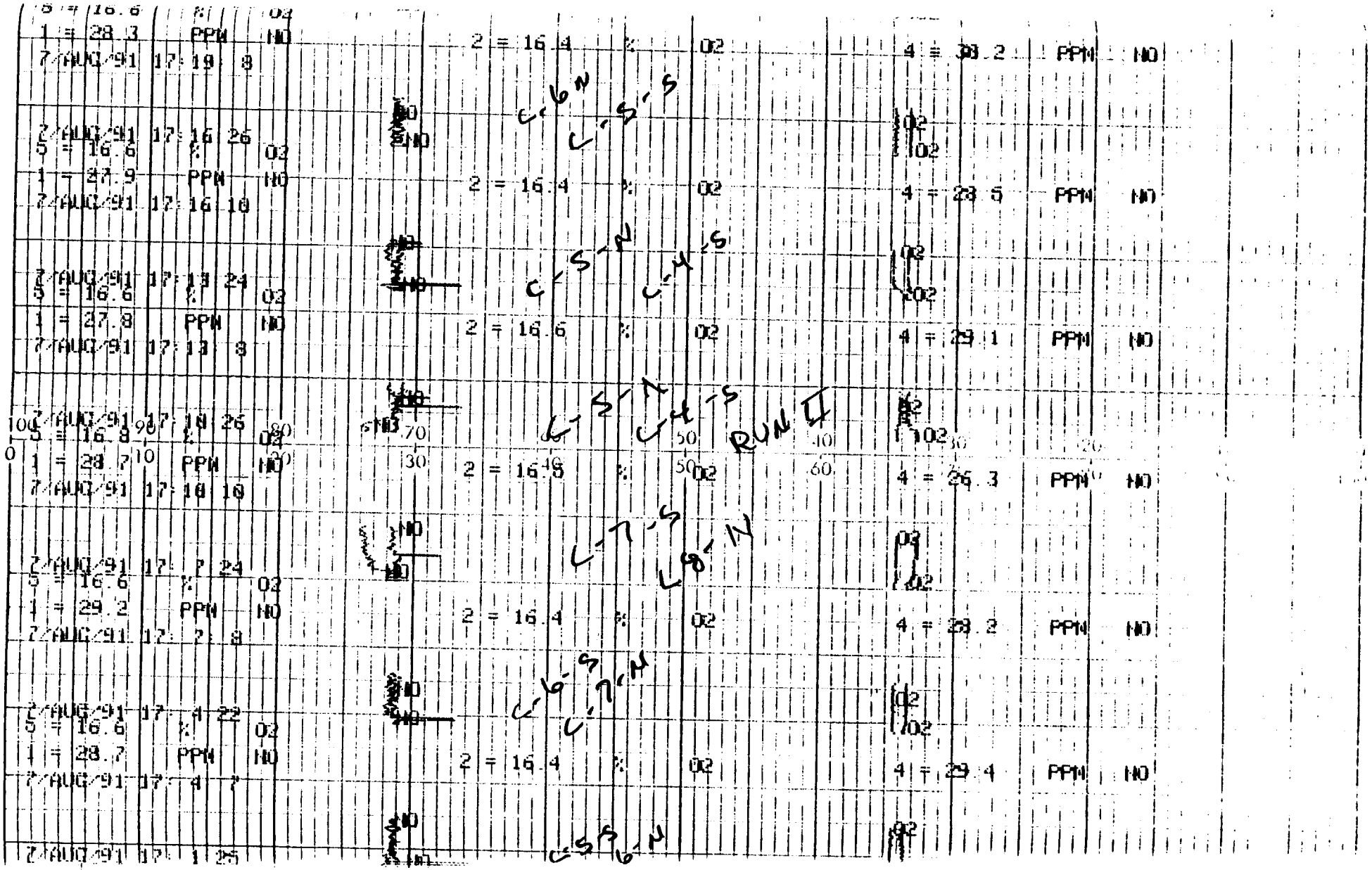
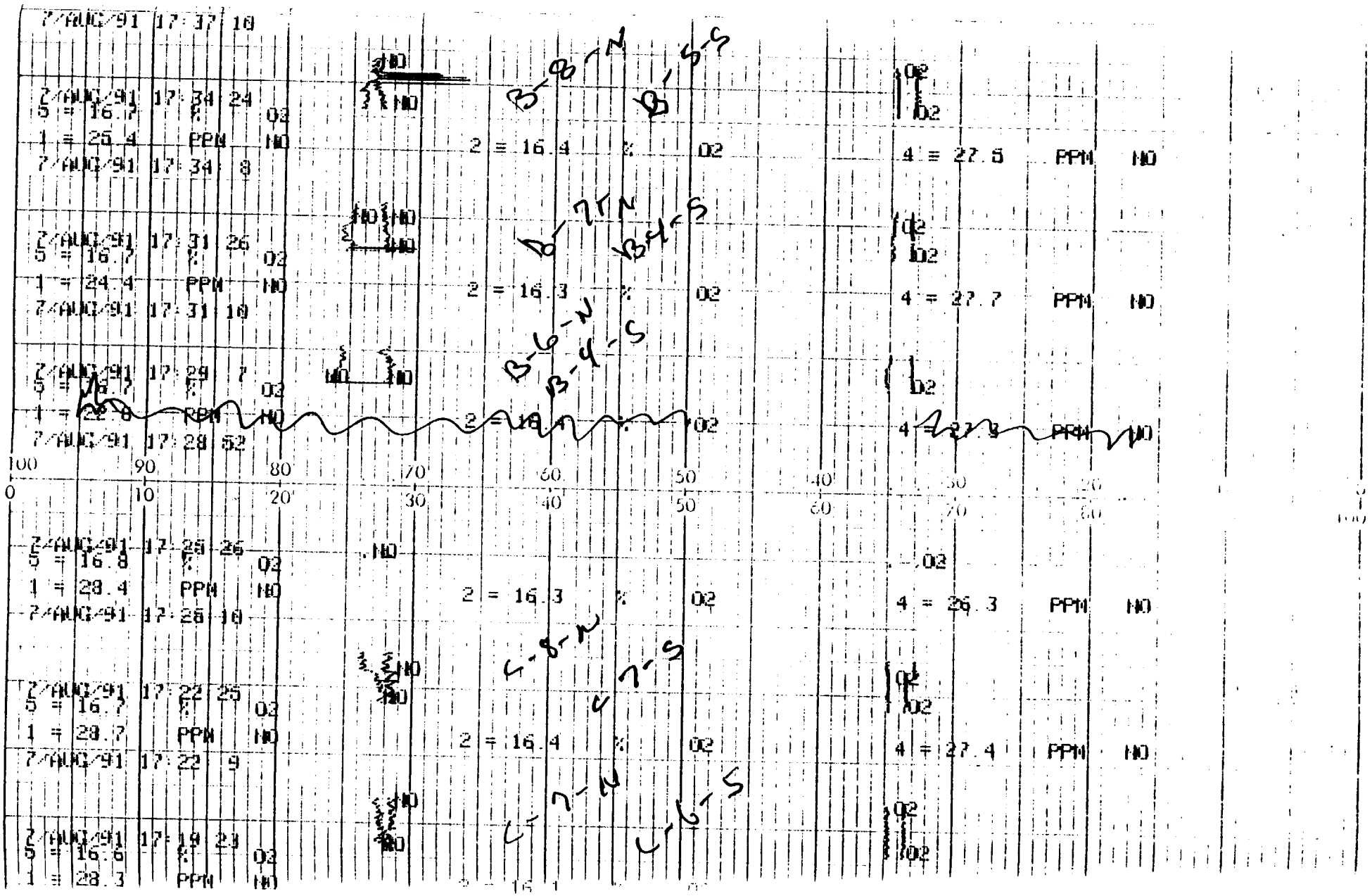
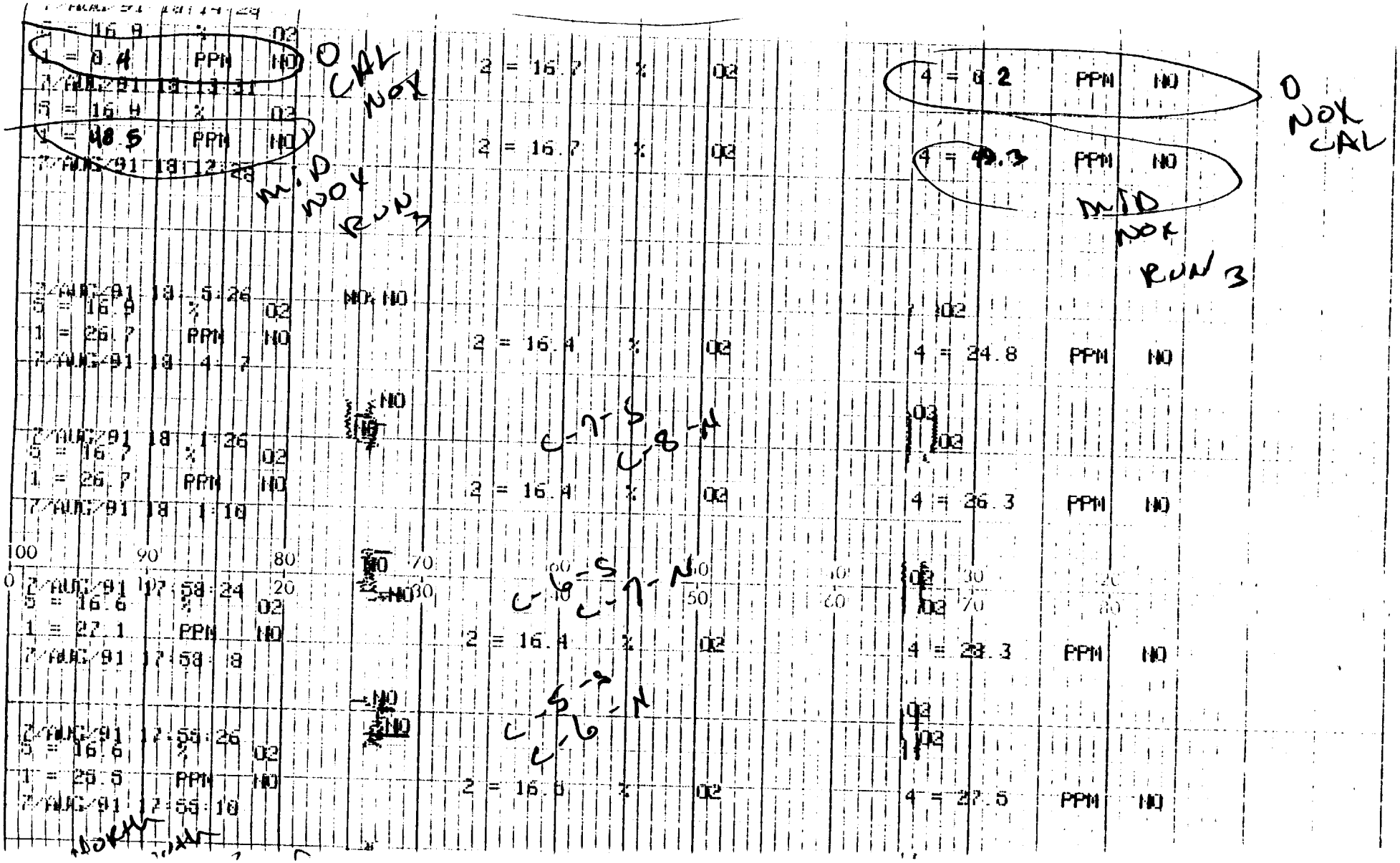


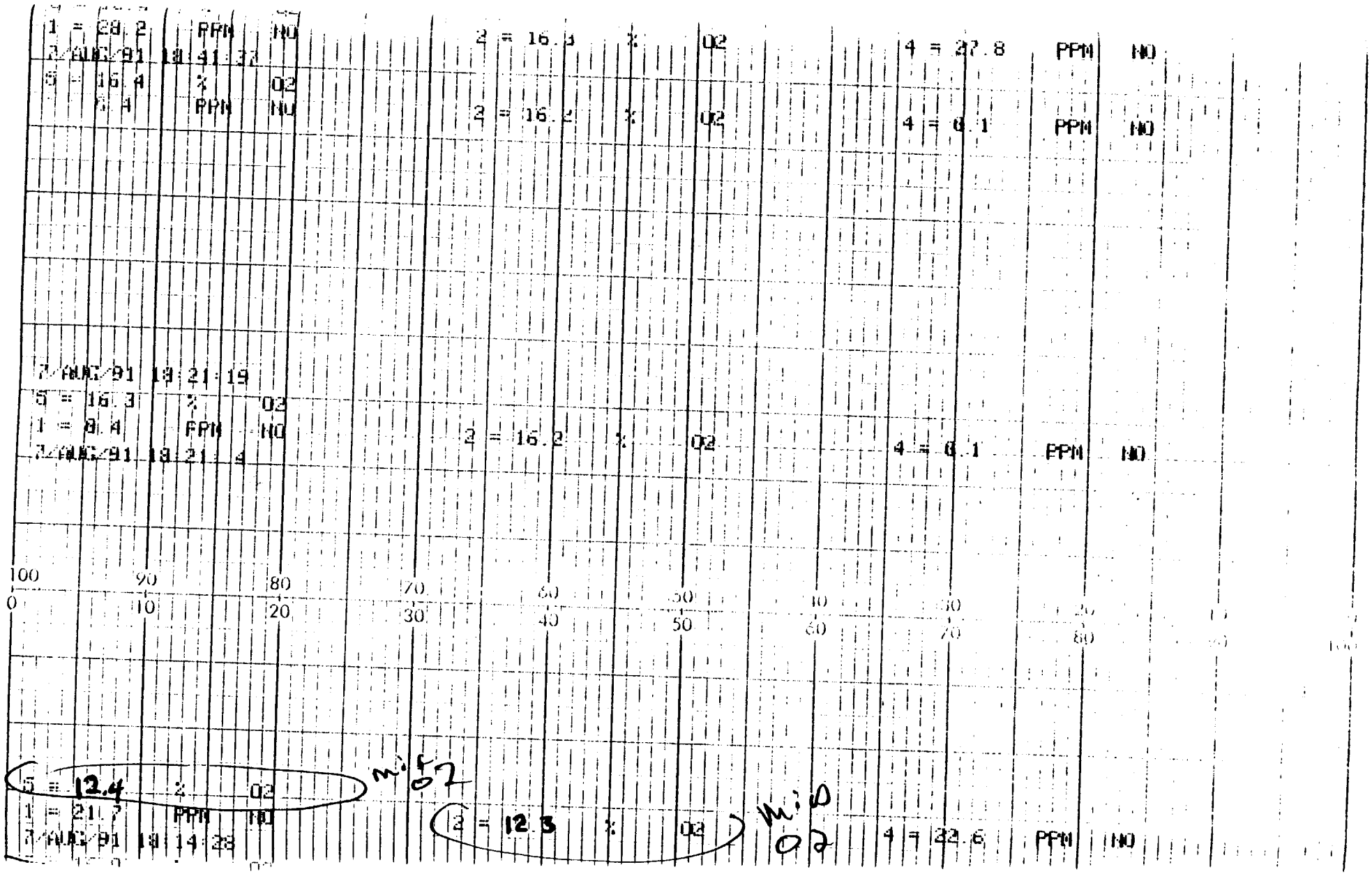
CHART NO 414446

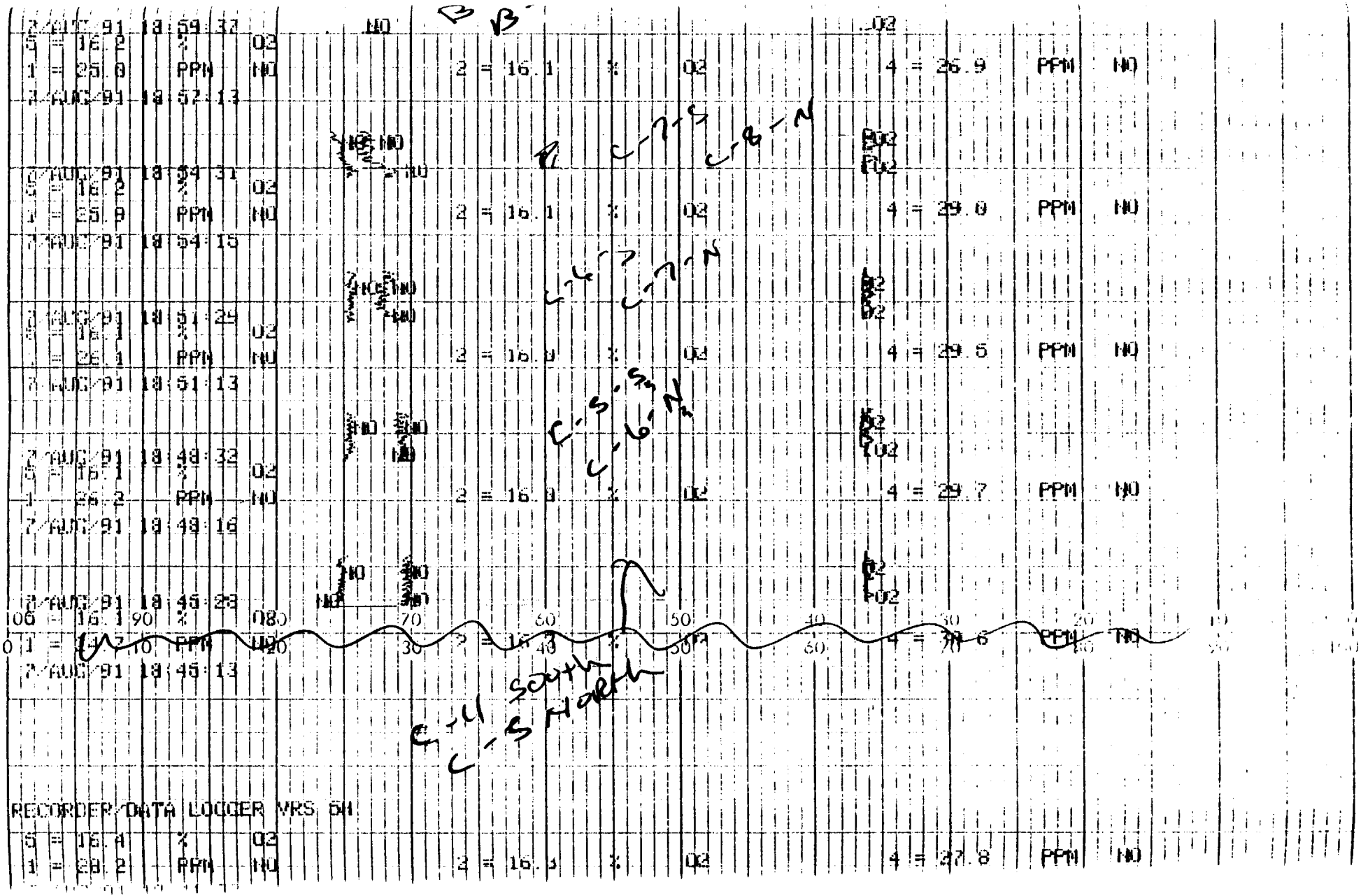

MOLYTEK
RUN 11

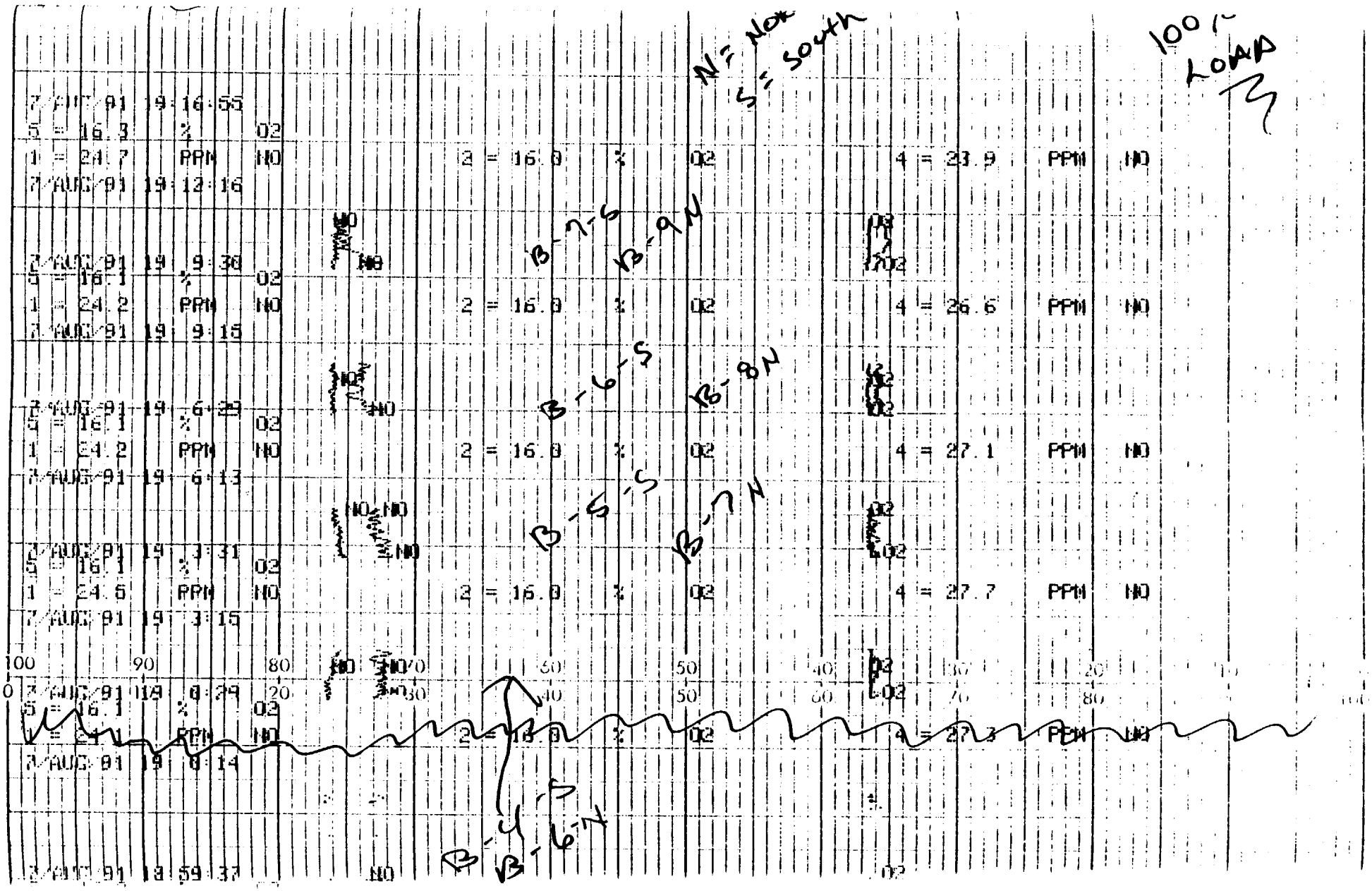

7/AUG/91 17:37 10
7/AUG/91 17:34 24
5 = 16.7 % O2
1 = 25.4 PPM NO
7/AUG/91 17:34 8
7/AUG/91 17:31 26
5 = 16.7 % O2
1 = 24.4 PPM NO
7/AUG/91 17:31 10
7/AUG/91 17:29 7
5 = 16.7 % O2
1 = 22.8 PPM NO
7/AUG/91 17:28 52
7/AUG/91 17:25 26
5 = 16.8 % O2
1 = 28.4 PPM NO
7/AUG/91 17:25 10
7/AUG/91 17:22 25
5 = 16.7 % O2
1 = 28.7 PPM NO
7/AUG/91 17:22 9
7/AUG/91 17:19 23
5 = 16.6 % O2
1 = 28.3 PPM NO
2 = 16.4 % O2
4 = 27.5 PPM NO
2 = 16.3 % O2
4 = 27.7 PPM NO
2 = 16.3 % O2
4 = 26.3 PPM NO
2 = 16.4 % O2
4 = 27.4 PPM NO
100 90 80 70 60 50 40 30 20 10 0

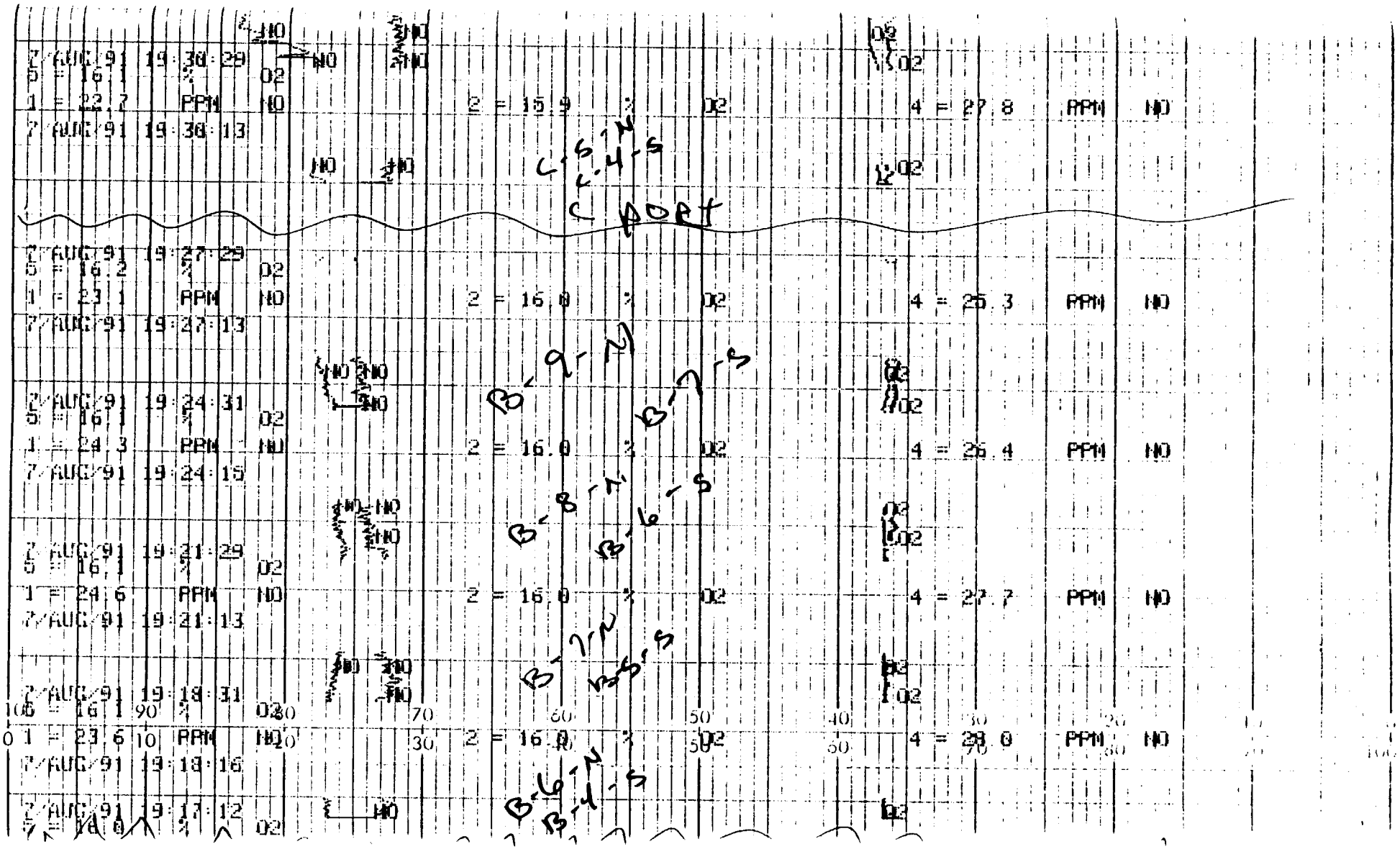
80% LOAD
PPM
O2
7/AUG/91 17:52:23
7/AUG/91 17:49:25
7/AUG/91 17:46:24
7/AUG/91 17:43:26
7/AUG/91 17:40:24
7/AUG/91 17:37:26


5 = 16.8 % O2
1 = 0.4 PPM NO
7/AUG/91 18:13:31
5 = 16.8 % O2
1 = 48.5 PPM NO
7/AUG/91 18:12:28
7/AUG/91 18:5:26
5 = 16.8 % O2
1 = 26.7 PPM NO
7/AUG/91 18:4:7
7/AUG/91 18:1:26
5 = 16.7 % O2
1 = 26.7 PPM NO
7/AUG/91 18:1:10
7/AUG/91 17:58:24
5 = 16.6 % O2
1 = 27.1 PPM NO
7/AUG/91 17:58:8
7/AUG/91 12:55:26
5 = 16.6 % O2
1 = 25.5 PPM NO
7/AUG/91 12:55:10
2 = 16.7 % O2
2 = 16.7 % O2
2 = 16.4 % O2
2 = 16.4 % O2
2 = 16.0 % O2
4 = 0.2 PPM NO
4 = 49.3 PPM NO
4 = 24.8 PPM NO
4 = 26.3 PPM NO
4 = 28.3 PPM NO
4 = 27.5 PPM NO
O CAL NOX
MID NOX RUN 2
MID NOX RUN 3
O NOX CAL


1 = 28.2 PPM NO
7-AUG-91 18:41:37
5 = 16.4 % O2
1 = 8.4 PPM NO
7-AUG-91 18:21:19
5 = 16.3 % O2
1 = 8.4 PPM NO
7-AUG-91 18:21:4
2 = 16.3 % O2
4 = 27.8 PPM NO
2 = 16.2 % O2
4 = 8.1 PPM NO
2 = 16.2 % O2
4 = 8.1 PPM NO
5 = 12.4 % O2
1 = 21.7 PPM NO
7-AUG-91 18:14:28
m:07
2 = 12.3 % O2
m:0
02
4 = 22.6 PPM NO
100
90
80
70
60
50
40
30
20
10
0


2/AUG/91 18:59:32
5 = 16.2 % O2
1 = 25.0 PPM NO
2/AUG/91 18:52:13
2 = 16.1 % O2
4 = 26.9 PPM NO
2/AUG/91 18:54:31
5 = 16.2 % O2
1 = 25.9 PPM NO
2/AUG/91 18:54:15
2 = 16.1 % O2
4 = 29.0 PPM NO
2/AUG/91 18:51:29
5 = 16.1 % O2
1 = 26.1 PPM NO
2/AUG/91 18:51:13
2 = 16.0 % O2
4 = 29.5 PPM NO
2/AUG/91 18:48:32
5 = 16.1 % O2
1 = 26.2 PPM NO
2/AUG/91 18:48:16
2 = 16.0 % O2
4 = 29.7 PPM NO
2/AUG/91 18:46:28
5 = 16.1 % O2
1 = 26.0 PPM NO
2/AUG/91 18:46:13
2 = 16.0 % O2
4 = 29.6 PPM NO
RECORDER DATA LOGGER VRS 5H
5 = 16.4 % O2
1 = 28.2 PPM NO
2 = 16.0 % O2
4 = 27.8 PPM NO
B B'
SOUTH
NORTH
100 90 80 70 60 50 40 30 20 10 0


N = North
S = South
100% LOAD
B-7-S
B-9N
B-6-S
B-8N
B-5-S
B-7N
B-4-S
B-6-N
7 AUG 91 19:16:55
5 = 16.3 % 02
1 = 24.7 PPM NO
2 = 16.0 % 02
4 = 23.9 PPM NO
7 AUG 91 19:12:16
7 AUG 91 19:9:30
5 = 16.1 % 02
1 = 24.2 PPM NO
2 = 16.0 % 02
4 = 26.6 PPM NO
7 AUG 91 19:9:15
7 AUG 91 19:6:29
5 = 16.1 % 02
1 = 24.2 PPM NO
2 = 16.0 % 02
4 = 27.1 PPM NO
7 AUG 91 19:6:13
7 AUG 91 19:3:31
5 = 16.1 % 02
1 = 24.6 PPM NO
2 = 16.0 % 02
4 = 27.7 PPM NO
7 AUG 91 19:3:15
7 AUG 91 19:0:29
5 = 16.1 % 02
1 = 24.1 PPM NO
2 = 16.0 % 02
4 = 27.3 PPM NO
7 AUG 91 19:0:14
7 AUG 91 18:59:37
100 90 80 70 60 50 40 30 20 10 0
100 90 80 70 60 50 40 30 20 10 0


7/AUG/91 19:30:29
5 = 16.1 %
1 = 22.2 PPM
7/AUG/91 19:30:13
2 = 15.9 %
4 = 27.8 PPM
7/AUG/91 19:27:29
5 = 16.2 %
1 = 23.1 PPM
7/AUG/91 19:27:13
2 = 16.0 %
4 = 25.3 PPM
7/AUG/91 19:24:31
5 = 16.1 %
1 = 24.3 PPM
7/AUG/91 19:24:15
2 = 16.0 %
4 = 26.4 PPM
7/AUG/91 19:21:29
5 = 16.1 %
1 = 24.6 PPM
7/AUG/91 19:21:13
2 = 16.0 %
4 = 27.7 PPM
7/AUG/91 19:18:31
5 = 16.1 %
1 = 23.6 PPM
7/AUG/91 19:18:16
2 = 16.0 %
4 = 28.0 PPM
7/AUG/91 19:17:12
NO
O2

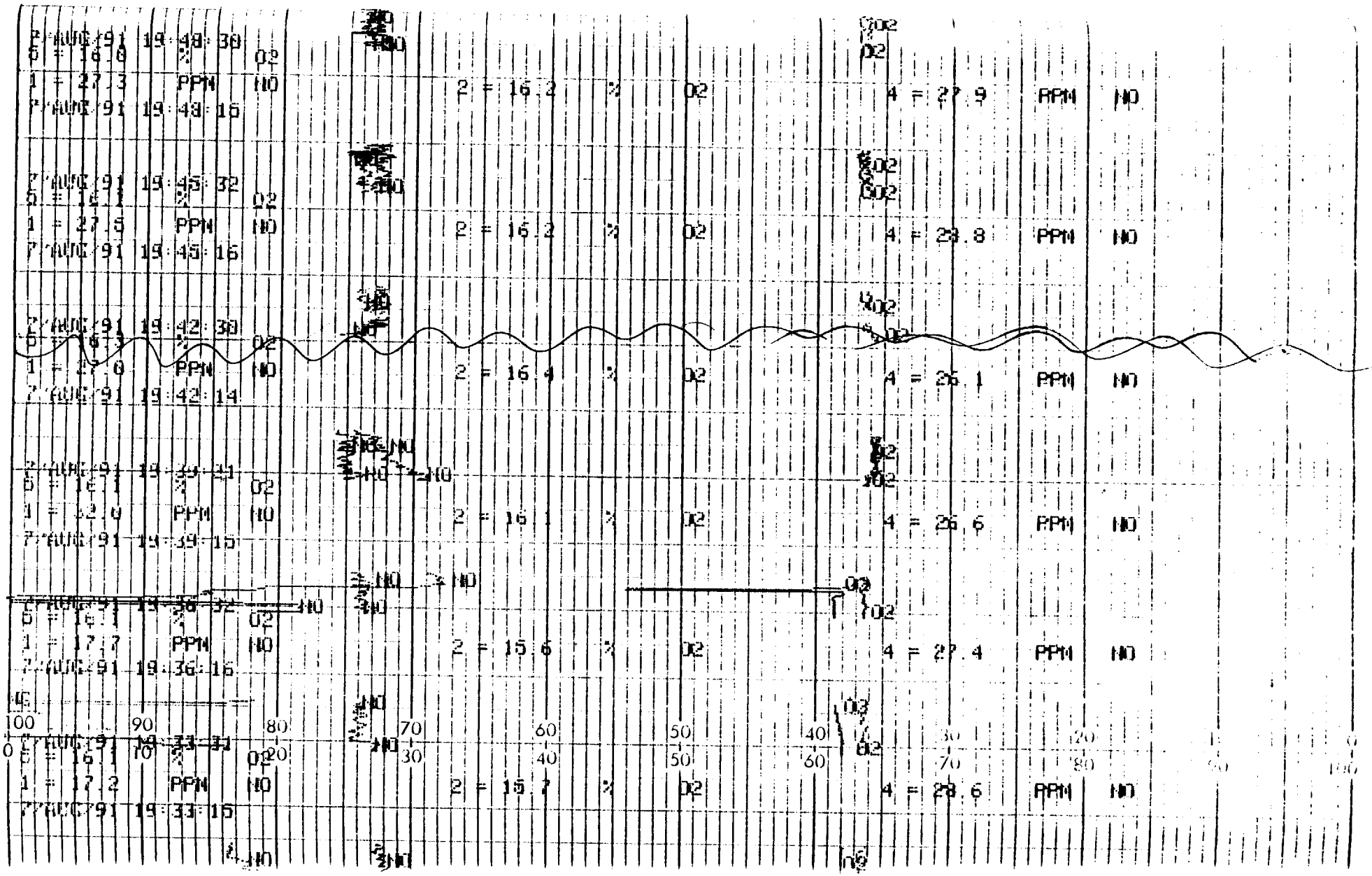
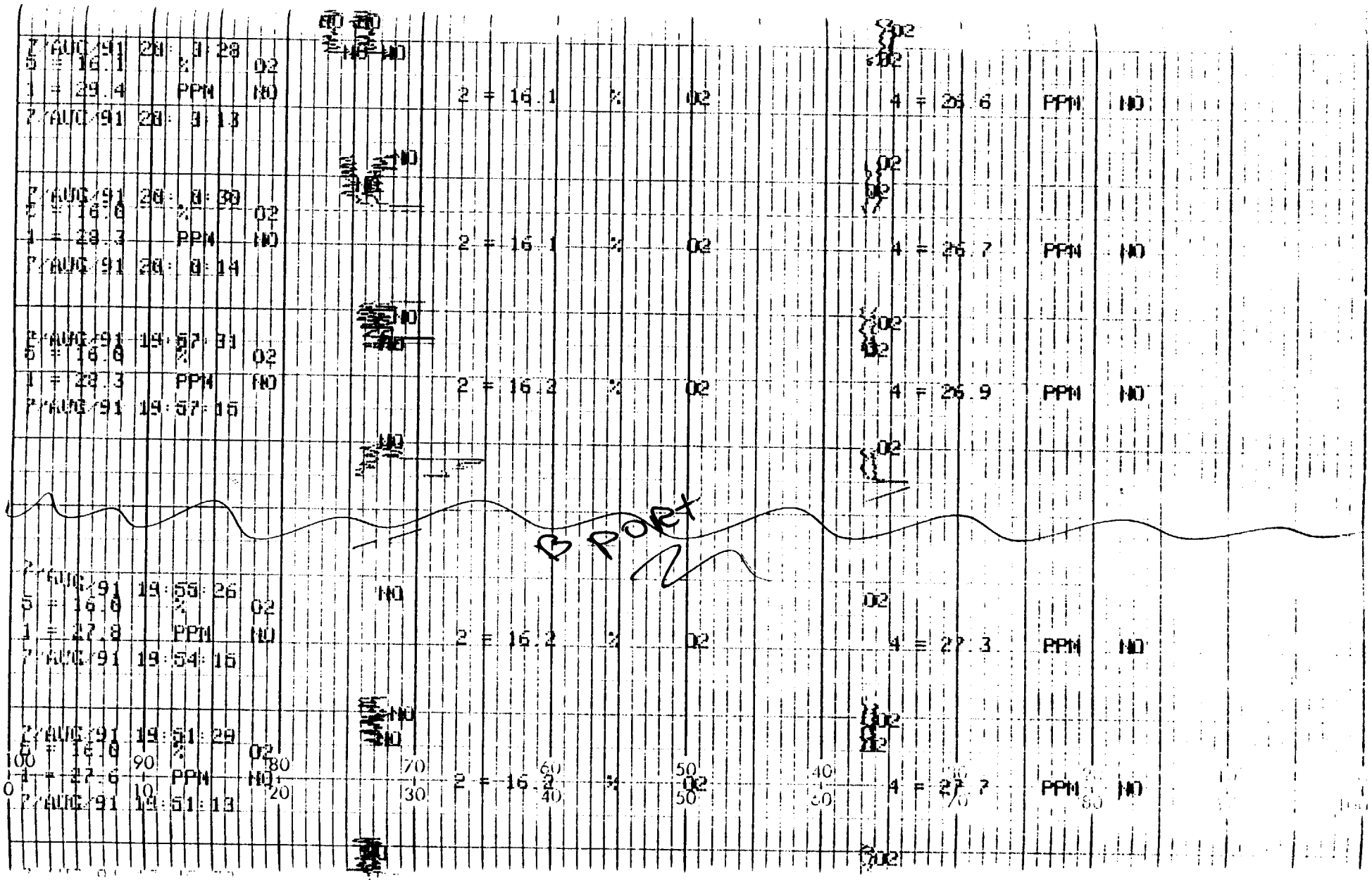
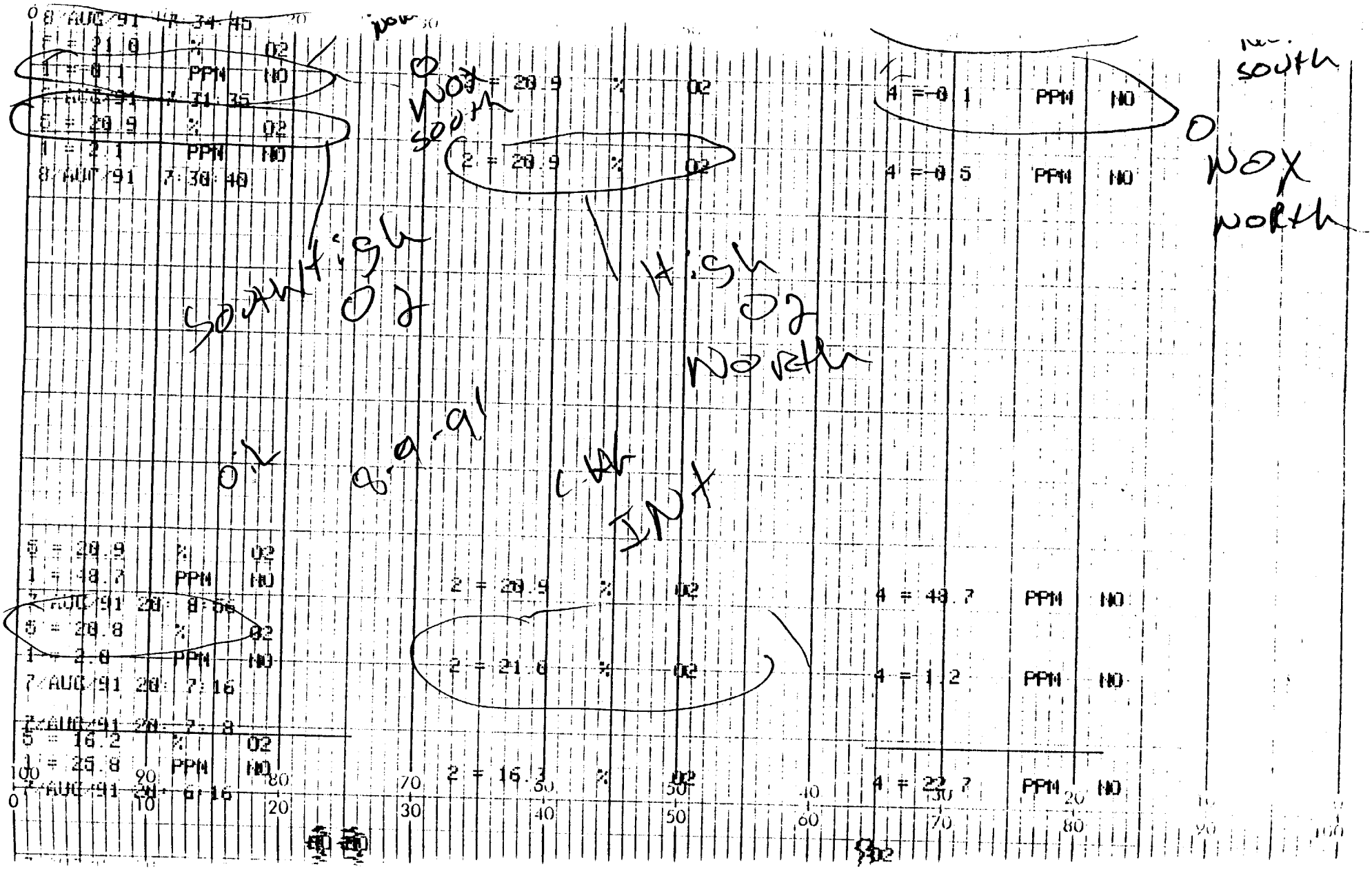


CHART NO 414446


7 AUG 91 20: 0: 28
5 = 16.1 %
1 = 29.4 PPM
7 AUG 91 20: 0: 13
7 AUG 91 20: 0: 30
5 = 16.0 %
1 = 28.3 PPM
7 AUG 91 20: 0: 14
7 AUG 91 19: 57: 31
5 = 16.0 %
1 = 28.3 PPM
7 AUG 91 19: 57: 15
7 AUG 91 19: 55: 26
5 = 16.0 %
1 = 27.8 PPM
7 AUG 91 19: 54: 15
7 AUG 91 19: 51: 29
5 = 16.0 %
1 = 27.6 PPM
7 AUG 91 19: 51: 13
2 = 16.1 % O2
4 = 26.6 PPM NO
2 = 16.1 % O2
4 = 26.7 PPM NO
2 = 16.2 % O2
4 = 26.9 PPM NO
2 = 16.2 % O2
4 = 27.3 PPM NO
2 = 16.2 % O2
4 = 27.7 PPM NO
REPORT


8 AUG 91 7:34:45
5 = 21.0 % O2
1 = 0.1 PPM NO
8 AUG 91 7:31:35
5 = 20.9 % O2
1 = 2.1 PPM NO
8 AUG 91 7:30:40
5 = 20.9 % O2
1 = 48.7 PPM NO
7 AUG 91 20: 8:56
5 = 20.8 % O2
1 = 2.8 PPM NO
7 AUG 91 20: 7:16
7 AUG 91 20: 7: 8
5 = 16.2 % O2
1 = 25.8 PPM NO
7 AUG 91 20: 6:16
2 = 20.9 % O2
2 = 20.9 % O2
2 = 21.6 % O2
2 = 16.3 % O2
4 = 0.1 PPM NO
4 = 0.5 PPM NO
4 = 48.7 PPM NO
4 = 1.2 PPM NO
4 = 22.7 PPM NO
NO
SO2
NOX
O2
South
North
High
Low
INT
8-9-91

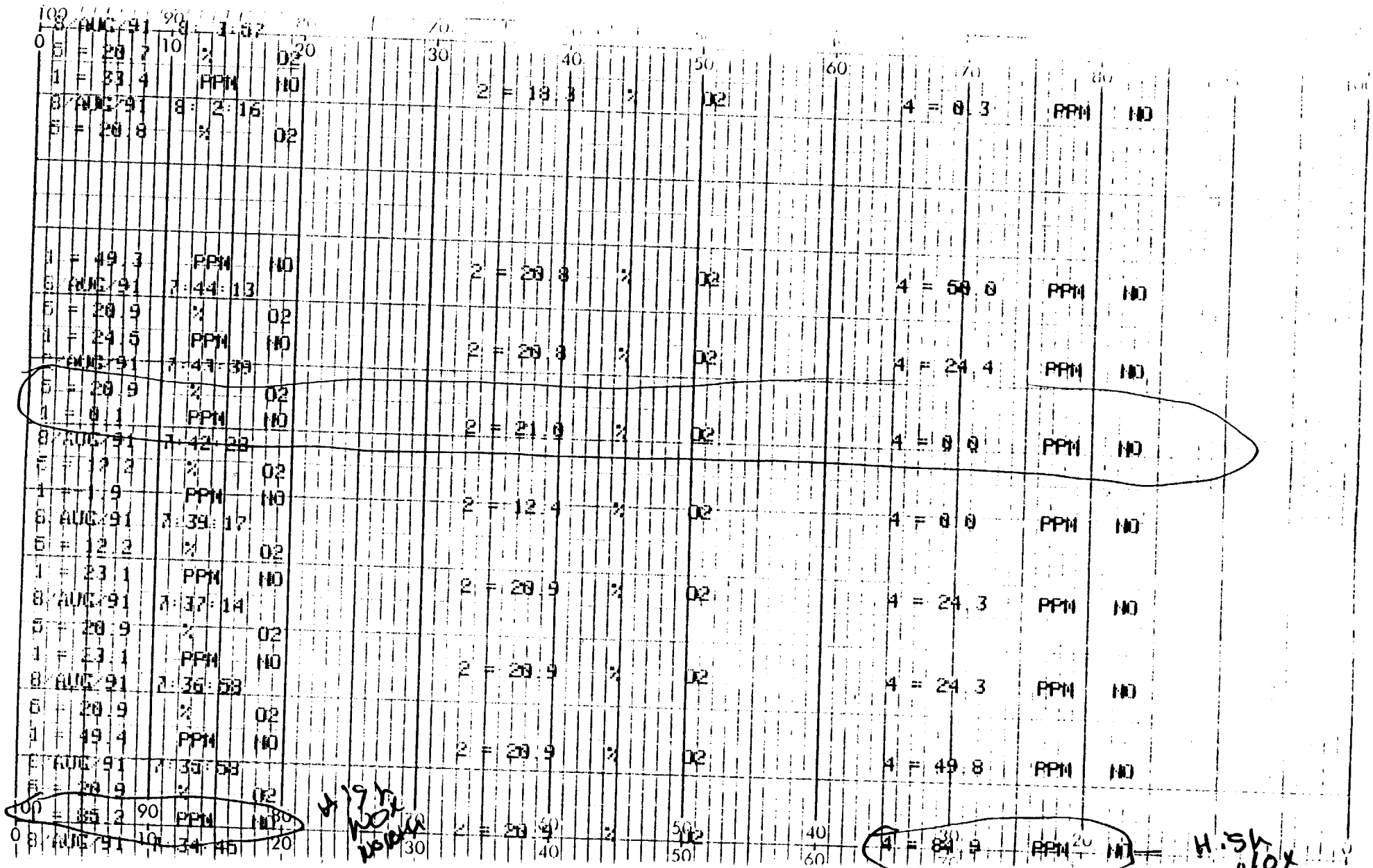
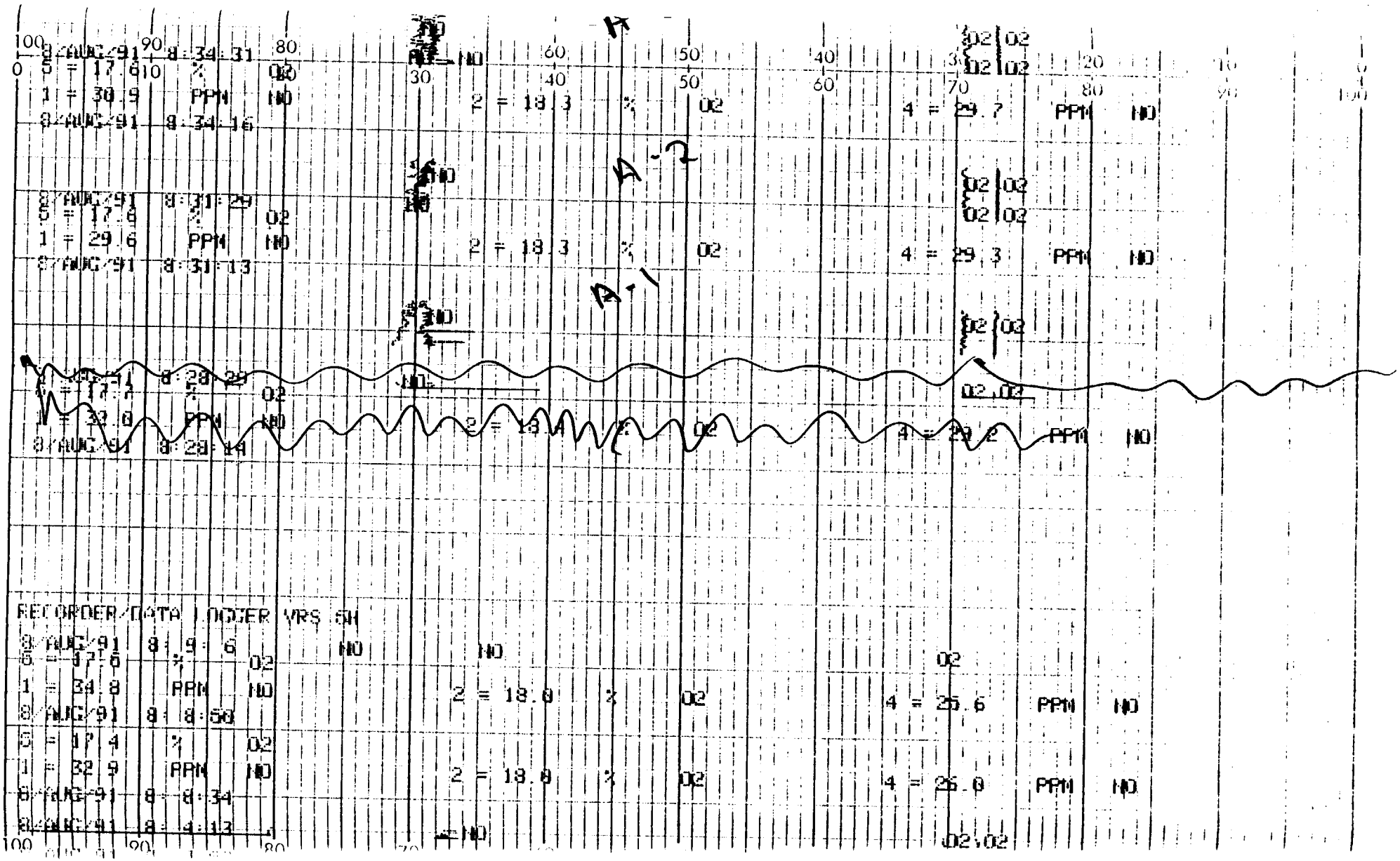


CHART NO. 11446



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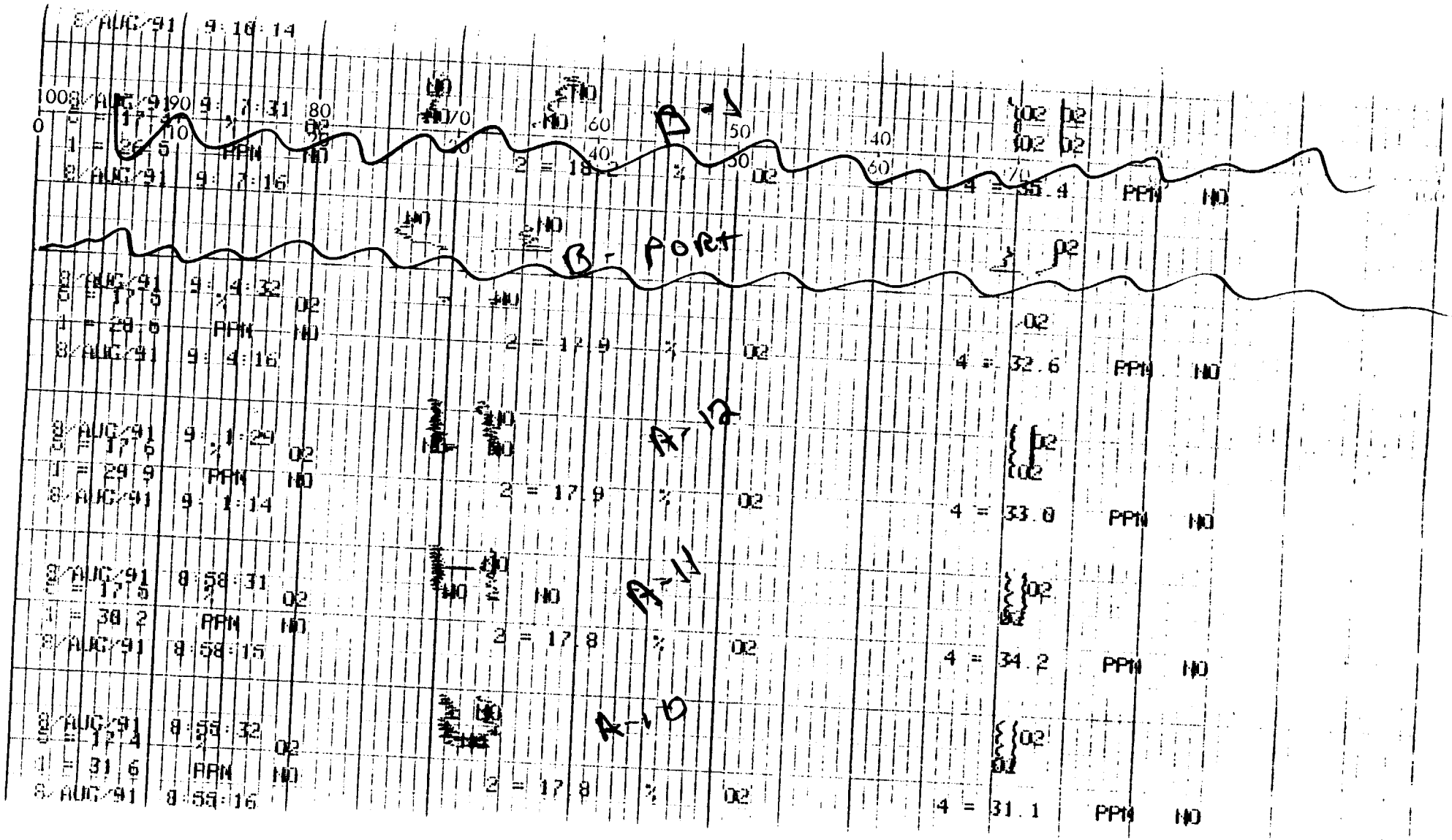
MOLYTEK

NO 414446


8/AUG/91 9:10:14
8/AUG/91 9:7:31
1 = 26.5 PPM ND
8/AUG/91 9:7:16
2 = 18.2 % O2
4 = 35.4 PPM ND
B-1
B-PORT
8/AUG/91 9:4:32
1 = 28.6 PPM ND
8/AUG/91 9:4:16
2 = 17.9 % O2
4 = 32.6 PPM ND
8/AUG/91 9:1:29
1 = 29.9 PPM ND
8/AUG/91 9:1:14
2 = 17.9 % O2
4 = 33.0 PPM ND
A-12
8/AUG/91 8:58:31
1 = 30.2 PPM ND
8/AUG/91 8:58:15
2 = 17.8 % O2
4 = 34.2 PPM ND
A-11
8/AUG/91 8:55:32
1 = 31.6 PPM ND
8/AUG/91 8:55:16
2 = 17.8 % O2
4 = 31.1 PPM ND
A-10

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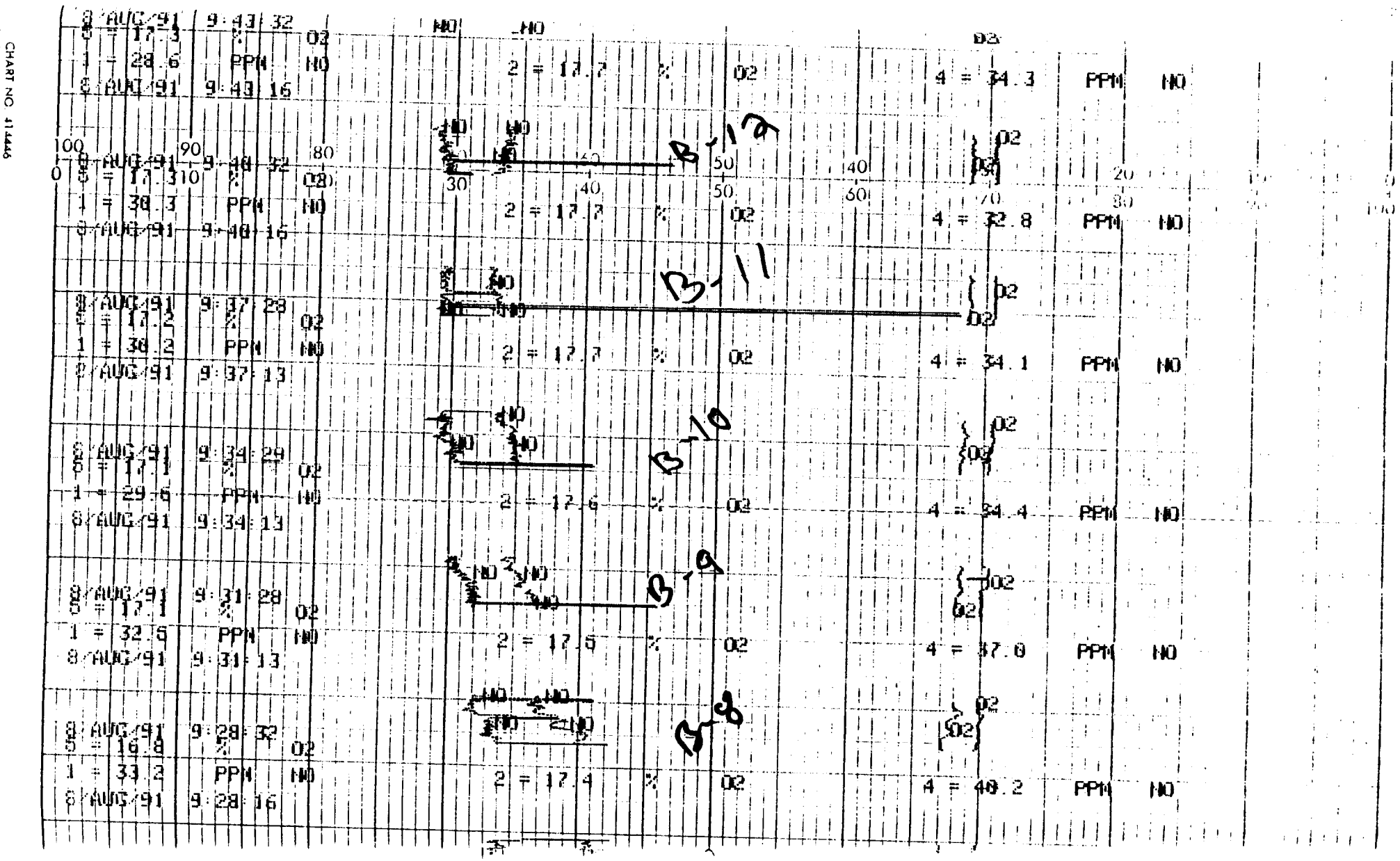
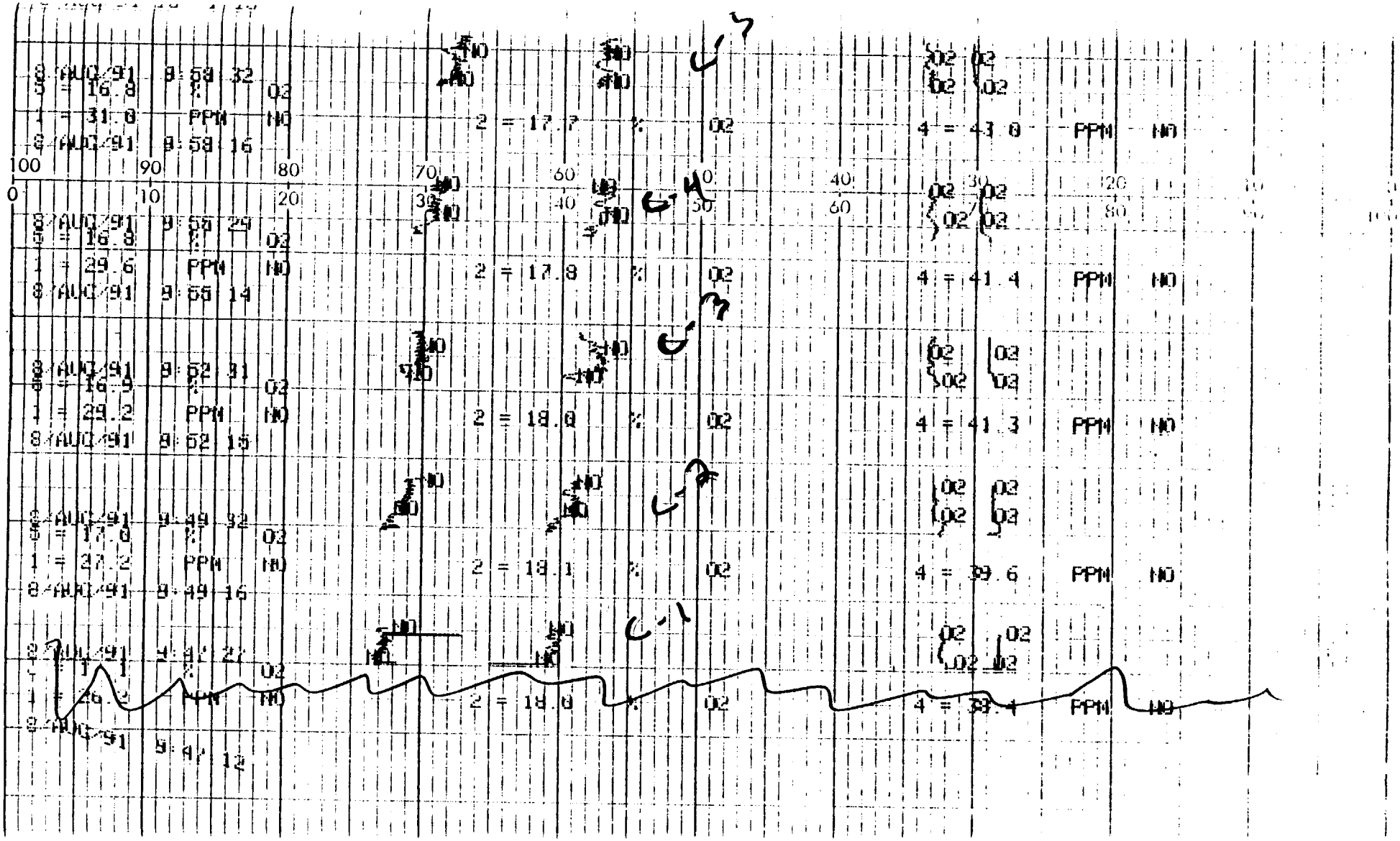


CHART NO. 114446


8 AUG 91 8:58:32
3 = 16.8 % O2
1 = 31.0 PPM NO
8 AUG 91 8:58:16
2 = 17.7 % O2
4 = 43.0 PPM NO
8 AUG 91 8:55:29
3 = 16.8 % O2
1 = 29.6 PPM NO
8 AUG 91 8:55:14
2 = 17.8 % O2
4 = 41.4 PPM NO
8 AUG 91 8:52:31
3 = 16.9 % O2
1 = 29.2 PPM NO
8 AUG 91 8:52:15
2 = 18.0 % O2
4 = 41.3 PPM NO
8 AUG 91 8:49:32
3 = 17.0 % O2
1 = 27.2 PPM NO
8 AUG 91 8:49:16
2 = 18.1 % O2
4 = 39.6 PPM NO
8 AUG 91 8:47:27
3 = 17.1 % O2
1 = 26.2 PPM NO
8 AUG 91 8:47:12
2 = 18.0 % O2
4 = 39.4 PPM NO

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MOLYTEK

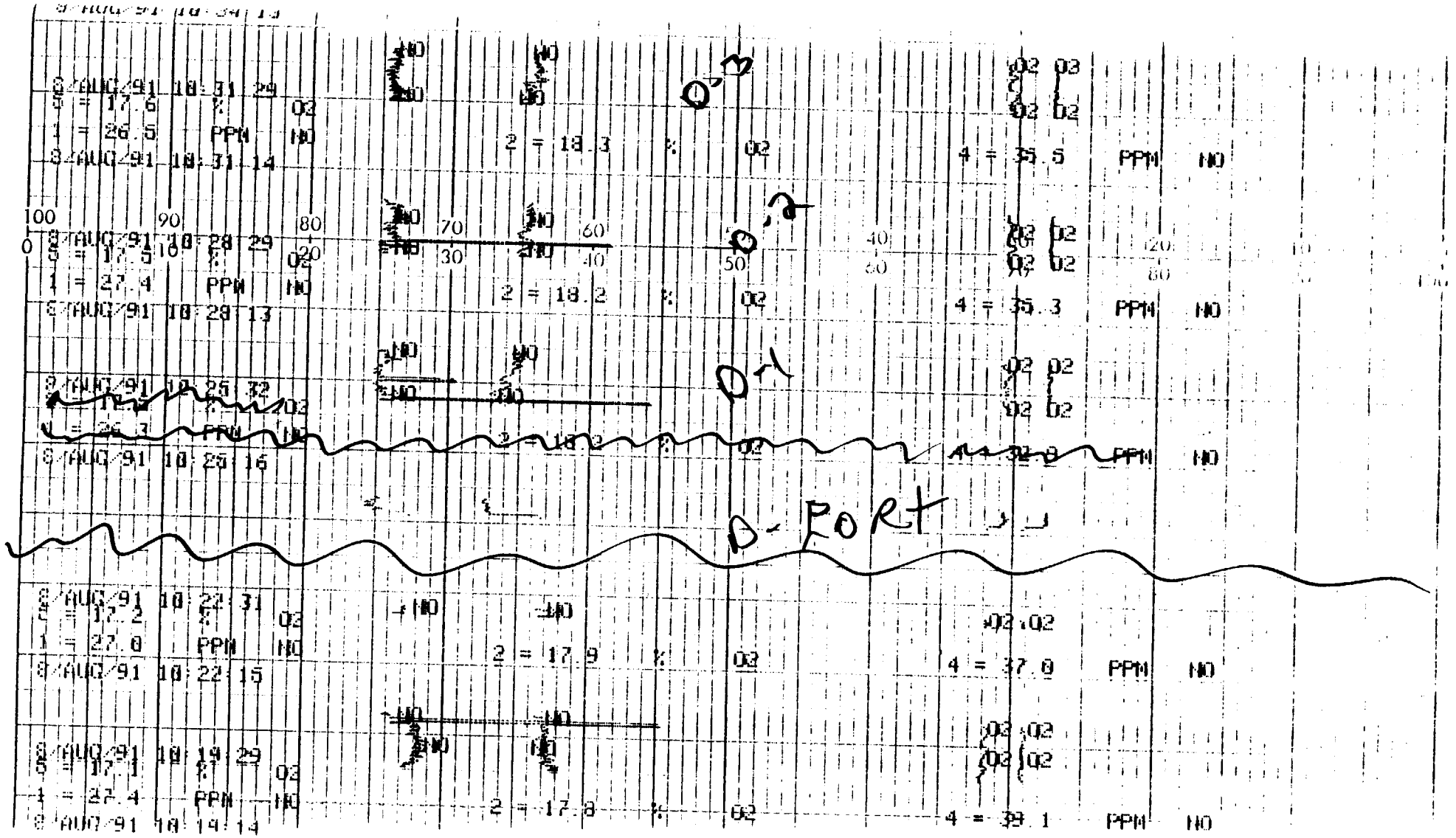
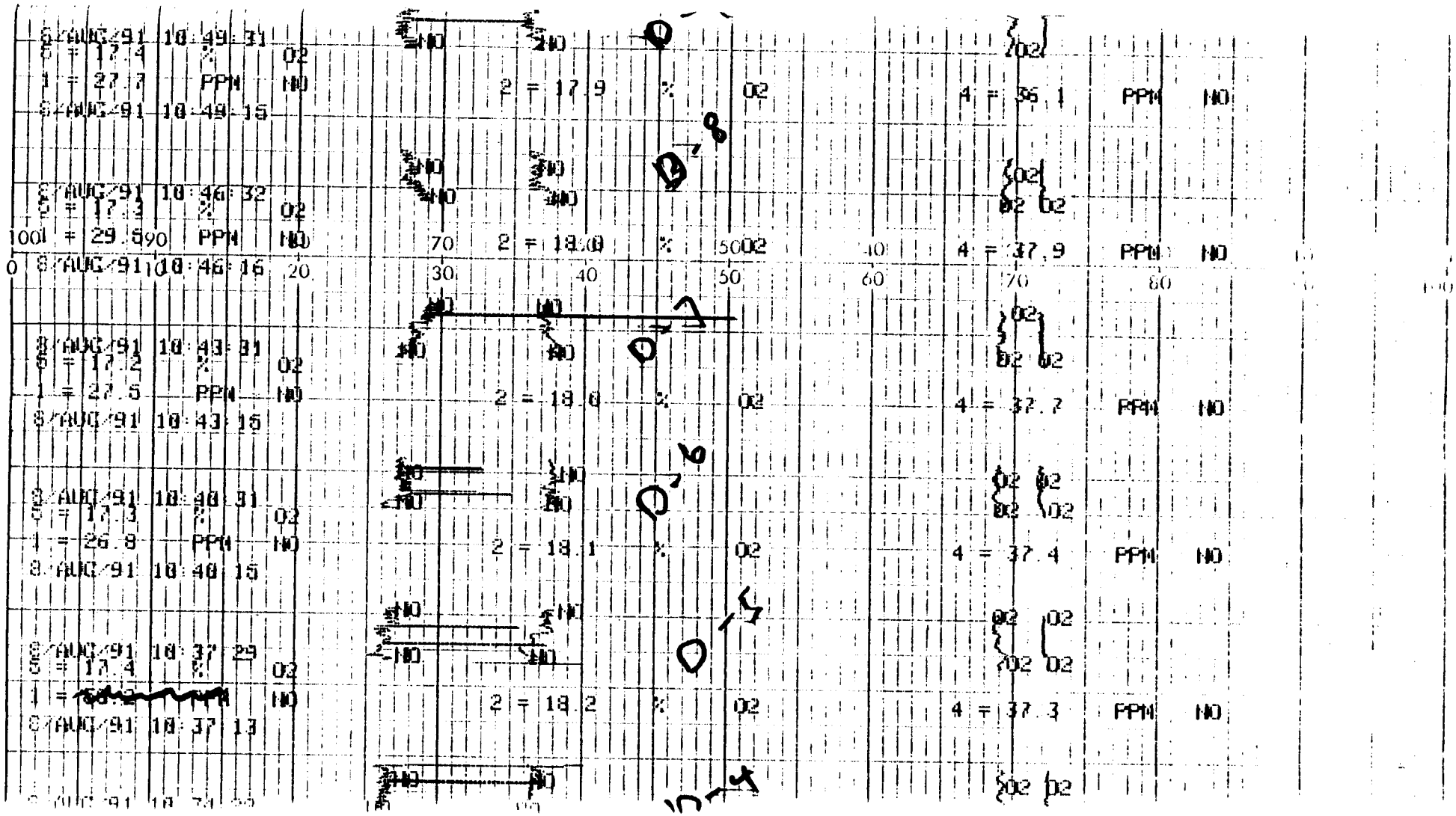
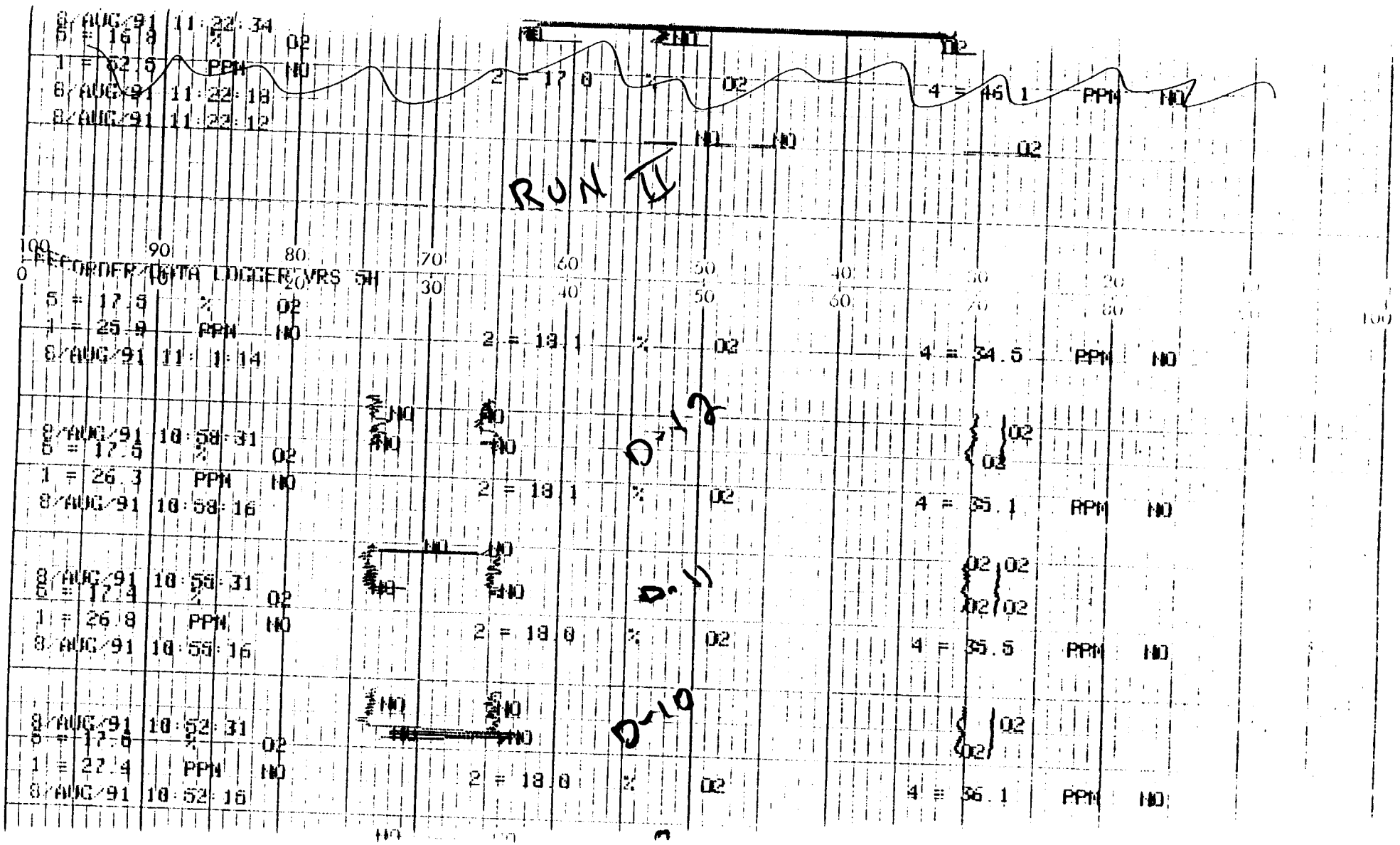


CHART NO 414446
8/AUG/91 10:31 29
5 = 17.6 % O2
1 = 26.5 PPM NO
8/AUG/91 10:31 14
2 = 18.3 % O2
4 = 35.5 PPM NO
8/AUG/91 10:28 29
5 = 17.5 % O2
1 = 27.4 PPM NO
8/AUG/91 10:28 13
2 = 18.2 % O2
4 = 35.3 PPM NO
8/AUG/91 10:25 32
8/AUG/91 10:25 16
2 = 18.2 % O2
4 = 32.0 PPM NO
8/AUG/91 10:22 31
5 = 17.2 % O2
1 = 27.0 PPM NO
8/AUG/91 10:22 15
2 = 17.9 % O2
4 = 37.0 PPM NO
8/AUG/91 10:19 29
5 = 17.1 % O2
1 = 22.4 PPM NO
8/AUG/91 10:19 14
2 = 17.8 % O2
4 = 39.1 PPM NO
O-3
O-2
O-1
O-Port


8/AUG/91 10:49:31
5 = 17.4 % O2
1 = 27.7 PPM NO
8/AUG/91 10:49:15
8/AUG/91 10:46:32
5 = 17.3 % O2
1 = 29.5 PPM NO
8/AUG/91 10:46:16
8/AUG/91 10:43:31
5 = 17.2 % O2
1 = 27.5 PPM NO
8/AUG/91 10:43:15
8/AUG/91 10:40:31
5 = 17.3 % O2
1 = 26.8 PPM NO
8/AUG/91 10:40:15
8/AUG/91 10:37:29
5 = 17.4 % O2
1 = 28.2 PPM NO
8/AUG/91 10:37:13
2 = 17.9 % O2
2 = 18.0 % O2
2 = 18.0 % O2
2 = 18.1 % O2
2 = 18.2 % O2
4 = 36.1 PPM NO
4 = 37.9 PPM NO
4 = 37.7 PPM NO
4 = 37.4 PPM NO
4 = 37.3 PPM NO
0.8
0.7
0.6
0.5
0.4


8/AUG/91 11:22:34
5 = 16.8 % O2
1 = 52.5 PPM NO
8/AUG/91 11:22:18
8/AUG/91 11:22:12
2 = 17.0 % O2
4 = 46.1 PPM NO
RUN II
RECORDER/DATA LOGGER VRS SH
5 = 17.5 % O2
1 = 25.9 PPM NO
8/AUG/91 11:1:14
2 = 18.1 % O2
4 = 34.5 PPM NO
8/AUG/91 10:58:31
5 = 17.5 % O2
1 = 26.3 PPM NO
8/AUG/91 10:58:16
2 = 18.1 % O2
4 = 35.1 PPM NO
8/AUG/91 10:58:31
5 = 17.4 % O2
1 = 26.8 PPM NO
8/AUG/91 10:58:16
2 = 18.0 % O2
4 = 35.5 PPM NO
8/AUG/91 10:52:31
5 = 17.6 % O2
1 = 27.4 PPM NO
8/AUG/91 10:52:16
2 = 18.0 % O2
4 = 36.1 PPM NO
D-12
D-11
D-10

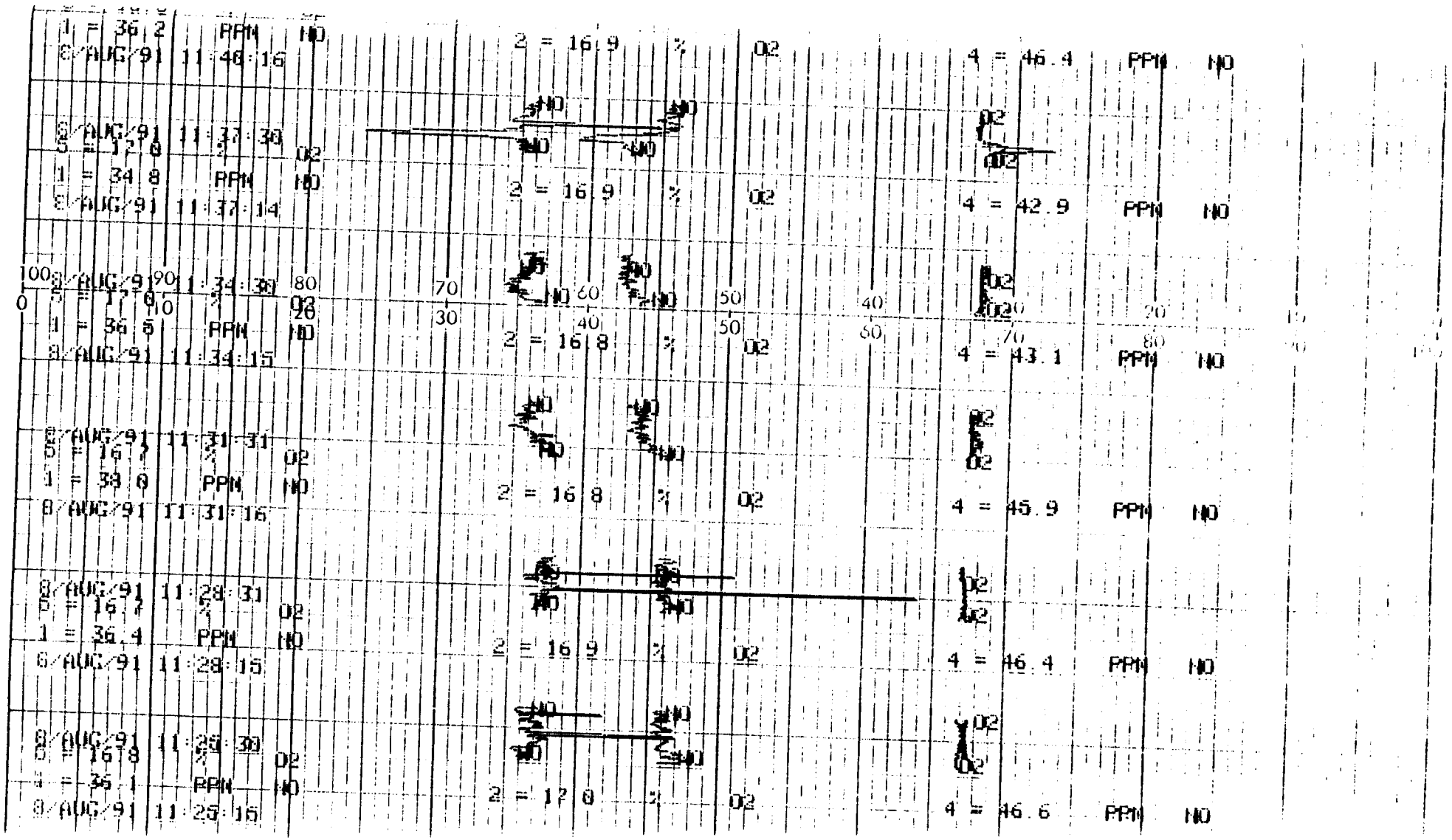
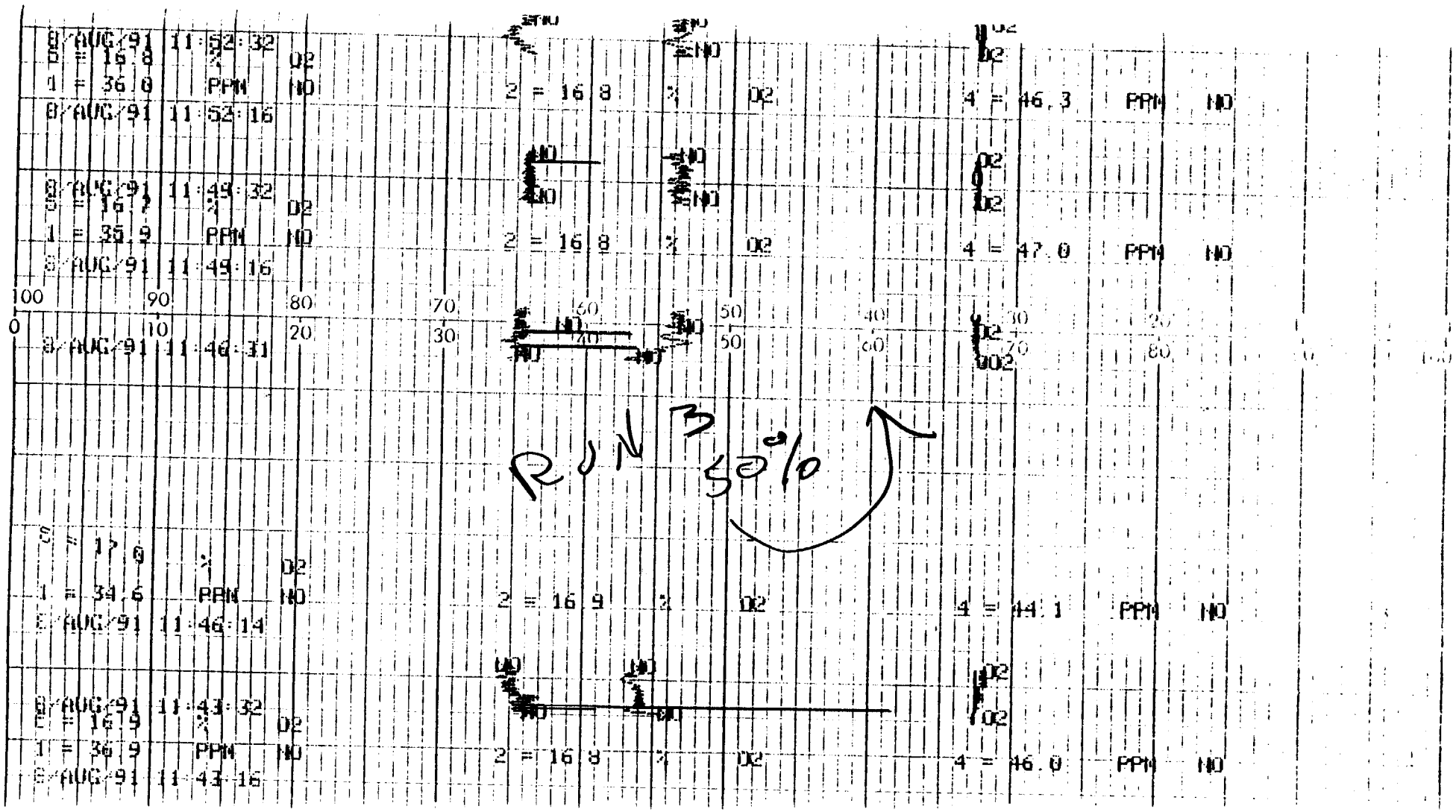
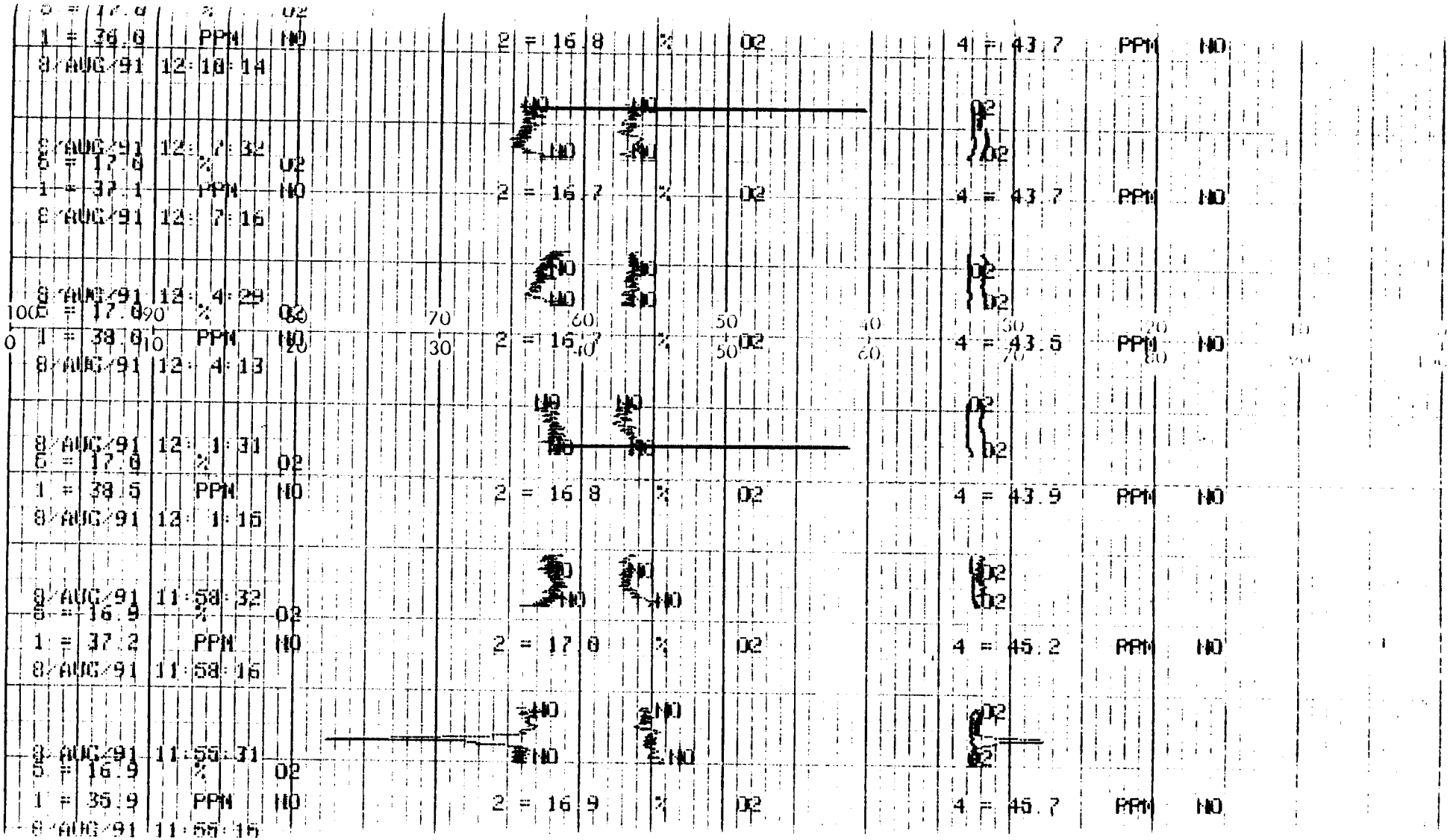


CHART NO 414446


8/AUG/91 11:52:32
D = 16.8 % 02
1 = 36.0 PPM NO
8/AUG/91 11:52:16
8/AUG/91 11:49:32
D = 16.7 % 02
1 = 35.9 PPM NO
8/AUG/91 11:49:16
8/AUG/91 11:46:31
D = 17.0 % 02
1 = 34.6 PPM NO
8/AUG/91 11:46:14
8/AUG/91 11:43:32
D = 16.9 % 02
1 = 36.9 PPM NO
8/AUG/91 11:43:16
2 = 16.8 % 02
4 = 46.3 PPM NO
2 = 16.8 % 02
4 = 47.0 PPM NO
2 = 16.9 % 02
4 = 44.1 PPM NO
2 = 16.8 % 02
4 = 46.0 PPM NO
RUN 3 50%


1 = 38.8 PPM NO
8/AUG/91 12:10:14
5 = 17.8 % O2
1 = 37.1 PPM NO
8/AUG/91 12: 7:16
5 = 17.8 % O2
1 = 38.8 PPM NO
8/AUG/91 12: 4:13
5 = 17.8 % O2
1 = 38.5 PPM NO
8/AUG/91 12: 1:15
5 = 16.9 % O2
1 = 37.2 PPM NO
8/AUG/91 11:58:16
5 = 16.9 % O2
1 = 35.9 PPM NO
8/AUG/91 11:55:15
2 = 16.8 % O2
2 = 16.7 % O2
2 = 16.7 % O2
2 = 16.8 % O2
2 = 17.0 % O2
2 = 16.9 % O2
4 = 43.7 PPM NO
4 = 43.7 PPM NO
4 = 43.5 PPM NO
4 = 43.9 PPM NO
4 = 45.2 PPM NO
4 = 45.7 PPM NO

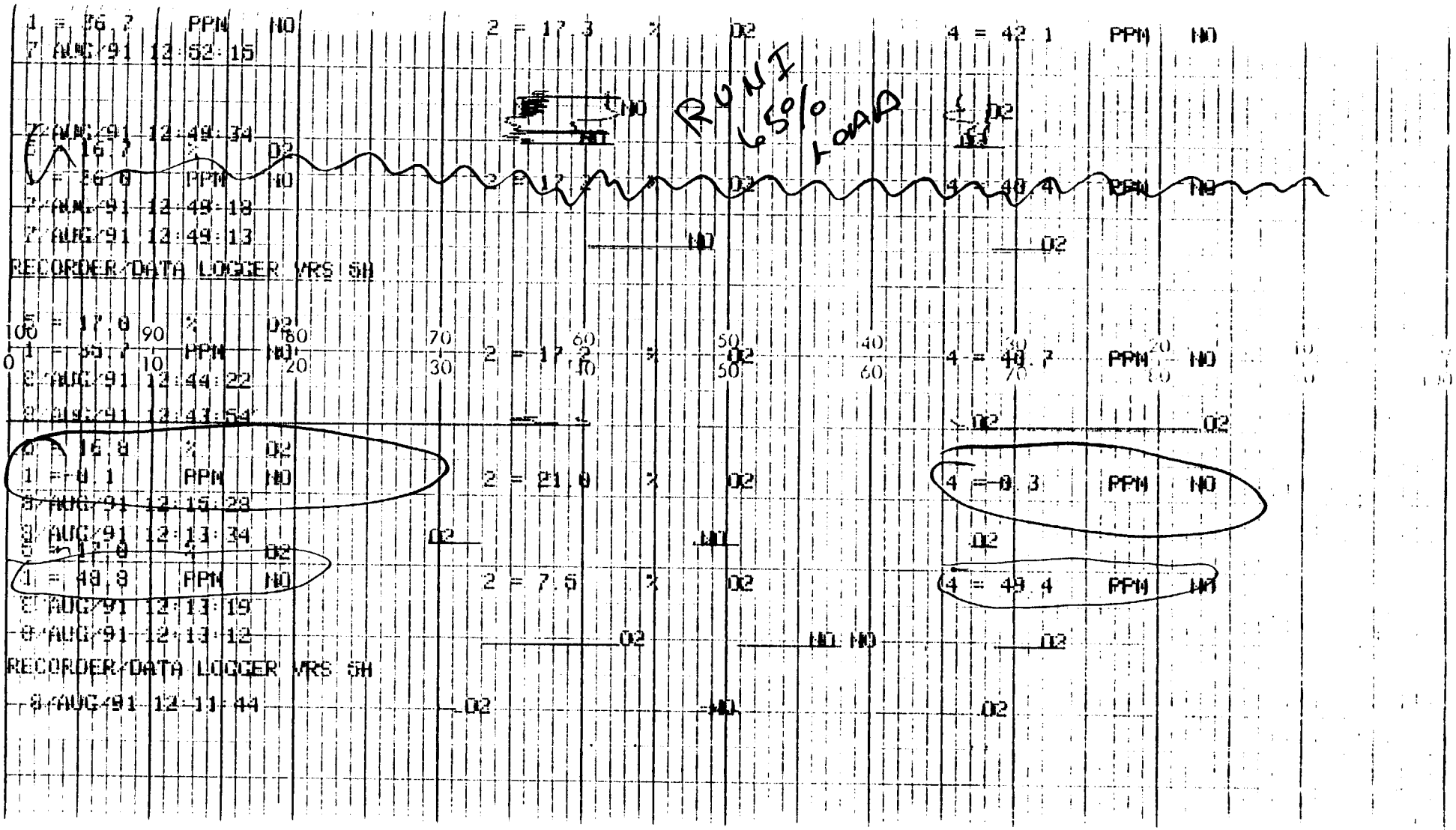
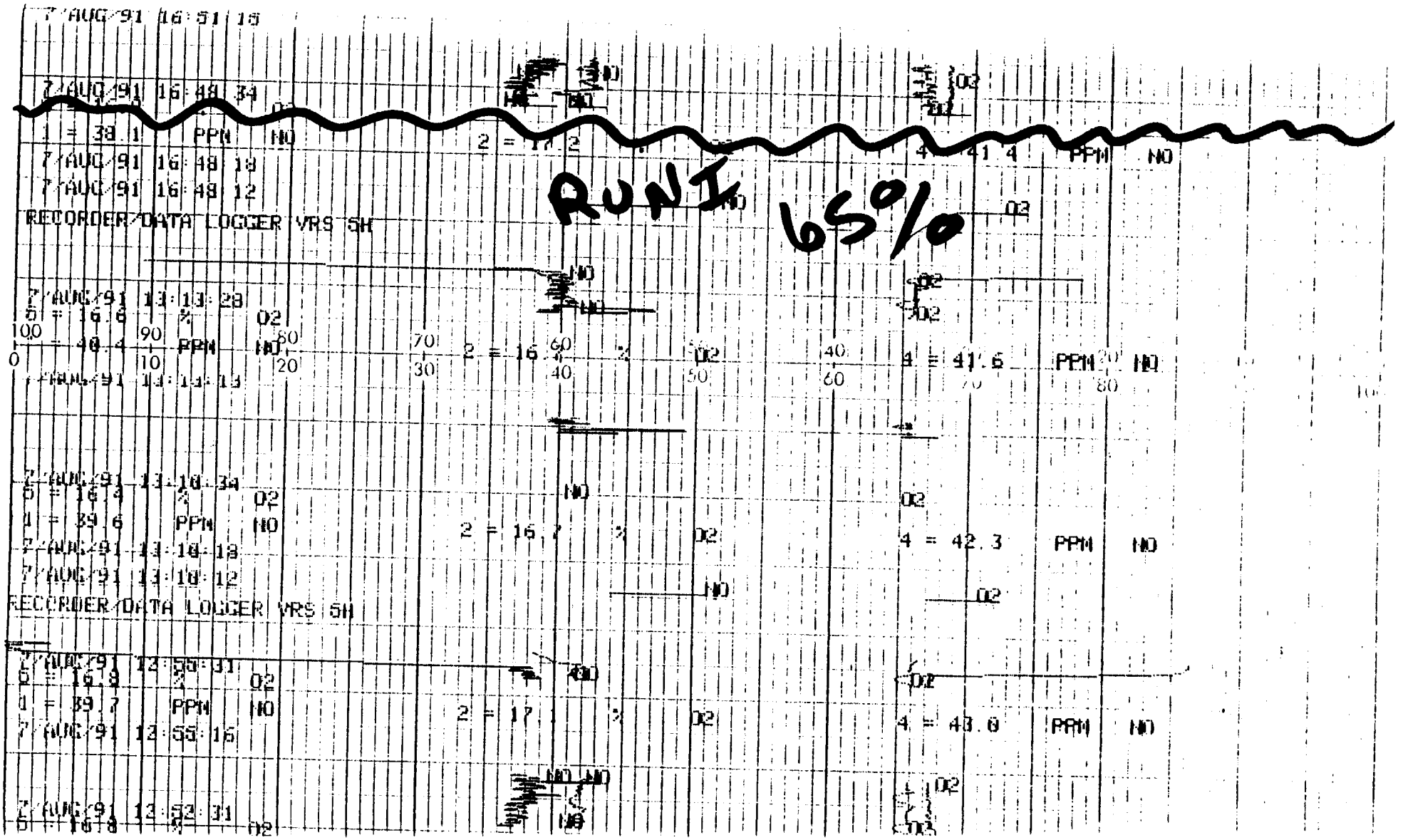
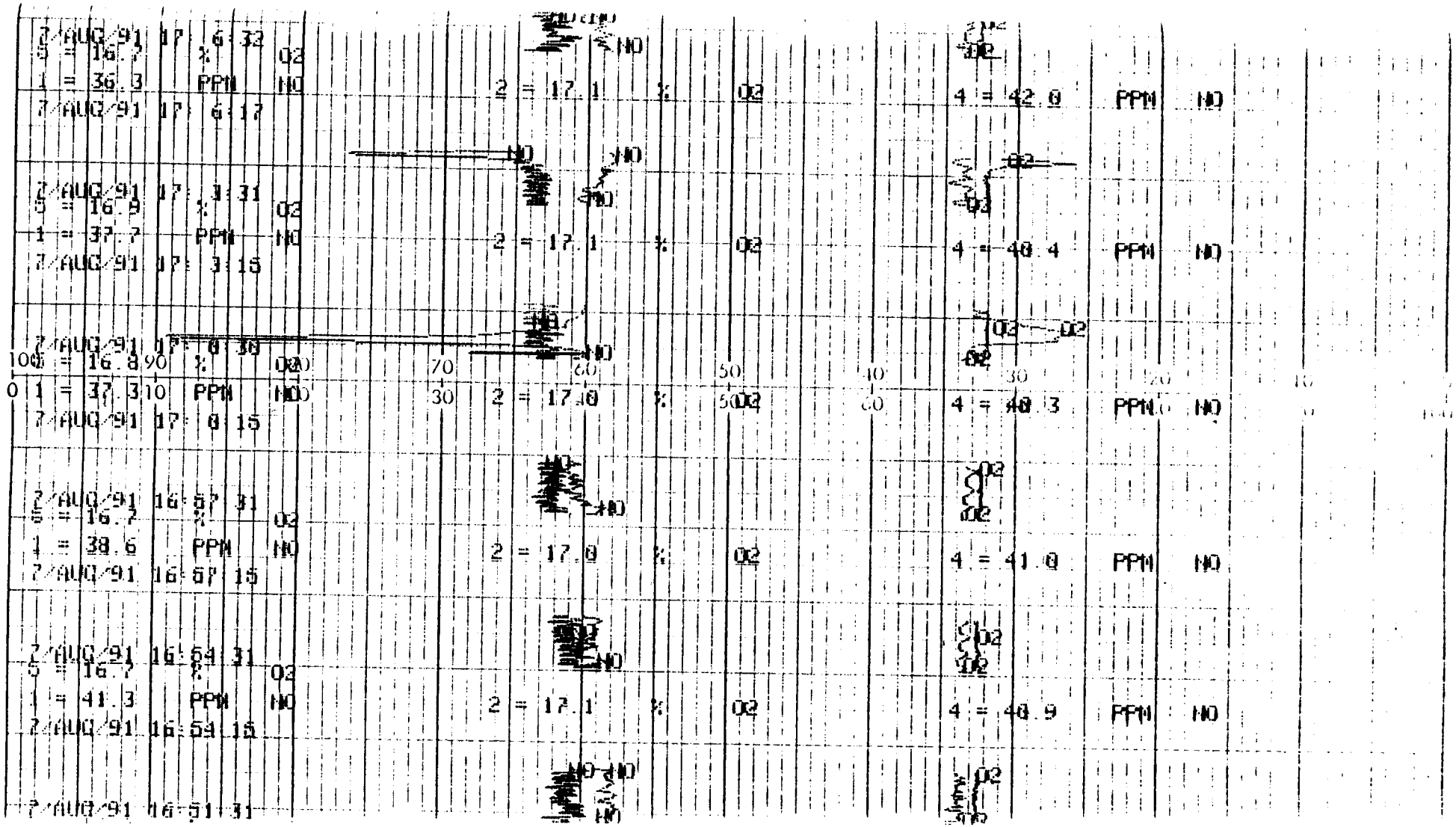


CHART NO. 414446


7/AUG/91 16:51:15
7/AUG/91 16:48:34
1 = 38.1 PPM NO
7/AUG/91 16:48:18
7/AUG/91 16:48:12
RECORDER/DATA LOGGER VRS 5H
RUN 1 65%
7/AUG/91 13:13:28
5 = 16.6 % O2
1 = 40.4 PPM NO
7/AUG/91 13:11:15
2 = 16.4 % O2
4 = 41.6 PPM NO
7/AUG/91 13:10:34
5 = 16.4 % O2
1 = 39.6 PPM NO
7/AUG/91 13:10:18
7/AUG/91 13:10:12
RECORDER/DATA LOGGER VRS 5H
2 = 16.7 % O2
4 = 42.3 PPM NO
7/AUG/91 12:55:31
5 = 16.8 % O2
1 = 39.7 PPM NO
7/AUG/91 12:55:16
2 = 17 % O2
4 = 43.0 PPM NO
7/AUG/91 12:52:31
5 = 16.8 % O2


7/AUG/91 17: 6:32
5 = 16.7 % O2
1 = 36.3 PPM NO
7/AUG/91 17: 6:17
2 = 17.1 % O2
4 = 42.0 PPM NO
7/AUG/91 17: 3:31
5 = 16.9 % O2
1 = 37.7 PPM NO
7/AUG/91 17: 3:15
2 = 17.1 % O2
4 = 40.4 PPM NO
7/AUG/91 17: 0:30
5 = 16.8 % O2
1 = 37.3 PPM NO
7/AUG/91 17: 0:15
2 = 17.0 % O2
4 = 40.3 PPM NO
7/AUG/91 16:57:31
5 = 16.7 % O2
1 = 38.6 PPM NO
7/AUG/91 16:57:15
2 = 17.0 % O2
4 = 41.0 PPM NO
7/AUG/91 16:54:31
5 = 16.7 % O2
1 = 41.3 PPM NO
7/AUG/91 16:54:15
2 = 17.1 % O2
4 = 40.9 PPM NO
7/AUG/91 16:51:31

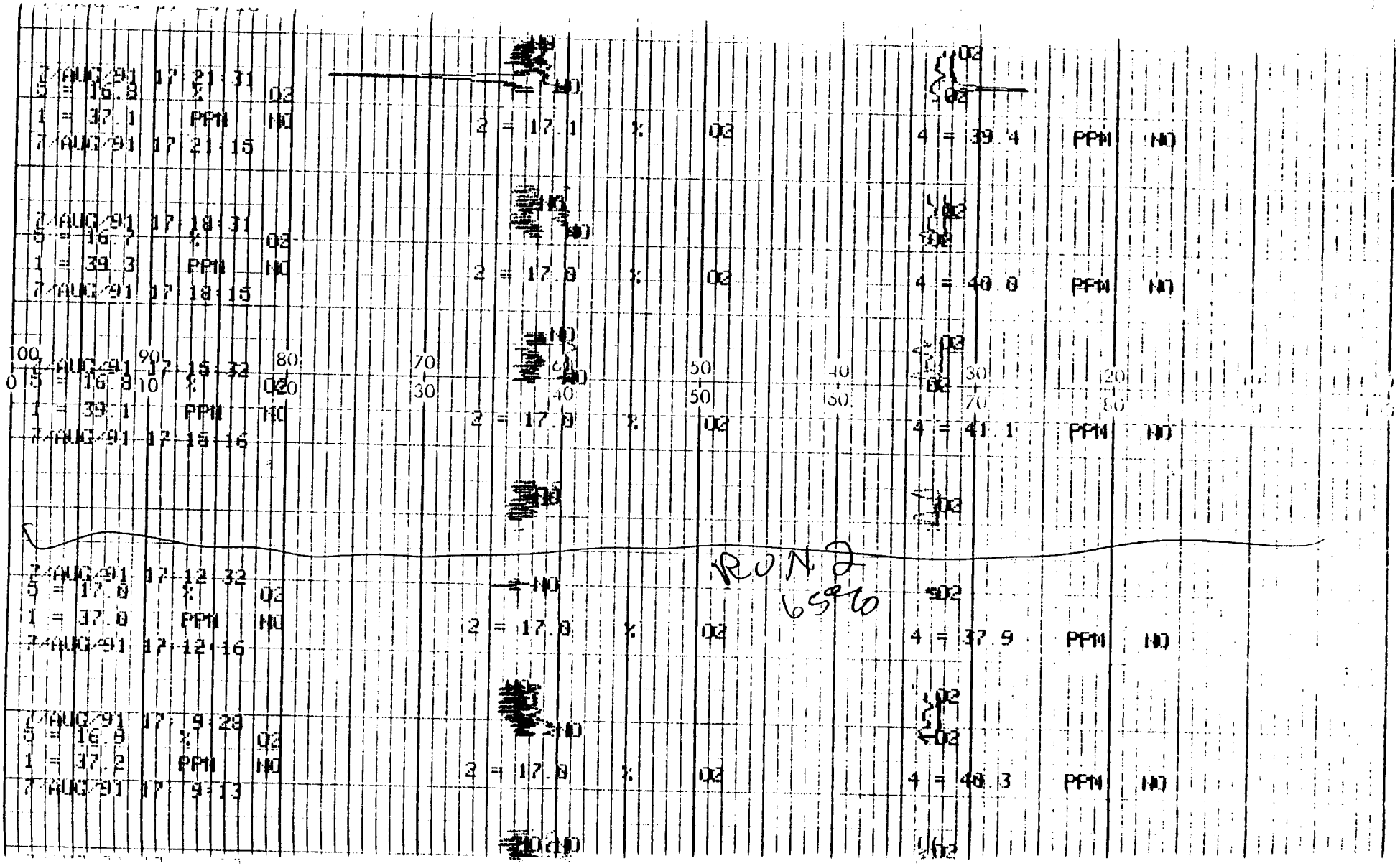
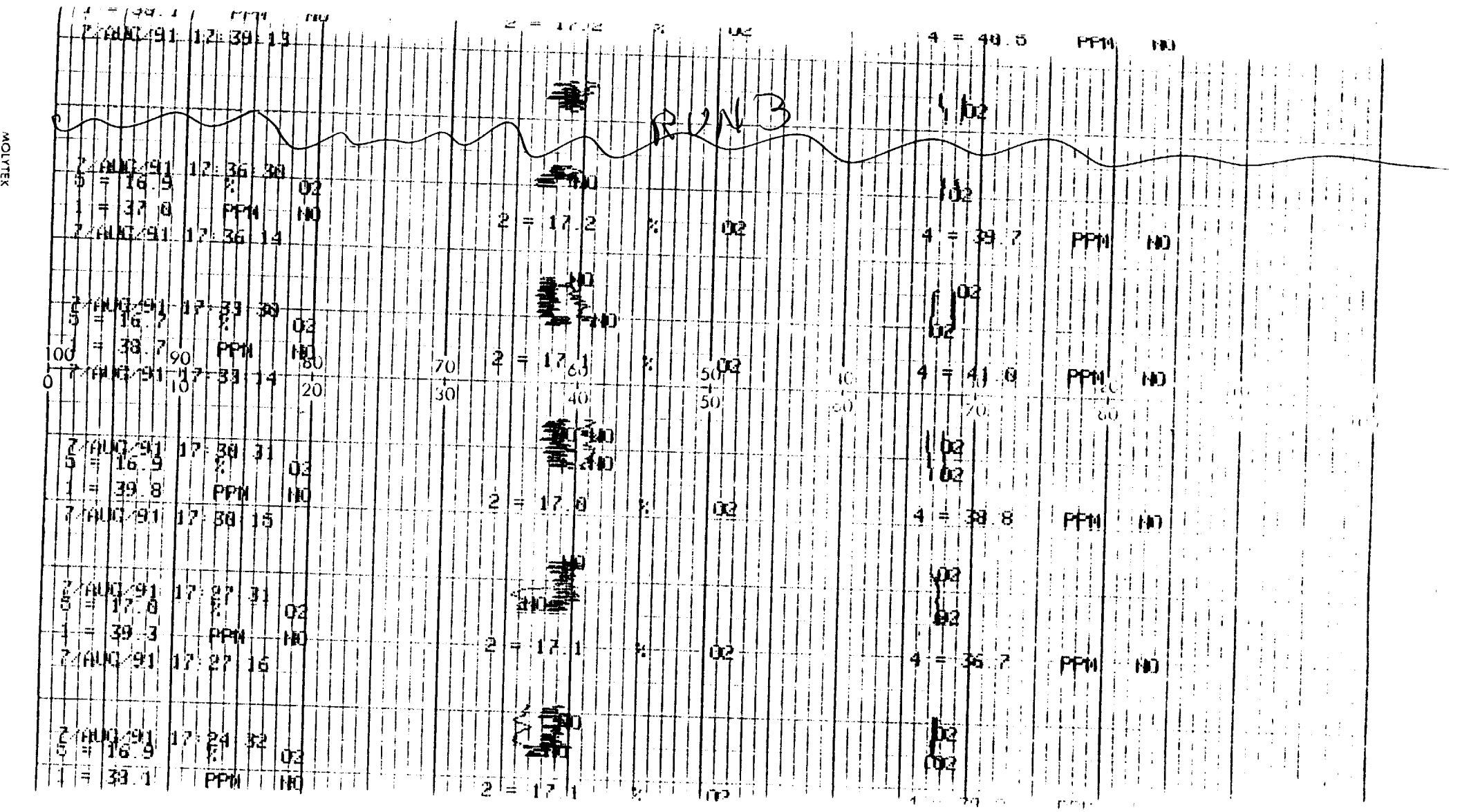
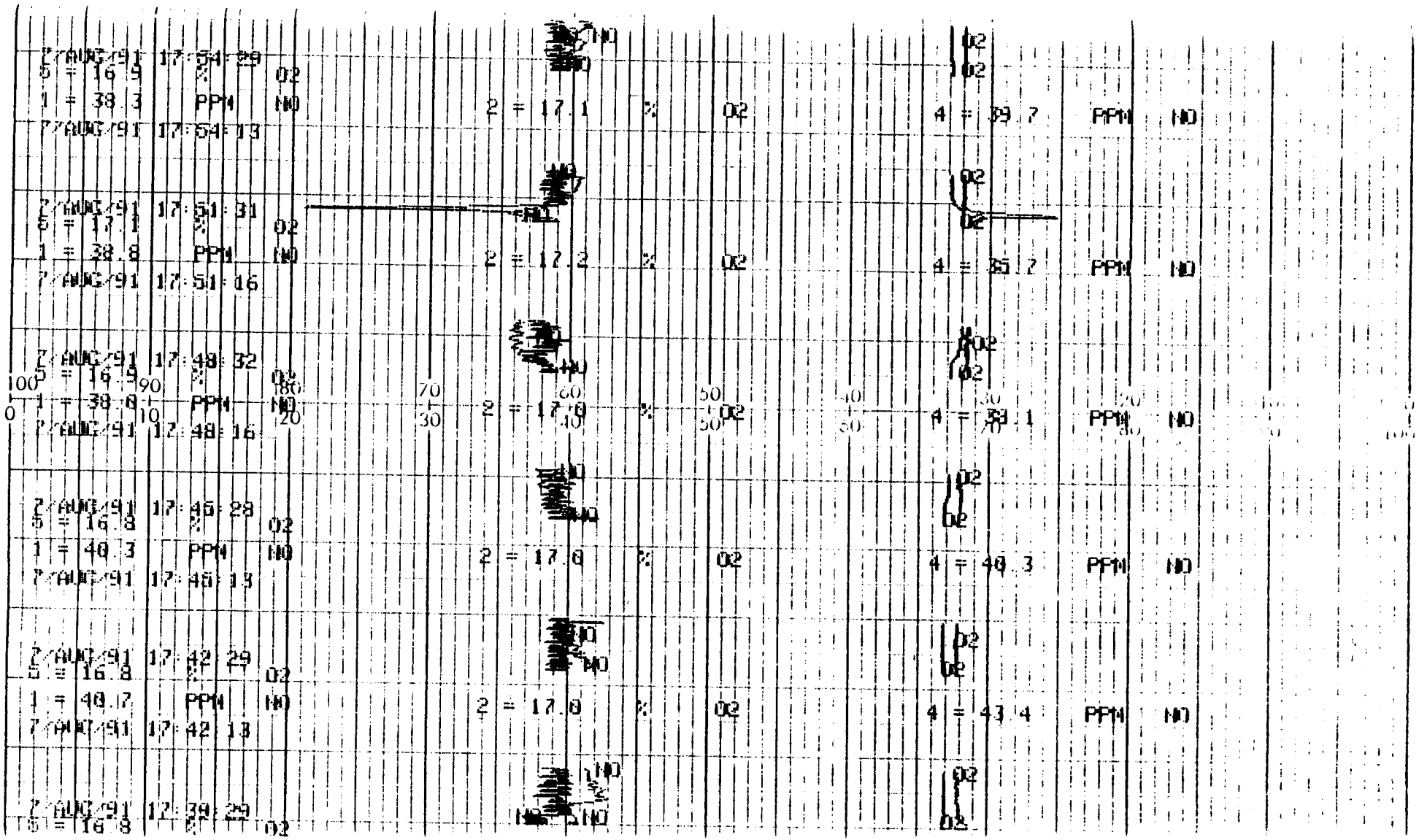


CHART NO. 414446


RUN 3
7 AUG 91 12:39:13
7 AUG 91 12:36:38
5 = 16.9 % 02
1 = 37.0 PPM HD
7 AUG 91 12:36:14
7 AUG 91 17:33:38
5 = 16.7 % 02
1 = 38.7 PPM HD
7 AUG 91 17:33:14
7 AUG 91 17:30:31
5 = 16.9 % 02
1 = 39.8 PPM HD
7 AUG 91 17:30:15
7 AUG 91 17:27:31
5 = 17.0 % 02
1 = 39.3 PPM HD
7 AUG 91 17:27:16
7 AUG 91 17:24:32
5 = 16.9 % 02
1 = 38.1 PPM HD
2 = 17.2 % 02
2 = 17.1 % 02
2 = 17.8 % 02
2 = 17.1 % 02
2 = 17.1 % 02
4 = 40.5 PPM HD
4 = 39.7 PPM HD
4 = 41.0 PPM HD
4 = 38.8 PPM HD
4 = 36.7 PPM HD
MOLYTEX


7/AUG/91 17:54:29
5 = 16.9 %
1 = 38.3 PPM
7/AUG/91 17:54:13
7/AUG/91 17:51:31
5 = 17.1 %
1 = 38.8 PPM
7/AUG/91 17:51:16
7/AUG/91 17:48:32
5 = 16.9 %
1 = 38.0 PPM
7/AUG/91 17:48:16
7/AUG/91 17:45:28
5 = 16.8 %
1 = 40.3 PPM
7/AUG/91 17:45:13
7/AUG/91 17:42:29
5 = 16.8 %
1 = 40.7 PPM
7/AUG/91 17:42:13
7/AUG/91 12:39:29
5 = 16.8 %
2 = 17.1 %
2 = 17.2 %
2 = 17.0 %
2 = 17.0 %
4 = 39.7 PPM
4 = 35.2 PPM
4 = 33.1 PPM
4 = 40.3 PPM
4 = 43.4 PPM
100 90 80 70 60 50 40 30 20 10 0

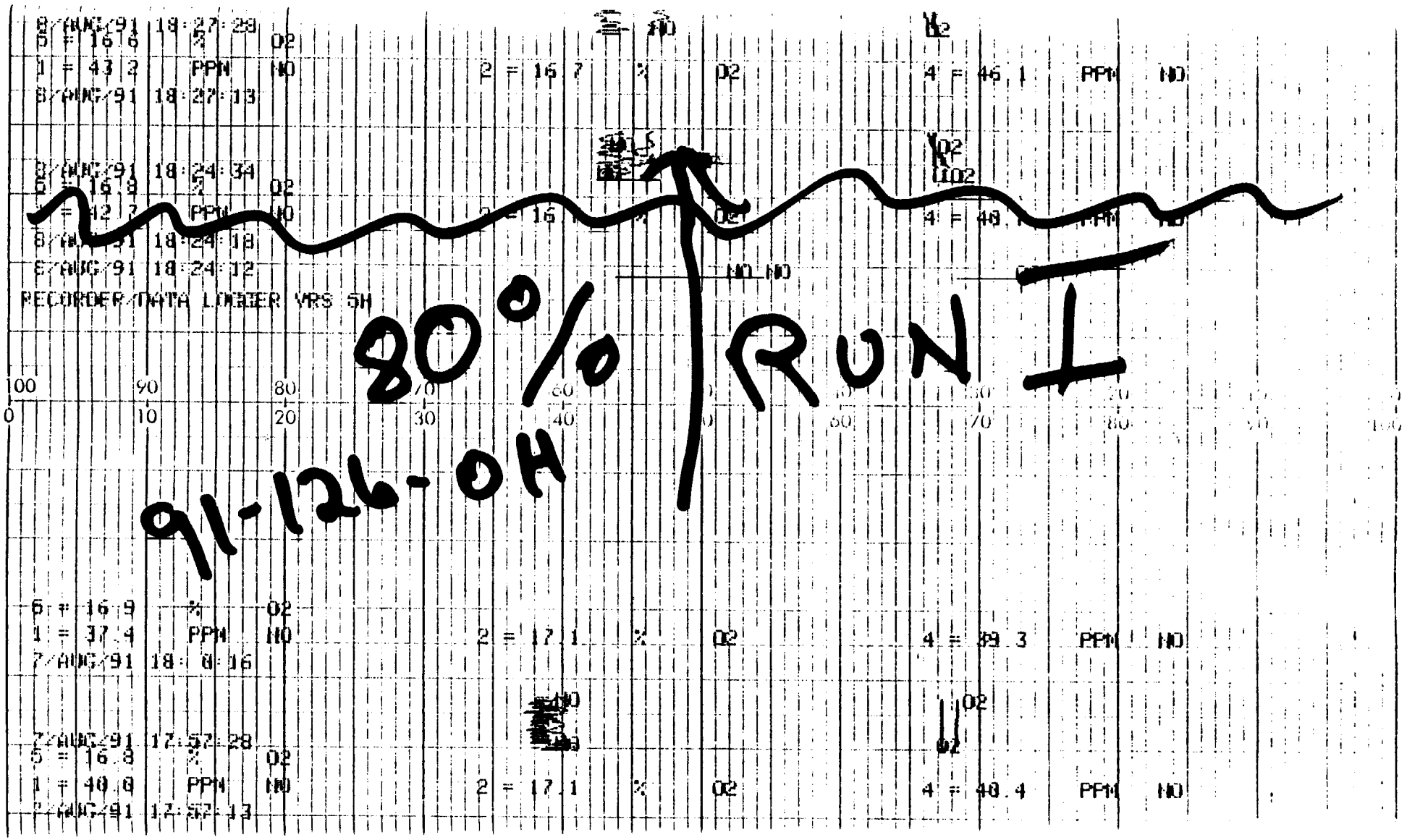
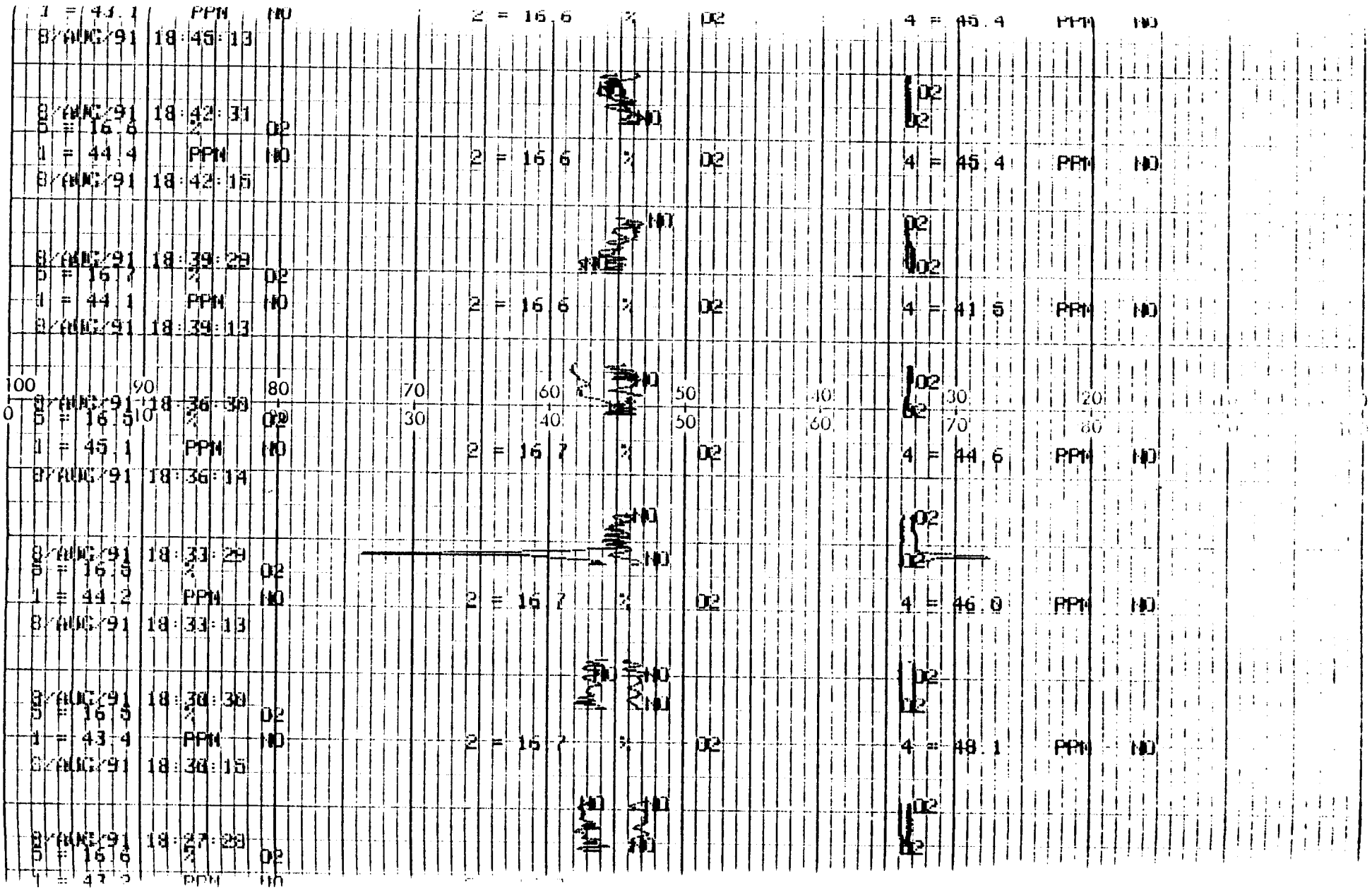
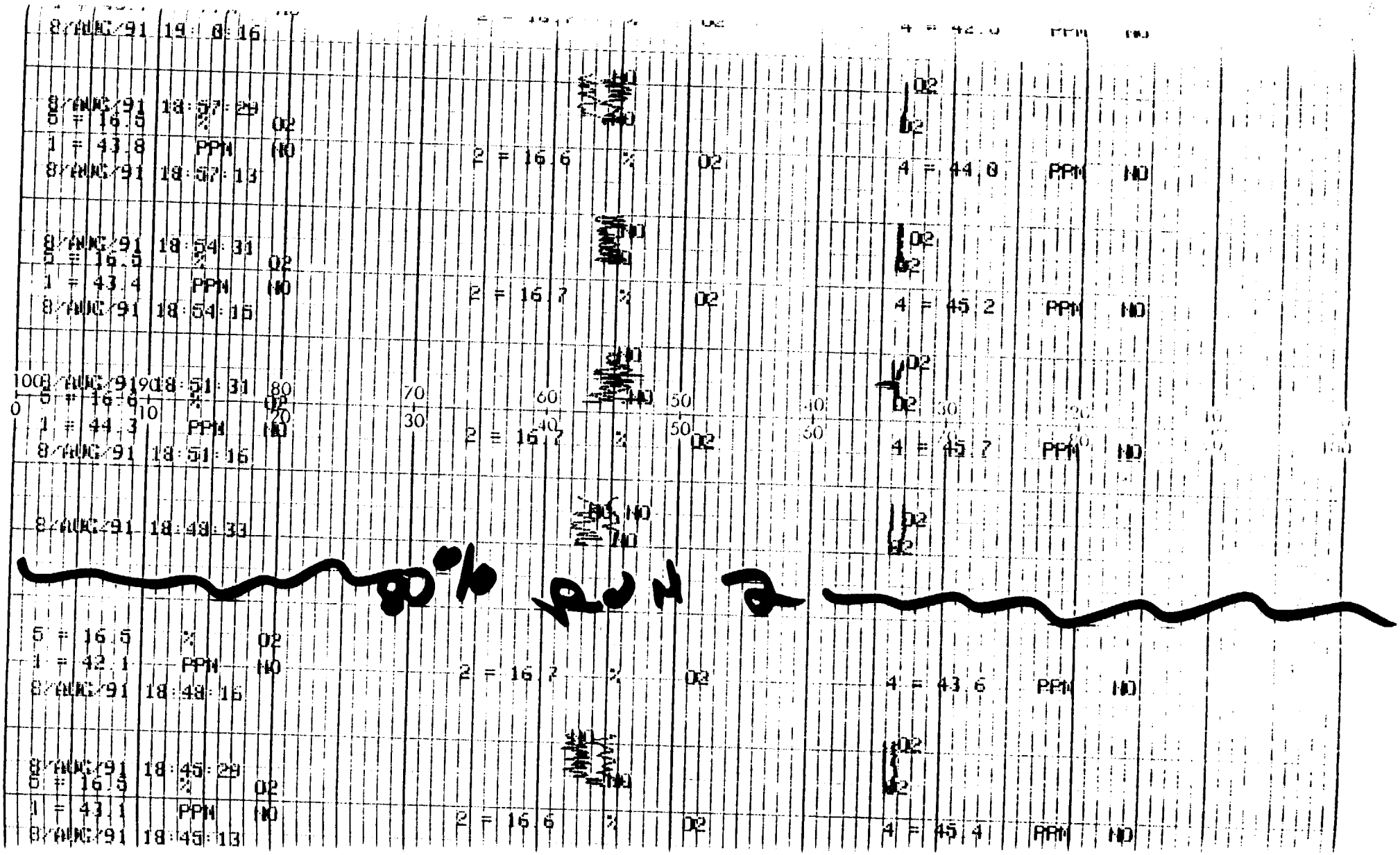
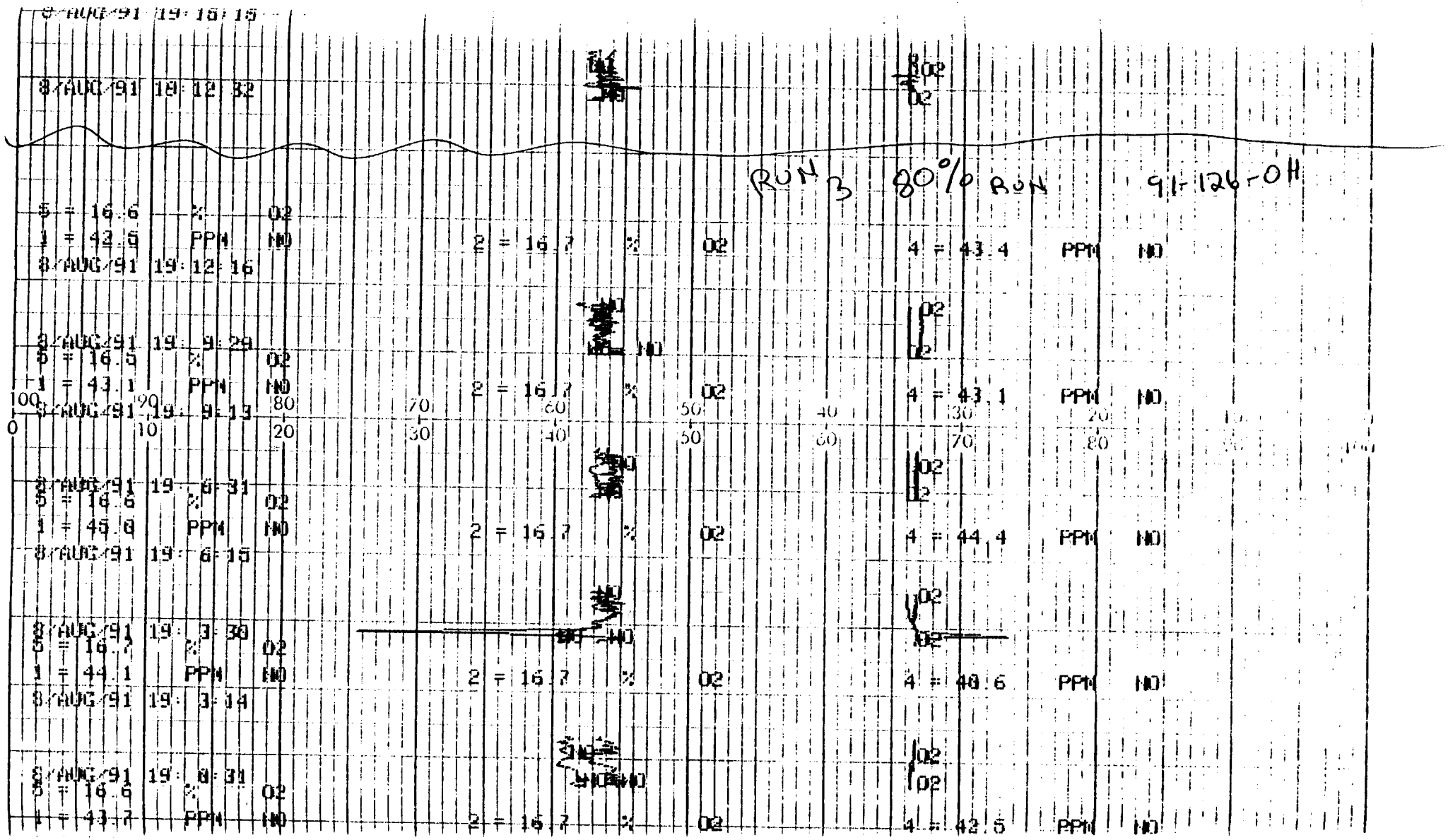
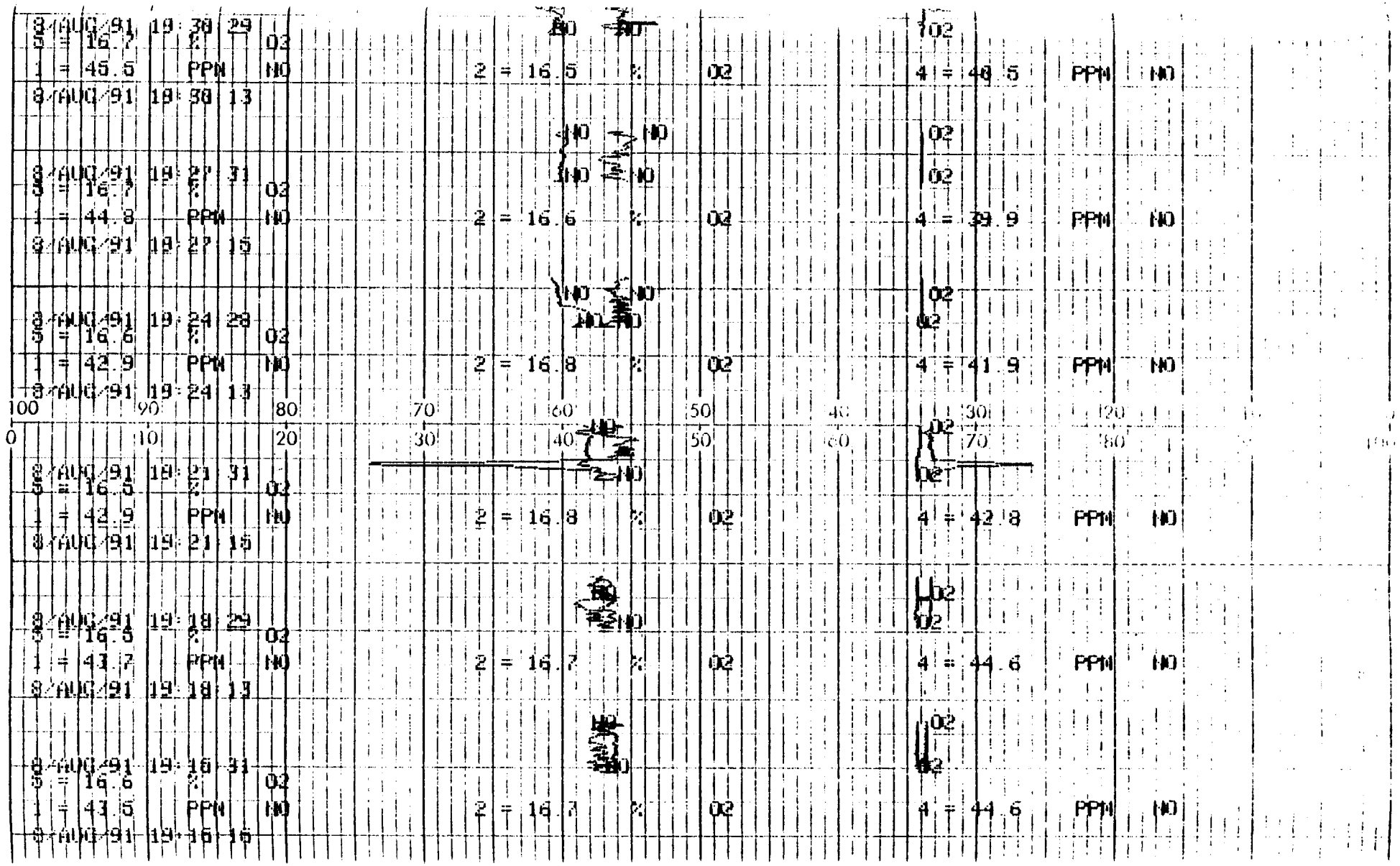


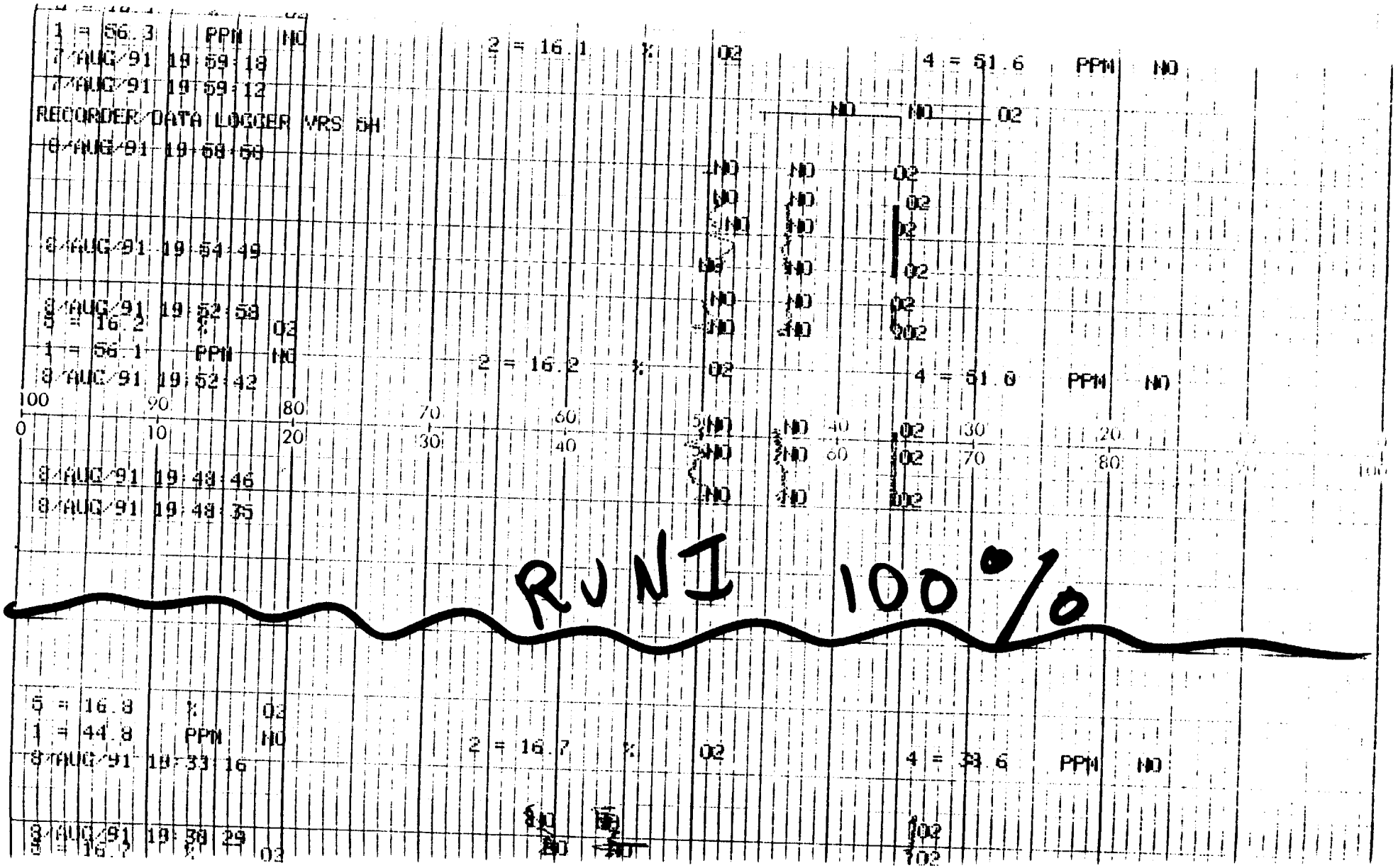
CHART NO 414446

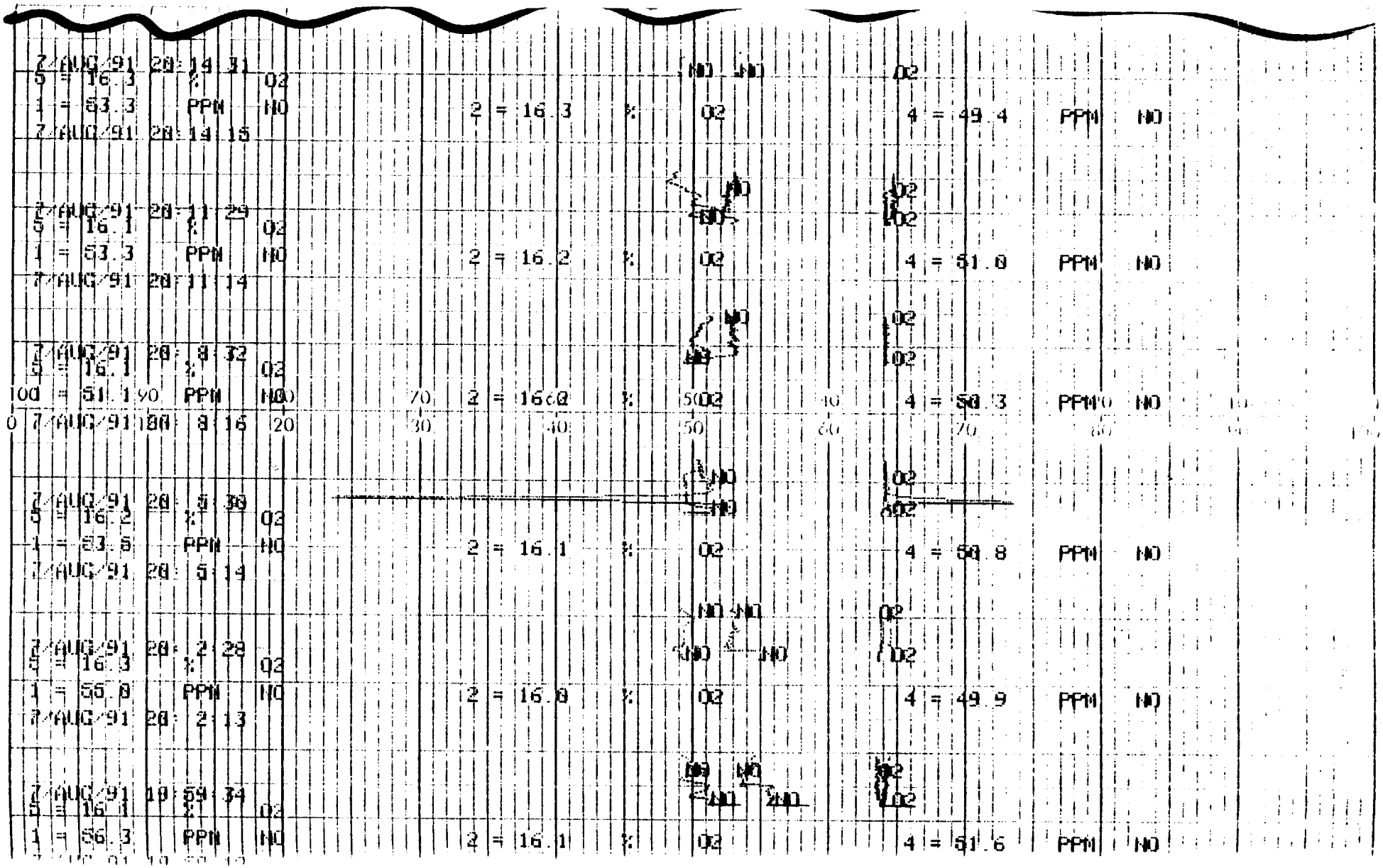

1 = 44.1 PPM
8/AUG/91 18:45:13
8/AUG/91 18:42:31
5 = 16.6
1 = 44.4 PPM
8/AUG/91 18:42:15
8/AUG/91 18:39:29
5 = 16.7
1 = 44.1 PPM
8/AUG/91 18:39:13
8/AUG/91 18:36:30
5 = 16.5
1 = 45.1 PPM
8/AUG/91 18:36:14
8/AUG/91 18:33:29
5 = 16.8
1 = 44.2 PPM
8/AUG/91 18:33:13
8/AUG/91 18:30:30
5 = 16.5
1 = 43.4 PPM
8/AUG/91 18:30:15
8/AUG/91 18:27:29
5 = 16.6
2 = 16.6 %
2 = 16.6 %
2 = 16.7 %
2 = 16.7 %
2 = 16.7 %
4 = 45.4 PPM
4 = 45.4 PPM
4 = 41.5 PPM
4 = 44.6 PPM
4 = 46.0 PPM
4 = 48.1 PPM
D2
H0
100 90 80 70 60 50 40 30 20
0 10 30 40 50 60 70 80

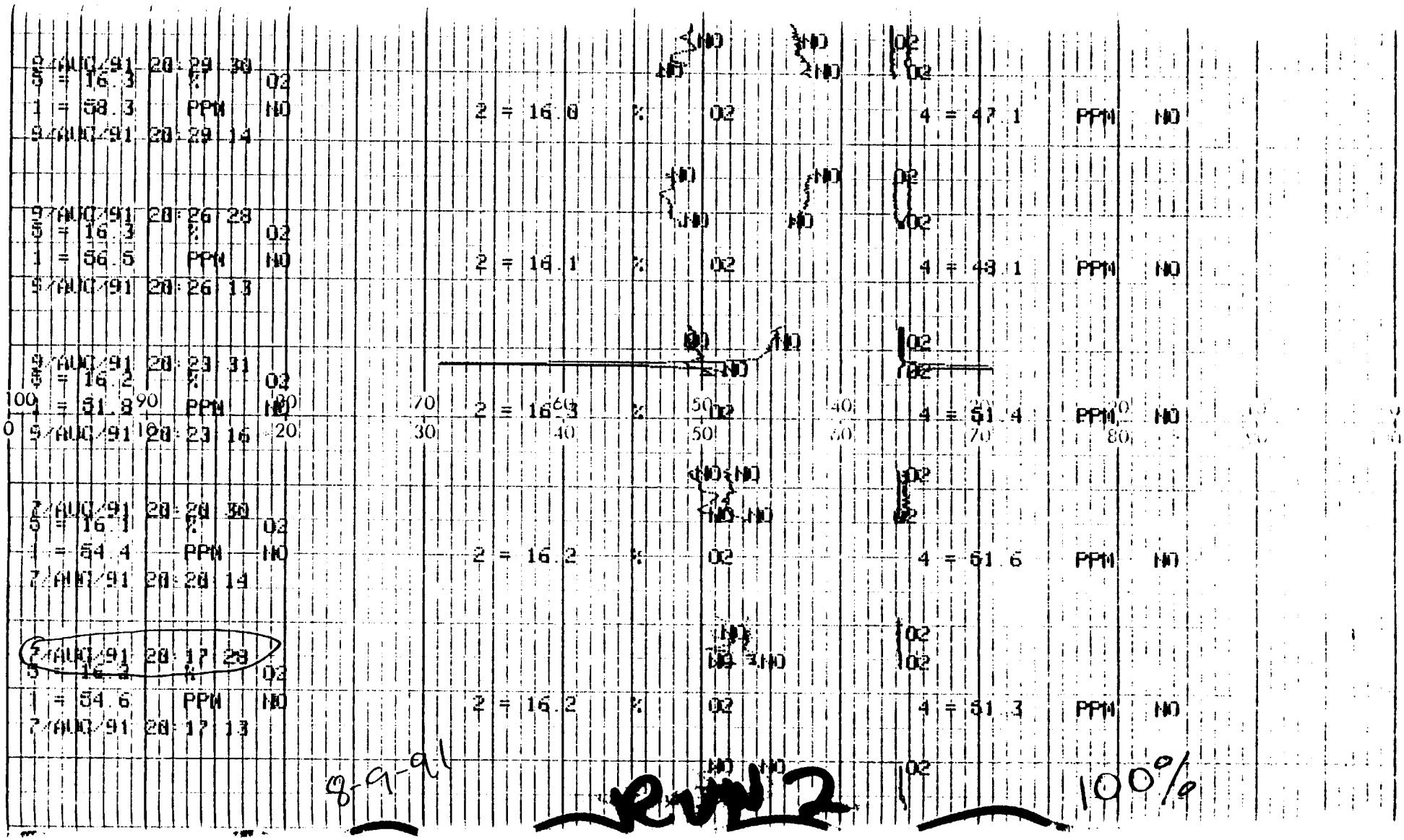

8/AUG/91 19: 0:16
8/AUG/91 18:57:29
5 = 16.5 % 02
1 = 43.8 PPM NO
8/AUG/91 18:57:13
2 = 16.6 % 02
4 = 44.0 PPM NO
8/AUG/91 18:54:31
5 = 16.5 % 02
1 = 43.4 PPM NO
8/AUG/91 18:54:15
2 = 16.7 % 02
4 = 45.2 PPM NO
8/AUG/91 18:51:31
5 = 16.6 % 02
1 = 44.3 PPM NO
8/AUG/91 18:51:16
2 = 16.7 % 02
4 = 45.7 PPM NO
8/AUG/91 18:48:33
5 = 16.5 % 02
1 = 42.1 PPM NO
8/AUG/91 18:48:16
2 = 16.7 % 02
4 = 43.6 PPM NO
8/AUG/91 18:45:29
5 = 16.5 % 02
1 = 43.1 PPM NO
8/AUG/91 18:45:13
2 = 16.6 % 02
4 = 45.4 PPM NO

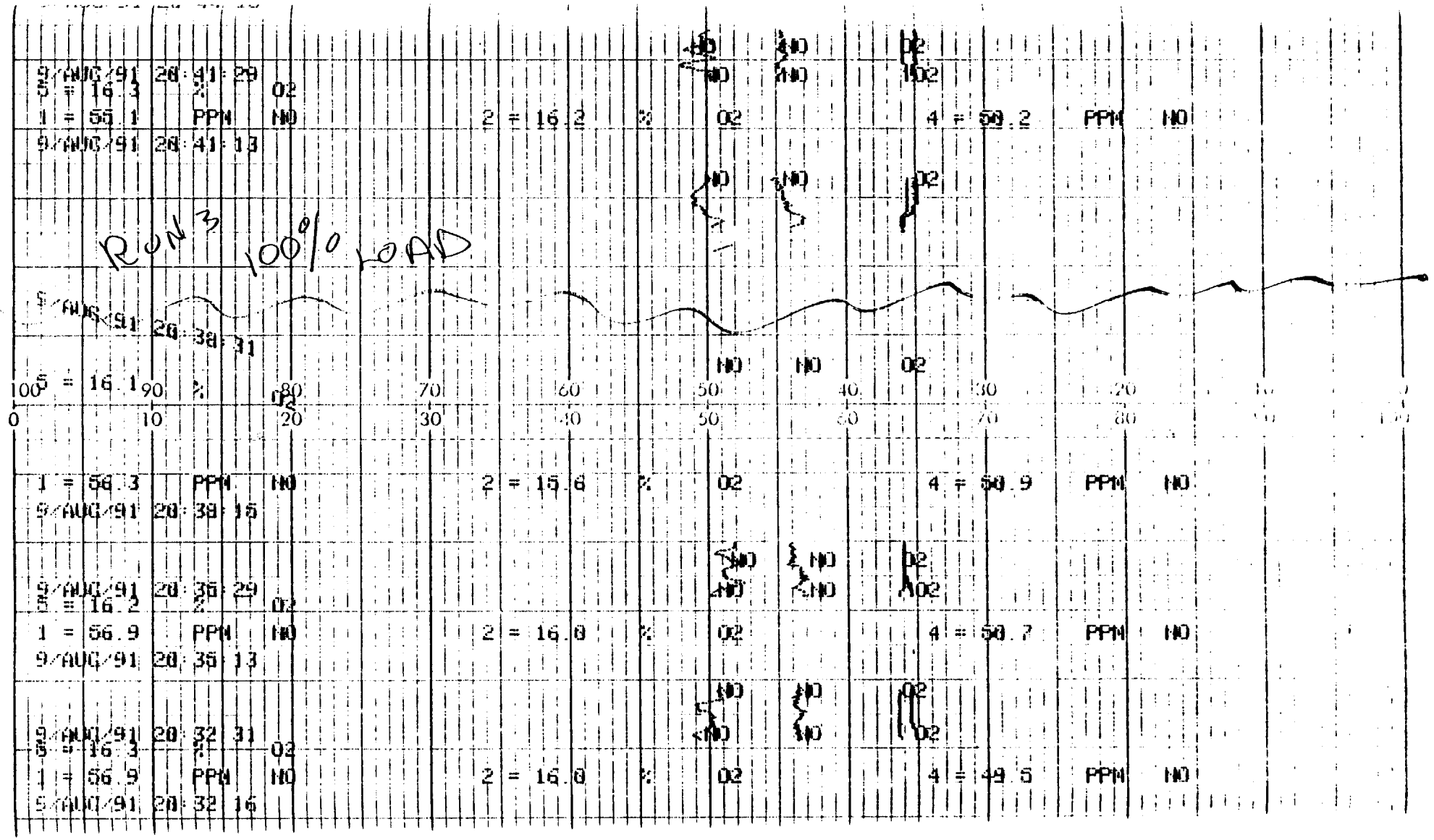

8/AUG/91 19:15:15
8/AUG/91 19:12:32
5 = 16.6 % O2
1 = 42.5 PPM NO
8/AUG/91 19:12:16
2 = 16.7 % O2
4 = 43.4 PPM NO
8/AUG/91 19: 9:29
5 = 16.5 % O2
1 = 43.1 PPM NO
8/AUG/91 19: 9:13
2 = 16.7 % O2
4 = 43.1 PPM NO
8/AUG/91 19: 6:31
5 = 16.6 % O2
1 = 45.0 PPM NO
8/AUG/91 19: 6:15
2 = 16.7 % O2
4 = 44.4 PPM NO
8/AUG/91 19: 3:30
5 = 16.7 % O2
1 = 44.1 PPM NO
8/AUG/91 19: 3:14
2 = 16.7 % O2
4 = 48.6 PPM NO
8/AUG/91 19: 0:31
5 = 16.6 % O2
1 = 43.7 PPM NO
2 = 16.7 % O2
4 = 42.5 PPM NO
RUN 3 80% RUN
91-126-OH


8/AUG/91 19:30:29
3 = 16.7 %
1 = 45.5 PPM
8/AUG/91 19:30:13
8/AUG/91 19:27:31
3 = 16.7 %
1 = 44.8 PPM
8/AUG/91 19:27:15
8/AUG/91 19:24:29
3 = 16.6 %
1 = 42.9 PPM
8/AUG/91 19:24:13
8/AUG/91 19:21:31
3 = 16.5 %
1 = 42.9 PPM
8/AUG/91 19:21:15
8/AUG/91 19:18:29
3 = 16.5 %
1 = 43.7 PPM
8/AUG/91 19:18:13
8/AUG/91 19:16:31
3 = 16.6 %
1 = 43.5 PPM
8/AUG/91 19:16:15
2 = 16.5 % 02
2 = 16.6 % 02
2 = 16.8 % 02
2 = 16.8 % 02
2 = 16.7 % 02
2 = 16.7 % 02
4 = 48.5 PPM NO
4 = 39.9 PPM NO
4 = 41.9 PPM NO
4 = 42.8 PPM NO
4 = 44.6 PPM NO
4 = 44.6 PPM NO
100 90 80 70 60 50 40 30 20 10 0
0 10 20 30 40 50 60 70 80 90 100


1 = 56.3 PPM NO
7/AUG/91 19:59:18
7/AUG/91 19:59:12
RECORDER/DATA LOGGER VRS 5H
8/AUG/91 19:58:50
8/AUG/91 19:54:49
8/AUG/91 19:52:58
5 = 16.2 %
1 = 56.1 PPM NO
8/AUG/91 19:52:42
8/AUG/91 19:48:46
8/AUG/91 19:48:35
RUNI 100%
5 = 16.8 %
1 = 44.8 PPM NO
8/AUG/91 19:33:16
8/AUG/91 19:30:29
2 = 16.1 % O2
2 = 16.2 % O2
2 = 16.7 % O2
4 = 51.6 PPM NO
4 = 51.0 PPM NO
4 = 33.6 PPM NO


7/AUG/91 20:14:31
5 = 16.3 % O2
1 = 53.3 PPM NO
7/AUG/91 20:14:15
7/AUG/91 20:11:29
5 = 16.1 % O2
1 = 53.3 PPM NO
7/AUG/91 20:11:14
7/AUG/91 20: 8:32
5 = 16.1 % O2
100 = 51.1 90 PPM NO
0 7/AUG/91 20: 8:16 20
7/AUG/91 20: 5:30
5 = 16.2 % O2
1 = 53.5 PPM NO
7/AUG/91 20: 5:14
7/AUG/91 20: 2:28
5 = 16.3 % O2
1 = 55.0 PPM NO
7/AUG/91 20: 2:13
7/AUG/91 19:59:34
5 = 16.1 % O2
1 = 56.3 PPM NO
2 = 16.3 % O2
2 = 16.2 % O2
2 = 16.0 % O2
2 = 16.1 % O2
2 = 16.1 % O2
4 = 49.4 PPM NO
4 = 51.0 PPM NO
4 = 50.3 PPM NO
4 = 50.8 PPM NO
4 = 49.9 PPM NO
4 = 51.6 PPM NO


9/AUG/91 20:29:30
3 = 16.3 % O2
1 = 58.3 PPM NO
9/AUG/91 20:29:14
2 = 16.0 % O2
4 = 47.1 PPM NO
9/AUG/91 20:26:28
3 = 16.3 % O2
1 = 56.5 PPM NO
9/AUG/91 20:26:13
2 = 16.1 % O2
4 = 48.1 PPM NO
9/AUG/91 20:23:31
3 = 16.2 % O2
1 = 51.8 PPM NO
9/AUG/91 20:23:16
2 = 16.3 % O2
4 = 51.4 PPM NO
7/AUG/91 20:20:30
3 = 16.1 % O2
1 = 54.4 PPM NO
7/AUG/91 20:20:14
2 = 16.2 % O2
4 = 61.6 PPM NO
7/AUG/91 20:17:28
3 = 16.2 % O2
1 = 54.6 PPM NO
7/AUG/91 20:17:13
2 = 16.2 % O2
4 = 61.3 PPM NO
8-9-91
REV 2
100%


9/AUG/91 20:41:29
5 = 16.3 % O2
1 = 56.1 PPM NO
2 = 16.2 % O2
4 = 50.2 PPM NO
9/AUG/91 20:41:13
RUN 3 100% LOAD
9/AUG/91 20:38:31
5 = 16.1 % O2
1 = 56.3 PPM NO
2 = 15.8 % O2
4 = 50.9 PPM NO
9/AUG/91 20:38:16
9/AUG/91 20:35:29
5 = 16.2 % O2
1 = 56.9 PPM NO
2 = 16.0 % O2
4 = 50.7 PPM NO
9/AUG/91 20:35:13
9/AUG/91 20:32:31
5 = 16.3 % O2
1 = 56.9 PPM NO
2 = 16.0 % O2
4 = 49.5 PPM NO
9/AUG/91 20:32:16
100 90 80 70 60 50 40 30 20 10 0
0 10 20 30 40 50 60 70 80 90 100

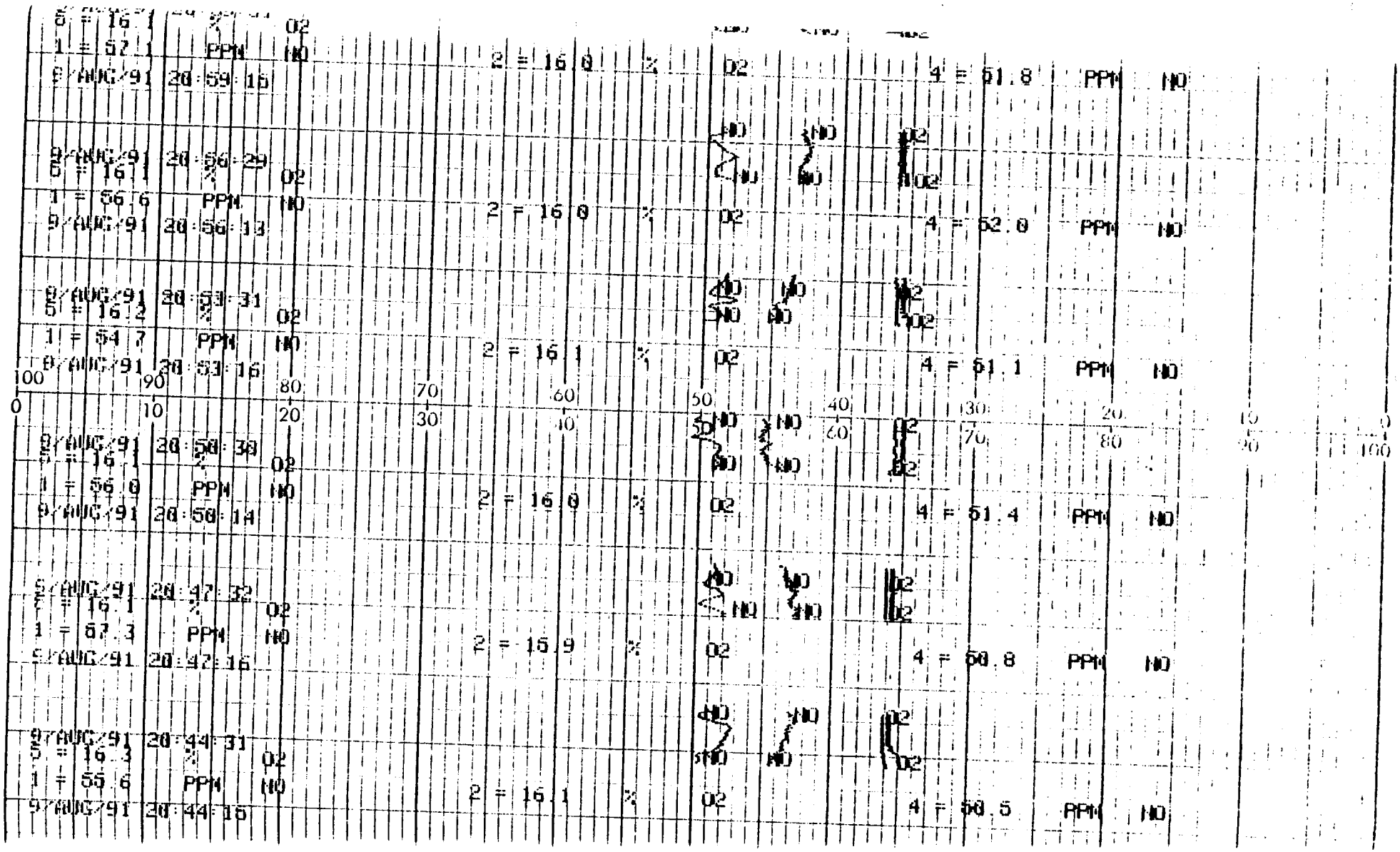
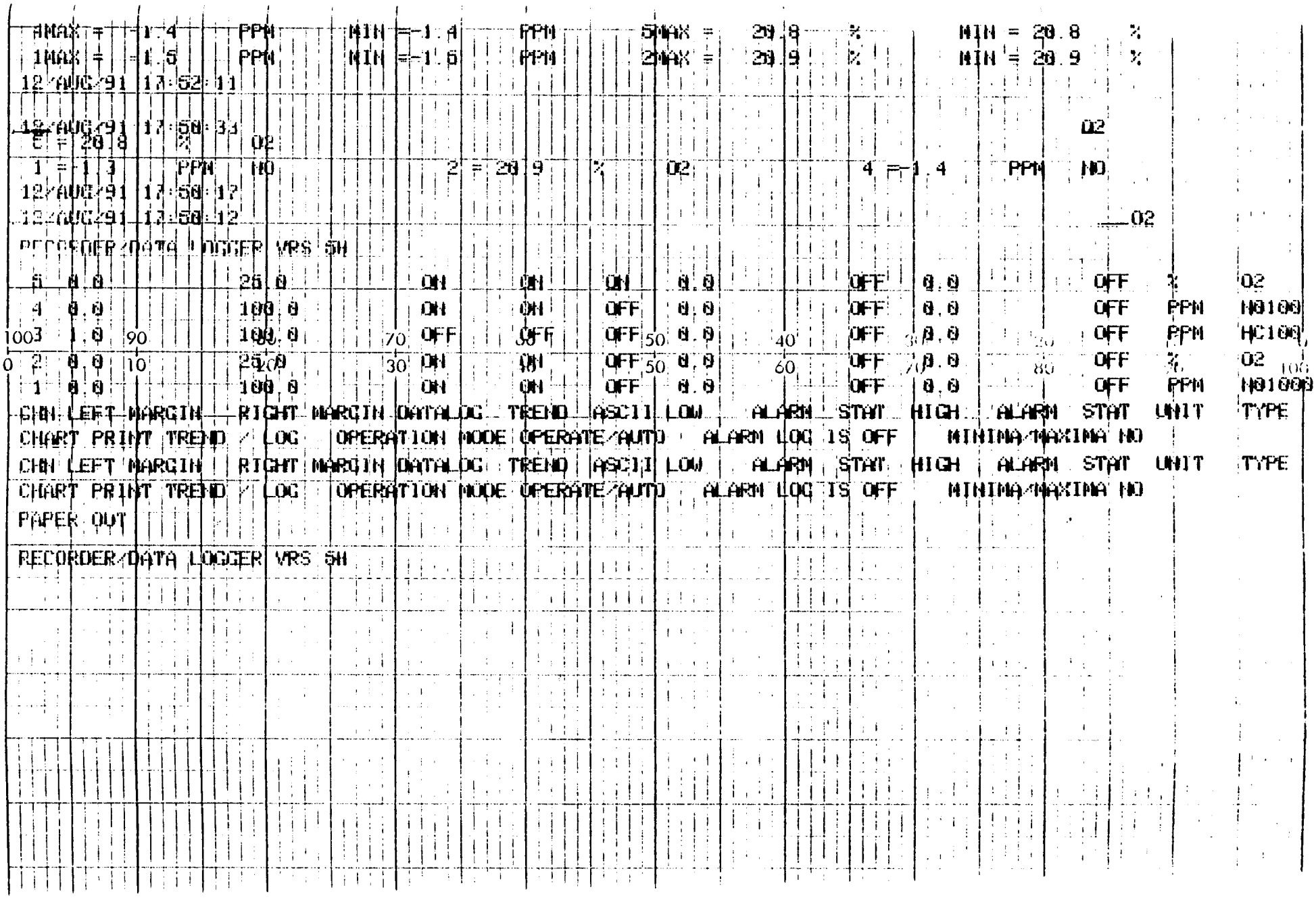


CHART NO. 414446

MOLYTEK


4MAX = 1.4 PPM MIN =-1.4 PPM
1MAX = 1.5 PPM MIN =-1.5 PPM
5MAX = 20.8 % MIN = 20.8 %
2MAX = 20.9 % MIN = 20.9 %
12/AUG/91 17:52:11
12/AUG/91 17:50:34
5 = 20.8 % O2
1 = 1.3 PPM NO
2 = 20.9 % O2
4 = 1.4 PPM NO
12/AUG/91 17:50:17
12/AUG/91 17:50:12
RECORDER/DATA LOGGER VRS 5H
5 0.0 25.0 ON ON ON 0.0 OFF 0.0 OFF % O2
4 0.0 100.0 ON ON OFF 0.0 OFF 0.0 OFF PPM NO100
3 1.0 100.0 OFF OFF OFF 0.0 OFF 0.0 OFF PPM HC100
2 0.0 25.0 ON ON OFF 0.0 OFF 0.0 OFF % O2
1 0.0 100.0 ON ON OFF 0.0 OFF 0.0 OFF PPM NO1000
CHN LEFT MARGIN RIGHT MARGIN DATALOG TREND ASCII LOW ALARM STAT HIGH ALARM STAT UNIT TYPE
CHART PRINT TREND / LOG OPERATION MODE OPERATE/AUTO ALARM LOG IS OFF MINIMA/MAXIMA NO
CHN LEFT MARGIN RIGHT MARGIN DATALOG TREND ASCII LOW ALARM STAT HIGH ALARM STAT UNIT TYPE
CHART PRINT TREND / LOG OPERATION MODE OPERATE/AUTO ALARM LOG IS OFF MINIMA/MAXIMA NO
PAPER OUT
RECORDER/DATA LOGGER VRS 5H

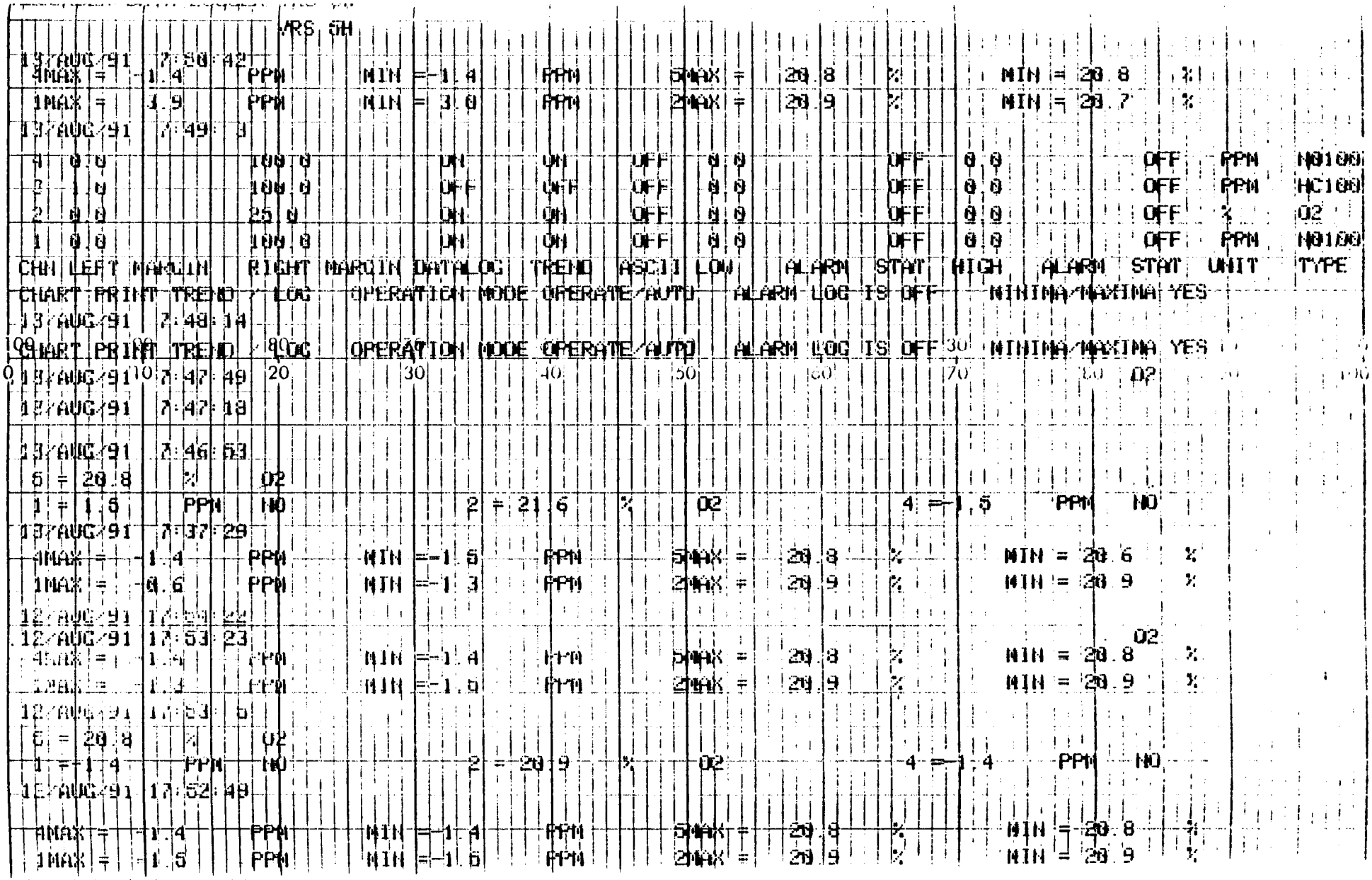
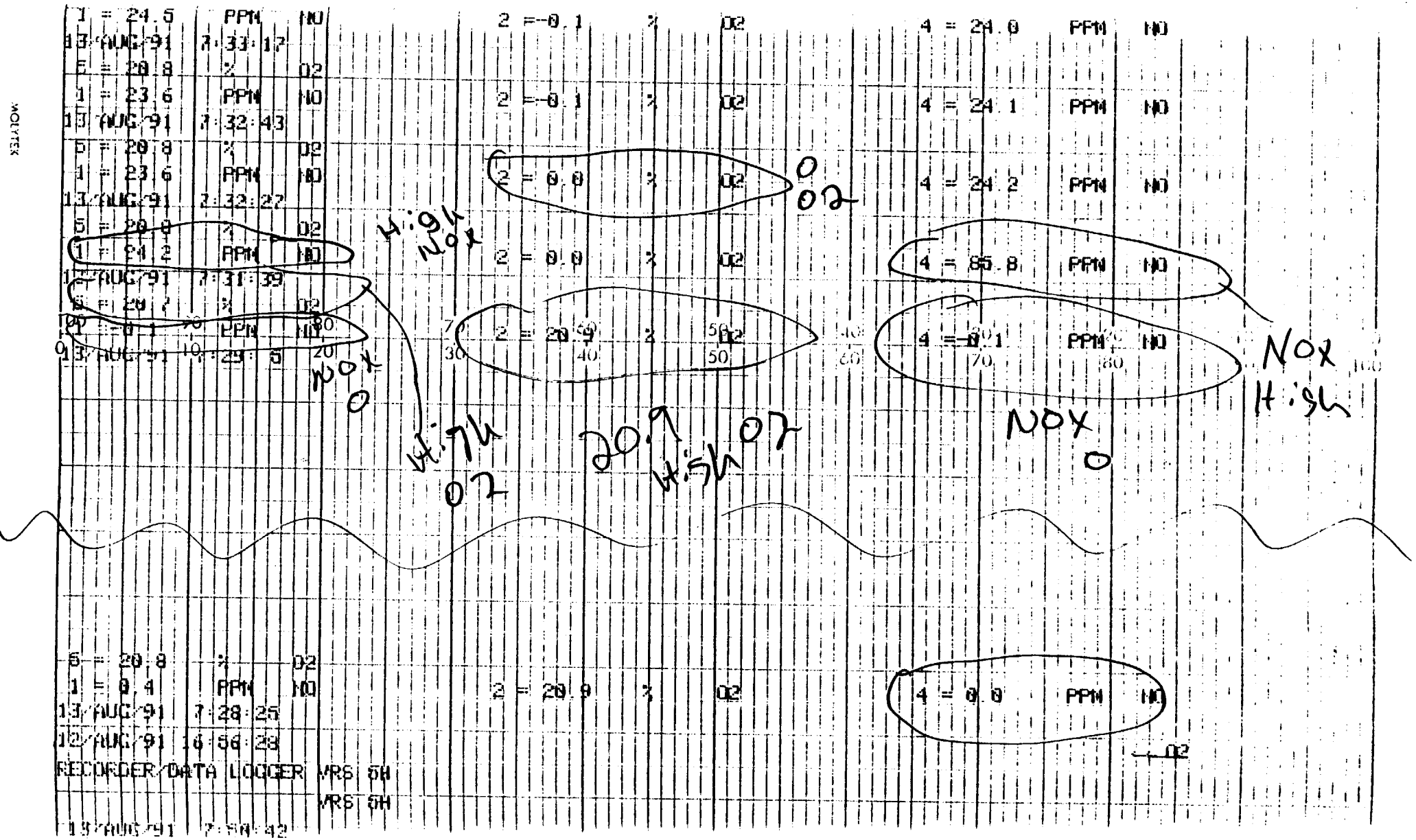
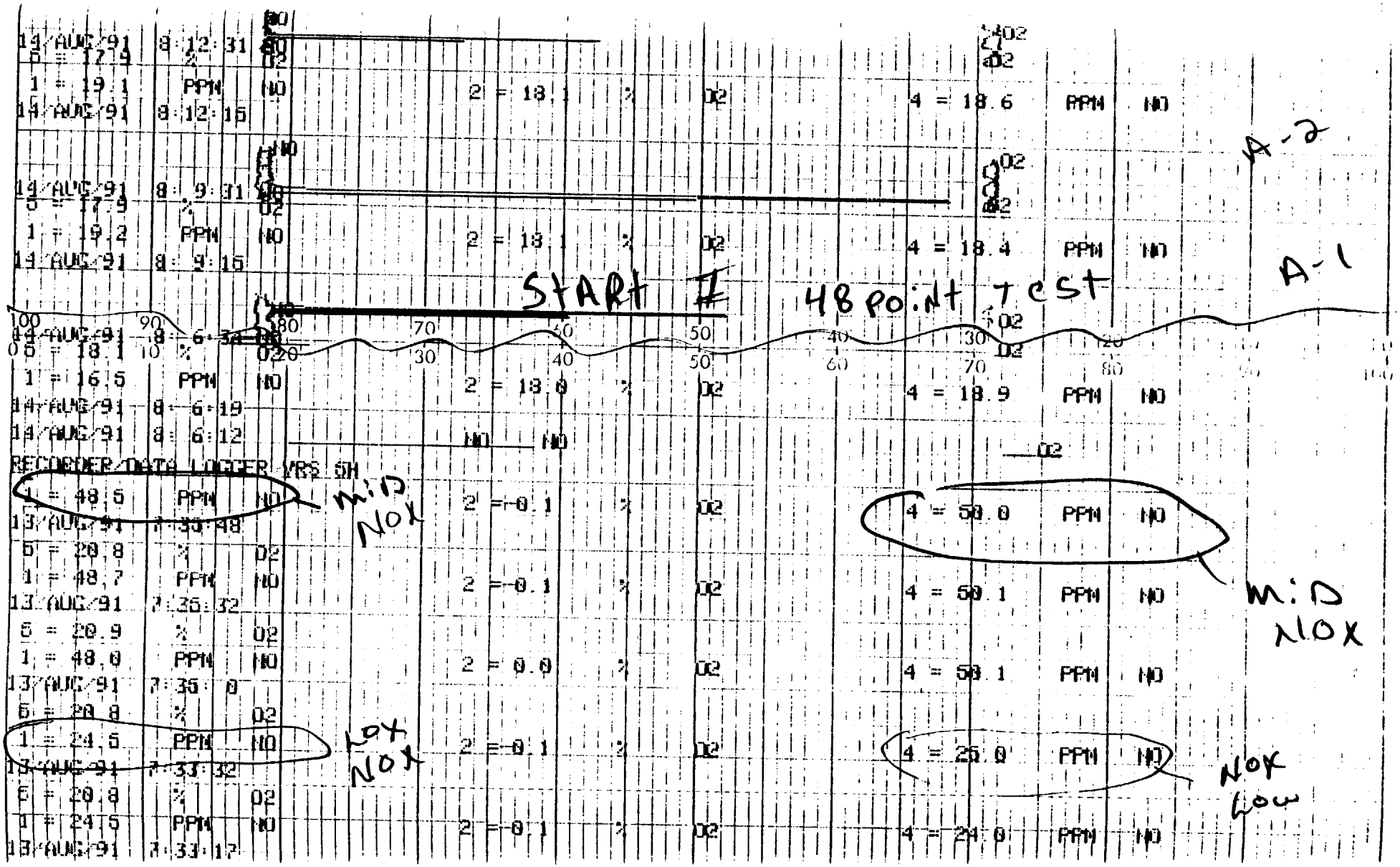


CHART NO 41446


1 = 24.5 PPM NO
13/AUG/91 7:33:12
5 = 20.8 % O2
1 = 23.6 PPM NO
13/AUG/91 7:32:43
5 = 20.8 % O2
1 = 23.6 PPM NO
13/AUG/91 7:32:27
5 = 20.8 % O2
1 = 24.2 PPM NO
13/AUG/91 7:31:39
5 = 20.7 % O2
1 = 0.1 PPM NO
13/AUG/91 10:29:5
2 = -0.1 % O2
2 = -0.1 % O2
2 = 0.0 % O2
2 = 0.0 % O2
2 = 20.9 % O2
4 = 24.0 PPM NO
4 = 24.1 PPM NO
4 = 24.2 PPM NO
4 = 85.8 PPM NO
4 = 0.1 PPM NO
NOx
High
NOx
0
NOx
High
O2
20.9
High
O2
NOx
0
5 = 20.8 % O2
1 = 0.4 PPM NO
13/AUG/91 7:28:25
12/AUG/91 16:56:28
RECORDER/DATA LOGGER VRS 6H
VRS 6H
13/AUG/91 7:50:42
2 = 20.9 % O2
4 = 0.0 PPM NO
O2


14 AUG 91 8:12:31
5 = 17.9 % O2
1 = 19.1 PPM NO
2 = 18.1 % O2
4 = 18.6 PPM NO
14 AUG 91 8:12:15
14 AUG 91 8:9:31
5 = 17.9 % O2
1 = 19.2 PPM NO
2 = 18.1 % O2
4 = 18.4 PPM NO
14 AUG 91 8:9:15
START # 48 POINT TEST
A-2
A-1
14 AUG 91 8:6:35
5 = 18.1 % O2
1 = 16.5 PPM NO
2 = 18.0 % O2
4 = 18.9 PPM NO
14 AUG 91 8:6:19
14 AUG 91 8:6:12
RECORDER/DATA LOGGER VRS SH
1 = 48.5 PPM NO
MID NOX
2 = -0.1 % O2
4 = 50.0 PPM NO
13 AUG 91 7:35:48
5 = 20.8 % O2
1 = 48.7 PPM NO
2 = -0.1 % O2
4 = 50.1 PPM NO
MID NOX
13 AUG 91 7:35:32
5 = 20.9 % O2
1 = 48.0 PPM NO
2 = 0.0 % O2
4 = 50.1 PPM NO
13 AUG 91 7:35:0
5 = 20.8 % O2
1 = 24.5 PPM NO
LOW NOX
2 = -0.1 % O2
4 = 25.0 PPM NO
NOX LOW
13 AUG 91 7:33:32
5 = 20.8 % O2
1 = 24.5 PPM NO
2 = -0.1 % O2
4 = 24.0 PPM NO
13 AUG 91 7:33:12

PPM
PPM
PPM

Blank
MOLYTEK

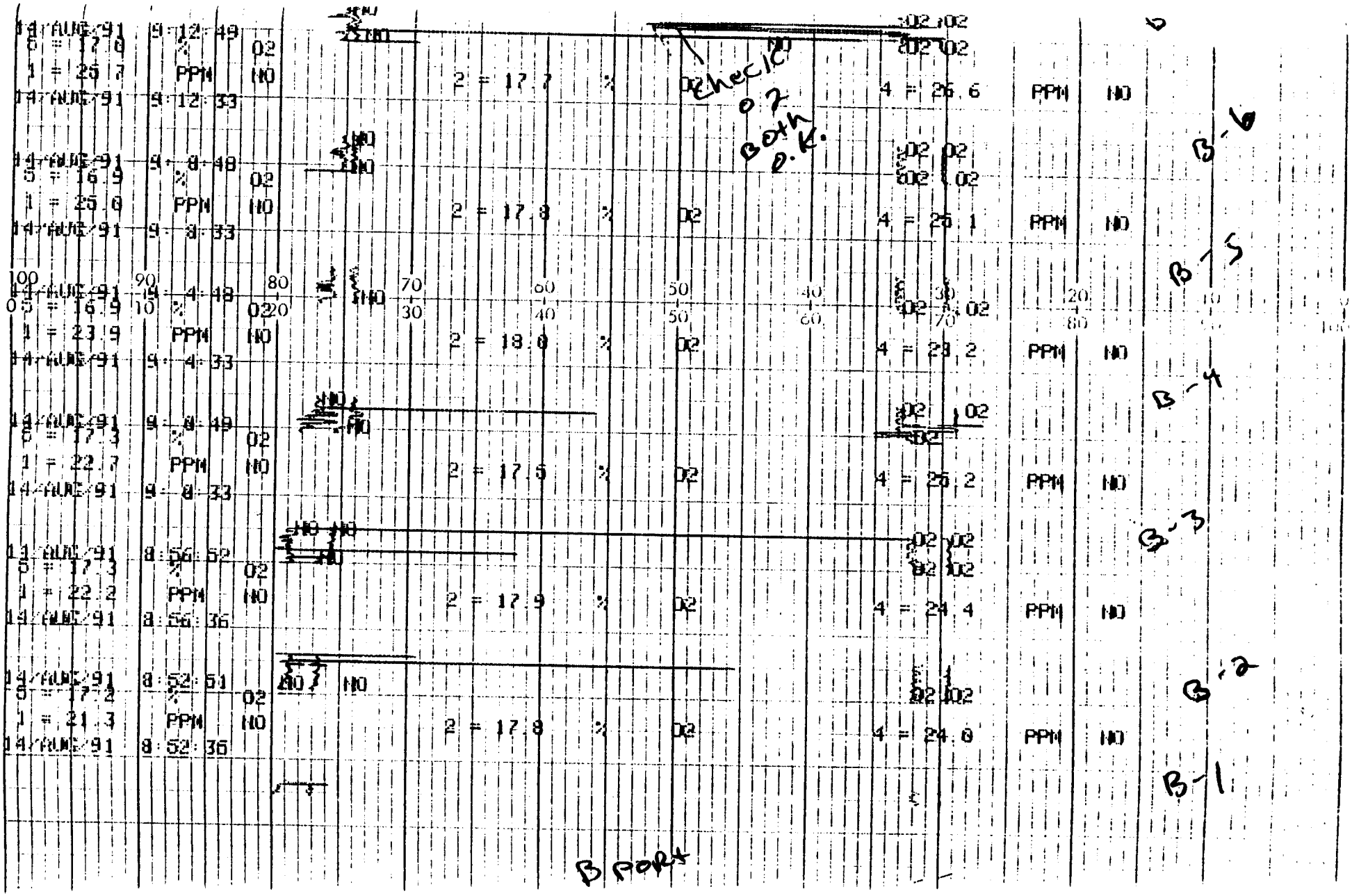

Both O.K.
B-6
B-5
B-4
B-3
B-2
B-1
B PORT

CHART NO 414446

C-5
C-4
C-2
C-0
C-1
CLOSE
PPM
%
O2
4 = 23.6
4 = 28.6
4 = 27.6
4 = 26.5
4 = 26.2
2 = 17.2
2 = 17.2
2 = 17.8
2 = 17.4
2 = 17.4

C-11
C-10
C-9
C-8
C-7
C-6
PPM
NO
O2
CO
%

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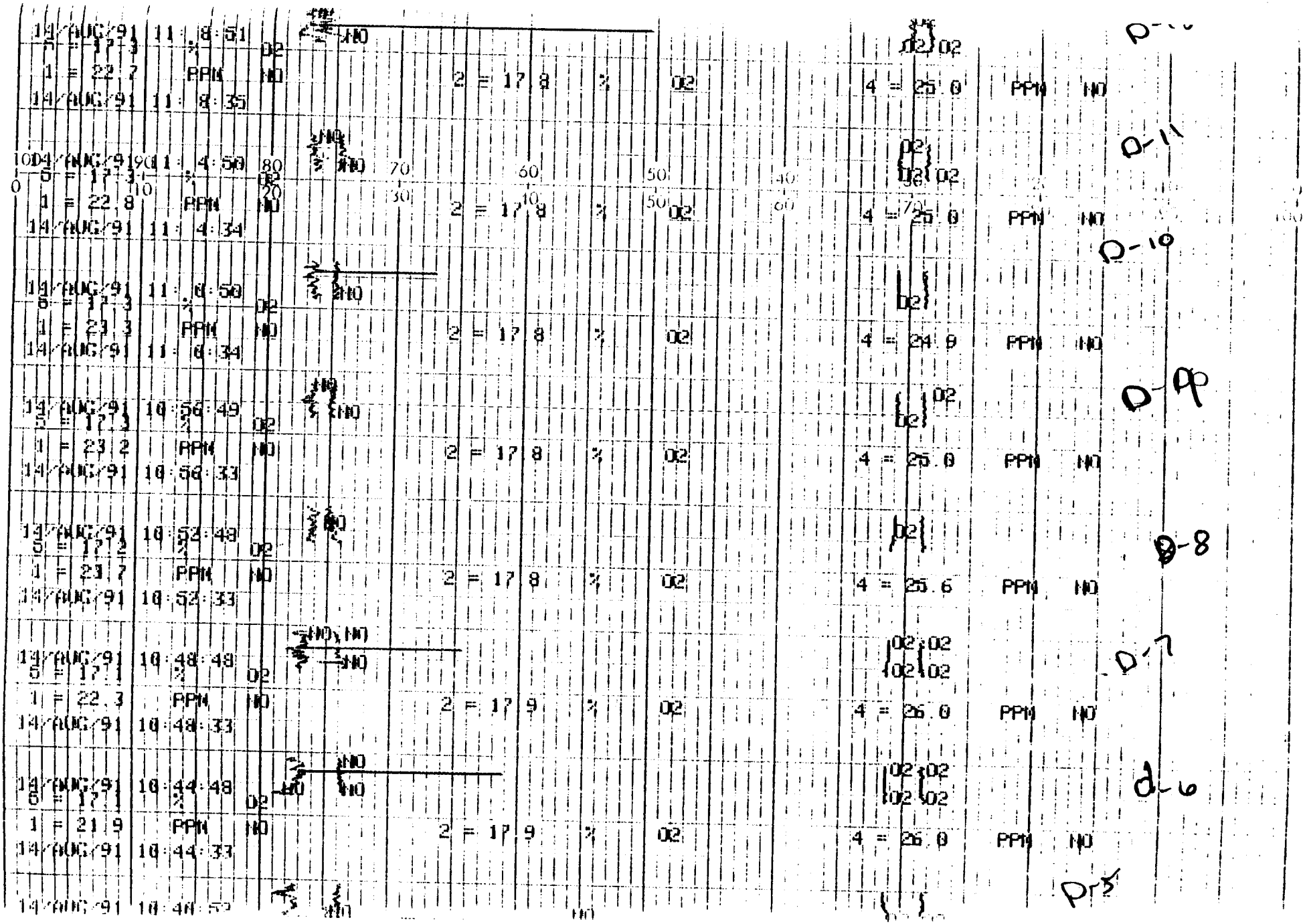
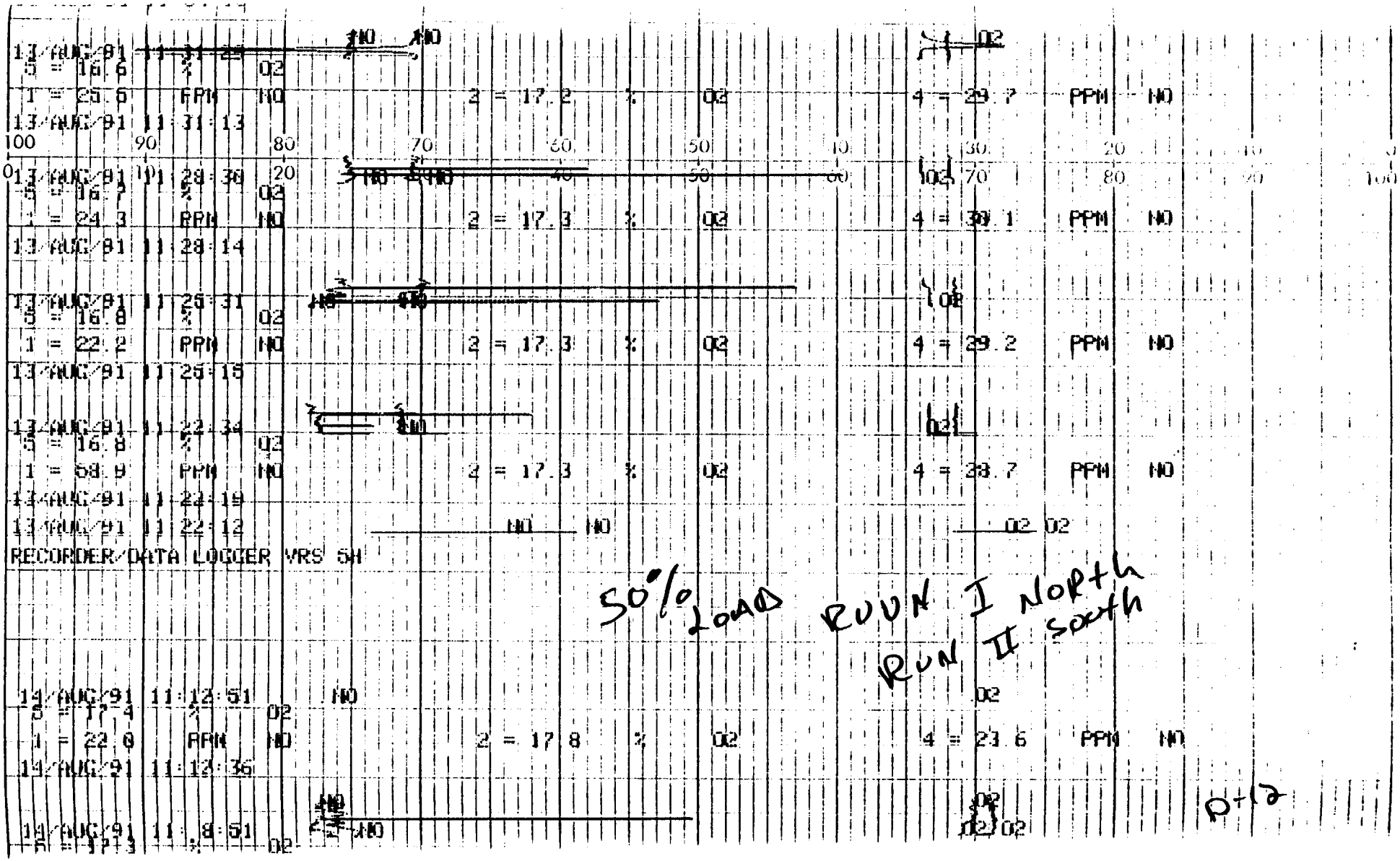
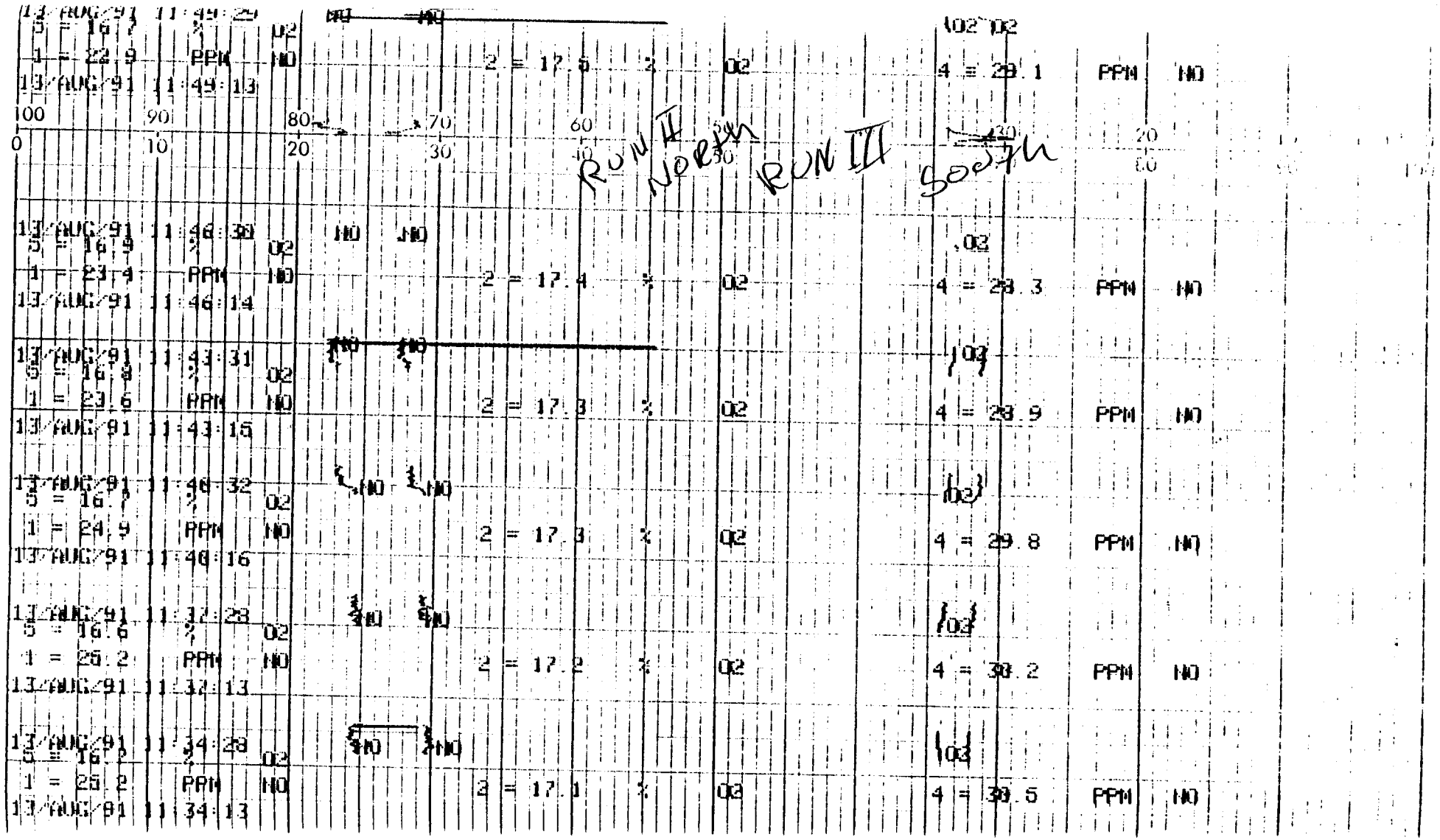
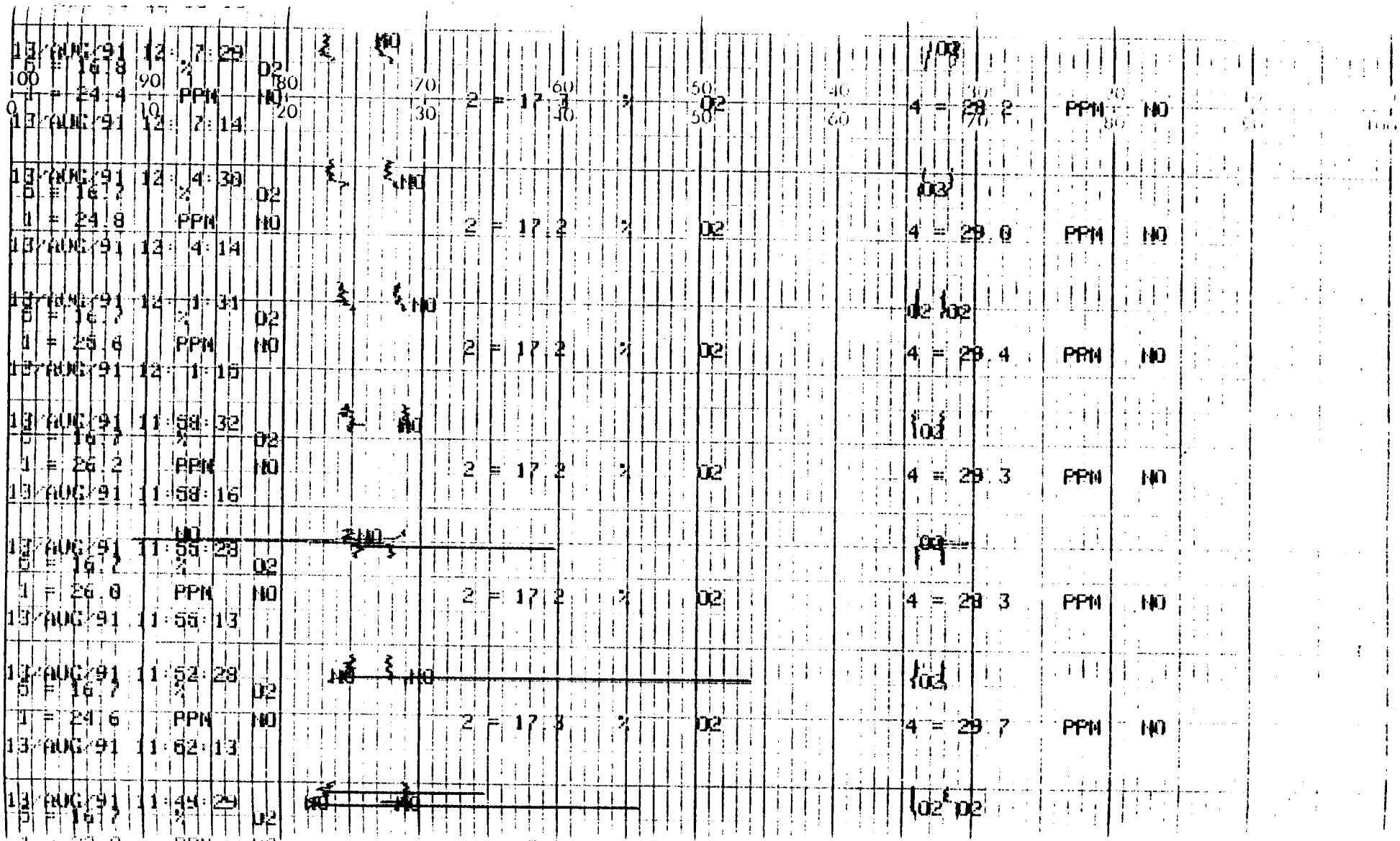
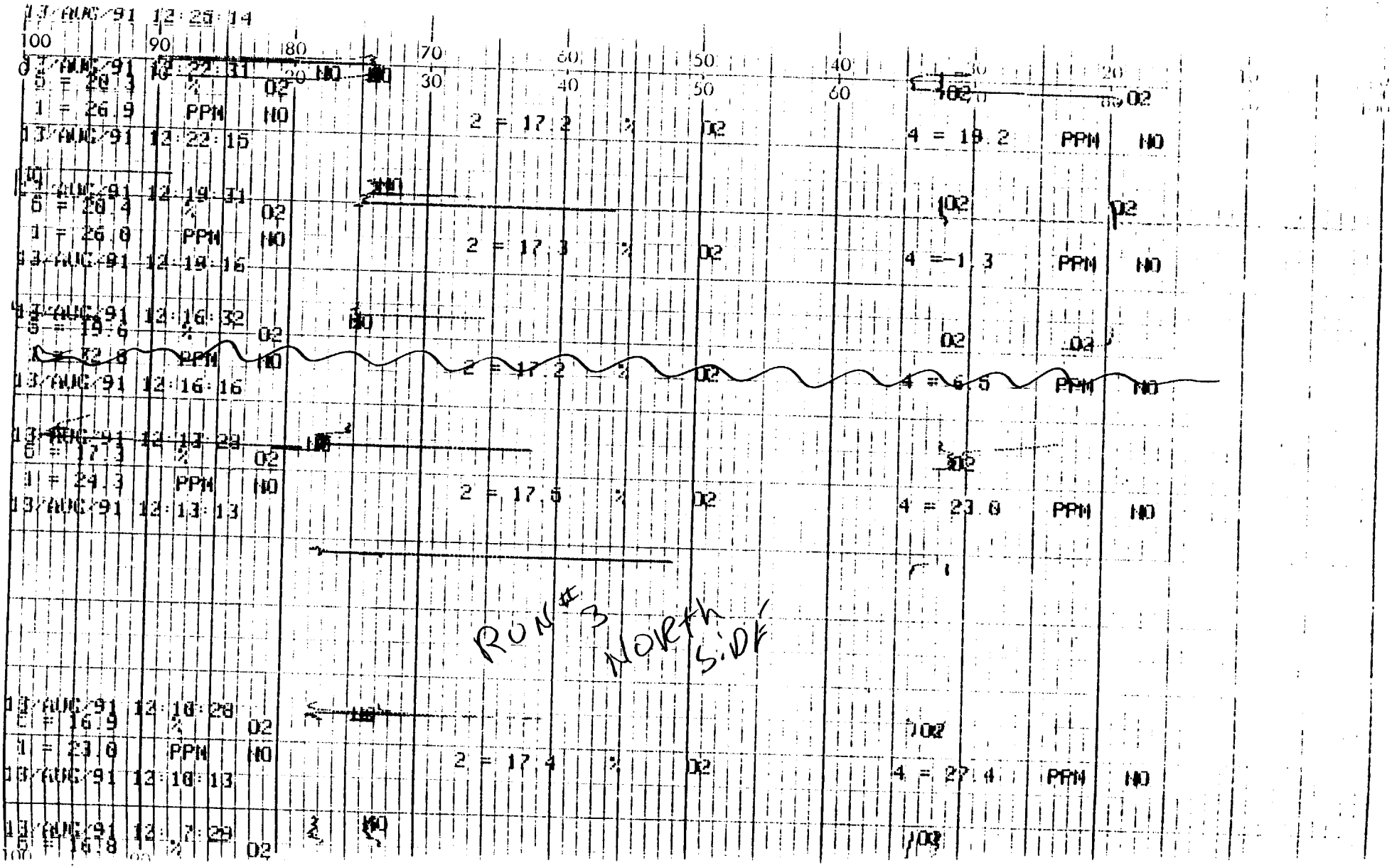
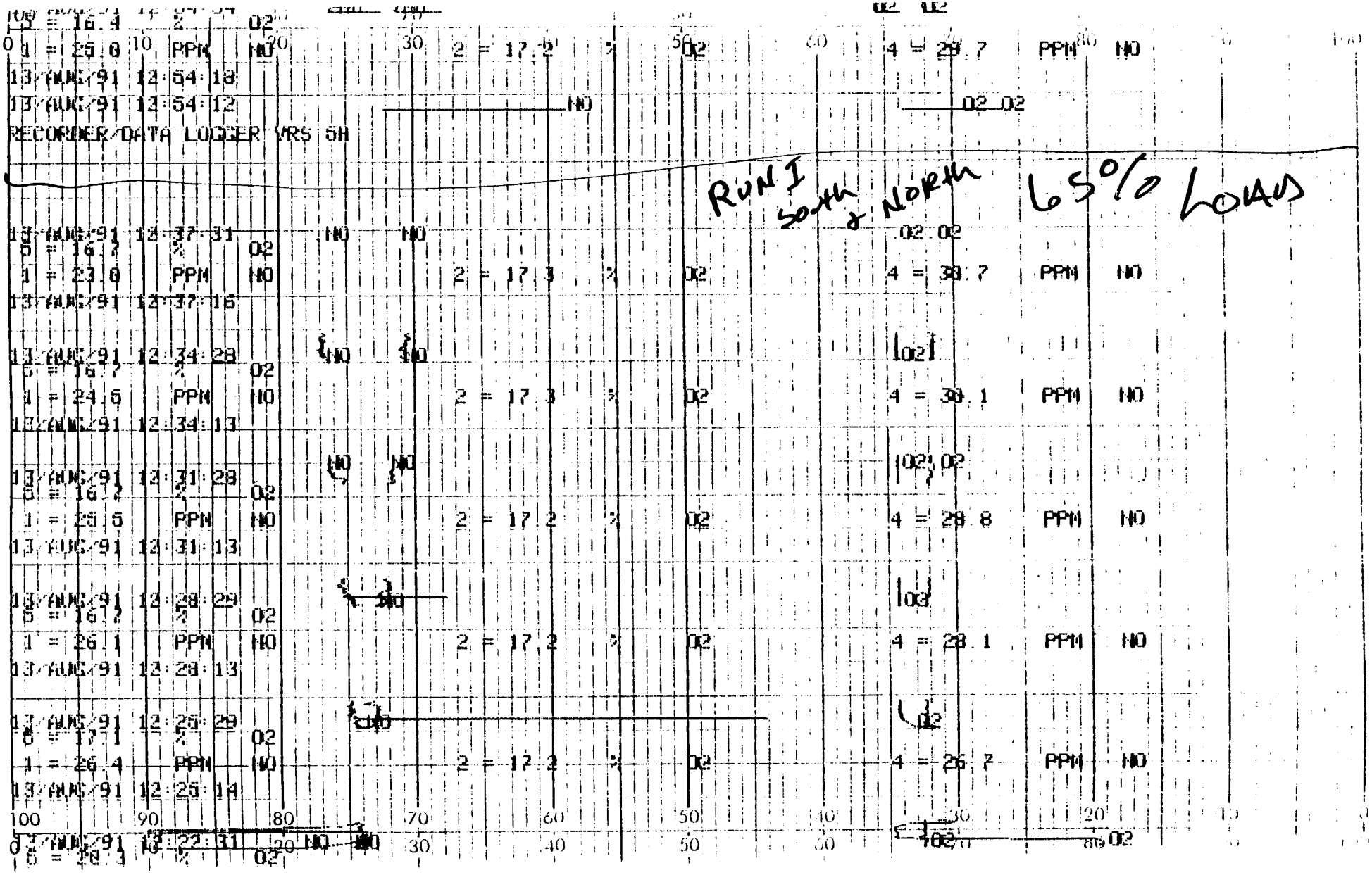

14/AUG/91 11: 8:51
5 = 17.3 %
1 = 22.7 PPM
14/AUG/91 11: 8:35
2 = 17.8 %
4 = 25.0 PPM
D-11
14/AUG/91 11: 4:50
5 = 17.3 %
1 = 22.8 PPM
14/AUG/91 11: 4:34
2 = 17.8 %
4 = 25.0 PPM
D-10
14/AUG/91 11: 0:50
5 = 17.3 %
1 = 23.3 PPM
14/AUG/91 11: 0:34
2 = 17.8 %
4 = 24.9 PPM
D-9
14/AUG/91 10:56:49
5 = 17.3 %
1 = 23.2 PPM
14/AUG/91 10:56:33
2 = 17.8 %
4 = 25.0 PPM
14/AUG/91 10:52:48
5 = 17.2 %
1 = 23.7 PPM
14/AUG/91 10:52:33
2 = 17.8 %
4 = 25.6 PPM
D-8
14/AUG/91 10:48:48
5 = 17.1 %
1 = 22.3 PPM
14/AUG/91 10:48:33
2 = 17.9 %
4 = 26.0 PPM
D-7
14/AUG/91 10:44:48
5 = 17.1 %
1 = 21.9 PPM
14/AUG/91 10:44:33
2 = 17.9 %
4 = 26.0 PPM
D-6
14/AUG/91 10:40:52
D-5

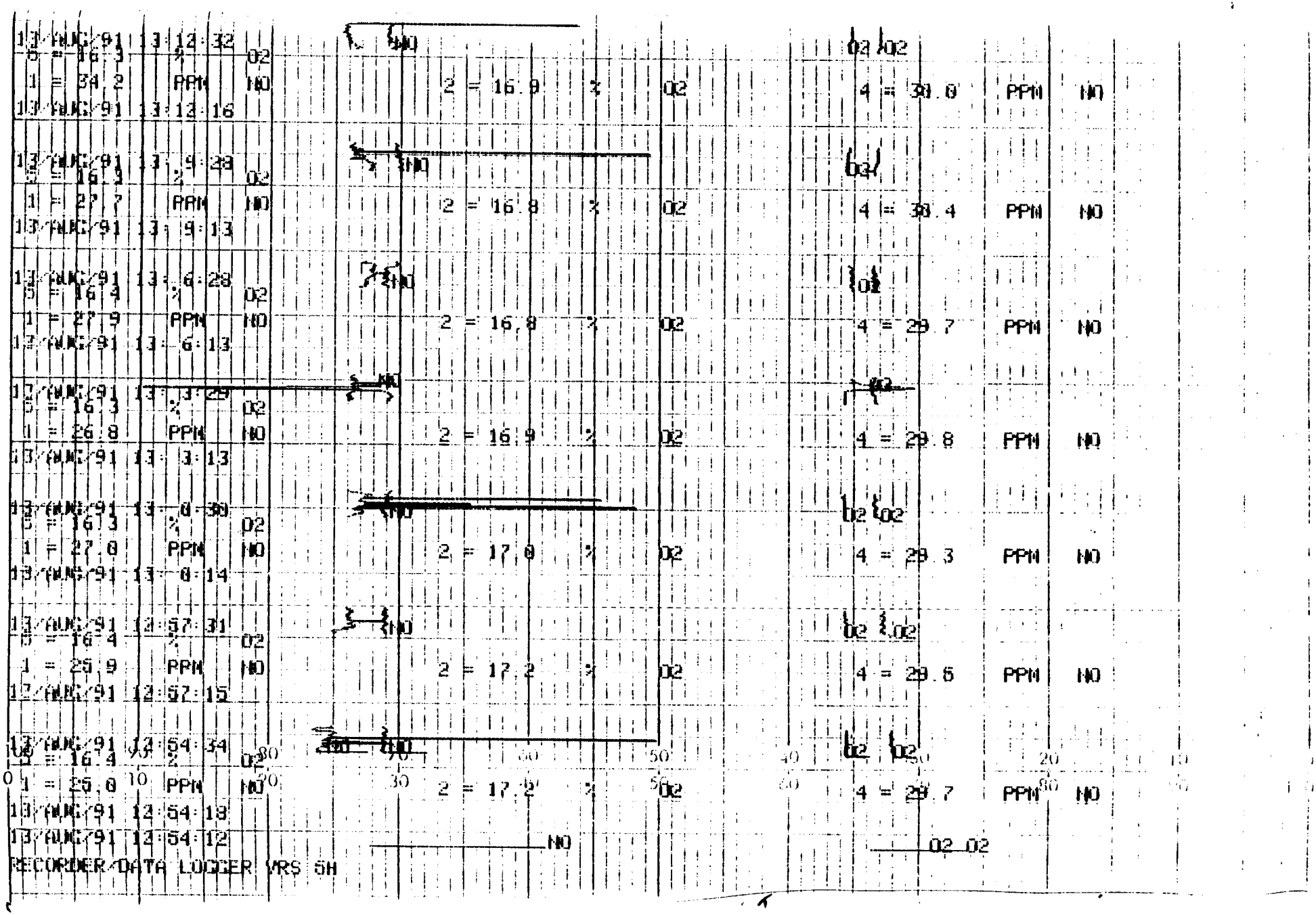

13/AUG/91 11:31:23
5 = 16.6 % 02
1 = 25.5 PPM NO
2 = 17.2 % 02
4 = 29.7 PPM NO
13/AUG/91 11:31:13
13/AUG/91 11:28:30
5 = 16.7 % 02
1 = 24.3 PPM NO
2 = 17.3 % 02
4 = 39.1 PPM NO
13/AUG/91 11:28:14
13/AUG/91 11:25:31
5 = 16.8 % 02
1 = 22.2 PPM NO
2 = 17.3 % 02
4 = 39.2 PPM NO
13/AUG/91 11:25:15
13/AUG/91 11:22:34
5 = 16.8 % 02
1 = 58.9 PPM NO
2 = 17.3 % 02
4 = 28.7 PPM NO
13/AUG/91 11:22:19
13/AUG/91 11:22:12
RECORDER/DATA LOGGER VRS 5H
50% LOAD RUN I North
RUN II South
14/AUG/91 11:12:51
5 = 17.4 % 02
1 = 22.0 PPM NO
2 = 17.8 % 02
4 = 23.6 PPM NO
13/AUG/91 11:12:36
13/AUG/91 11:8:51
5 = 17.3 % 02
D+12

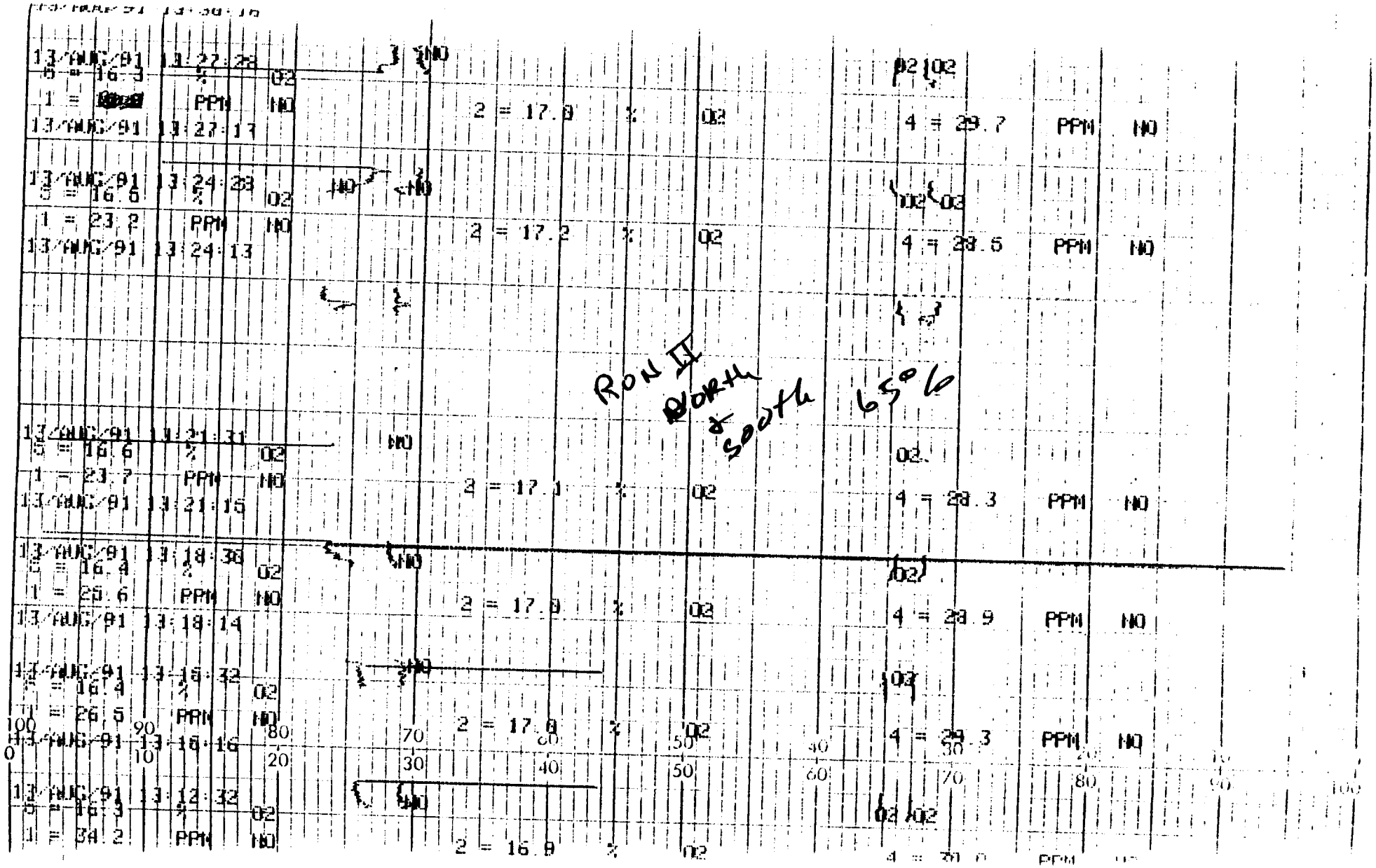

RUN II NORTH
RUN III SOUTH
13/AUG/91 11:49:29
5 = 16.7 % O2
1 = 22.9 PPM NO
13/AUG/91 11:49:13
13/AUG/91 11:46:30
5 = 16.9 % O2
1 = 23.4 PPM NO
13/AUG/91 11:46:14
13/AUG/91 11:43:31
5 = 16.8 % O2
1 = 23.6 PPM NO
13/AUG/91 11:43:15
13/AUG/91 11:40:32
5 = 16.7 % O2
1 = 24.9 PPM NO
13/AUG/91 11:40:16
13/AUG/91 11:37:28
5 = 16.6 % O2
1 = 25.2 PPM NO
13/AUG/91 11:37:13
13/AUG/91 11:34:28
5 = 16.5 % O2
1 = 25.2 PPM NO
13/AUG/91 11:34:13
2 = 17.5 % O2
4 = 28.1 PPM NO
2 = 17.4 % O2
4 = 28.3 PPM NO
2 = 17.3 % O2
4 = 28.9 PPM NO
2 = 17.3 % O2
4 = 29.8 PPM NO
2 = 17.2 % O2
4 = 30.2 PPM NO
2 = 17.1 % O3
4 = 30.5 PPM NO

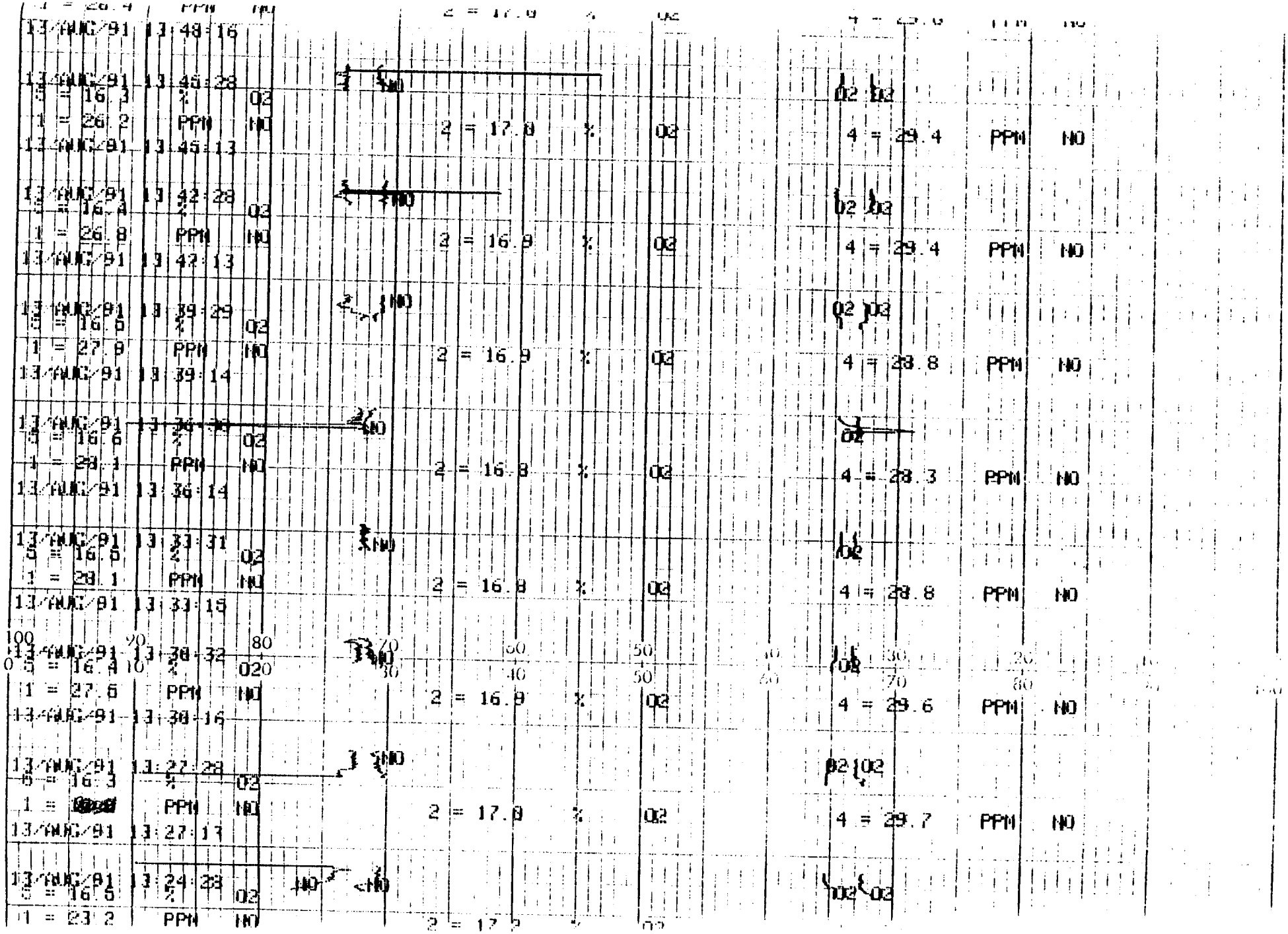

13/AUG/91 12: 7:29
13/AUG/91 12: 7:14
13/AUG/91 12: 4:30
13/AUG/91 12: 4:14
13/AUG/91 12: 1:31
13/AUG/91 12: 1:15
13/AUG/91 11:58:32
13/AUG/91 11:58:16
13/AUG/91 11:55:28
13/AUG/91 11:55:13
13/AUG/91 11:52:28
13/AUG/91 11:52:13
13/AUG/91 11:49:29
PPM
NO
O2

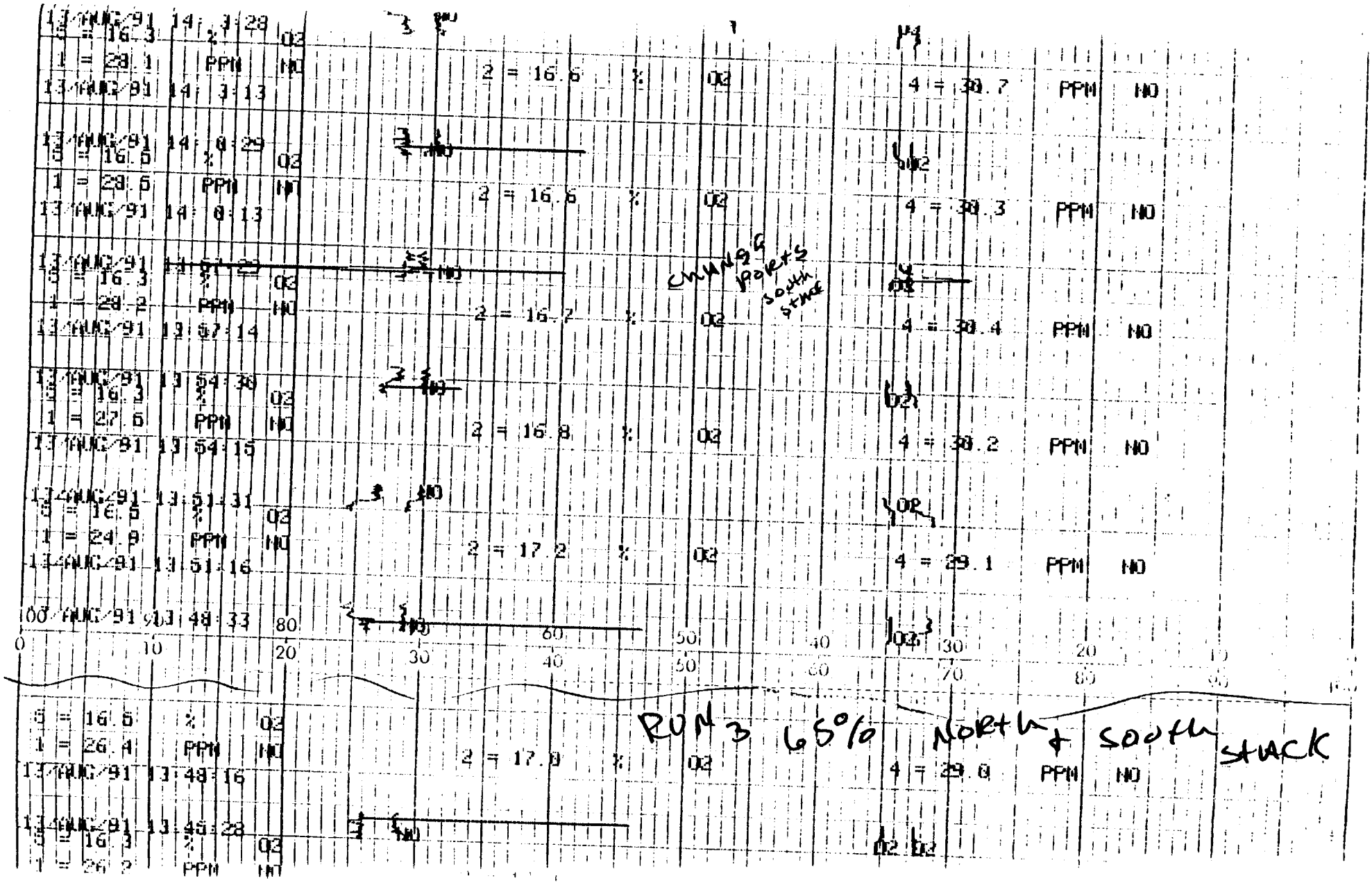

13/AUG/91 12:25:14
13/AUG/91 12:22:31
5 = 20.3 %
1 = 26.9 PPM
2 = 17.2 %
4 = 19.2 PPM
13/AUG/91 12:22:15
13/AUG/91 12:19:31
5 = 20.4 %
1 = 26.0 PPM
2 = 17.3 %
4 = -1.3 PPM
13/AUG/91 12:19:16
13/AUG/91 12:16:32
5 = 19.6 %
1 = 22.8 PPM
2 = 17.2 %
4 = 6.5 PPM
13/AUG/91 12:16:16
13/AUG/91 12:13:29
5 = 17.3 %
1 = 24.3 PPM
2 = 17.5 %
4 = 23.0 PPM
13/AUG/91 12:13:13
RUN #3 NORTH SIDE
13/AUG/91 12:10:28
5 = 16.9 %
1 = 23.0 PPM
2 = 17.4 %
4 = 27.4 PPM
13/AUG/91 12:7:29
5 = 16.8 %
02
HD
100
90
80
70
60
50
40
30
20

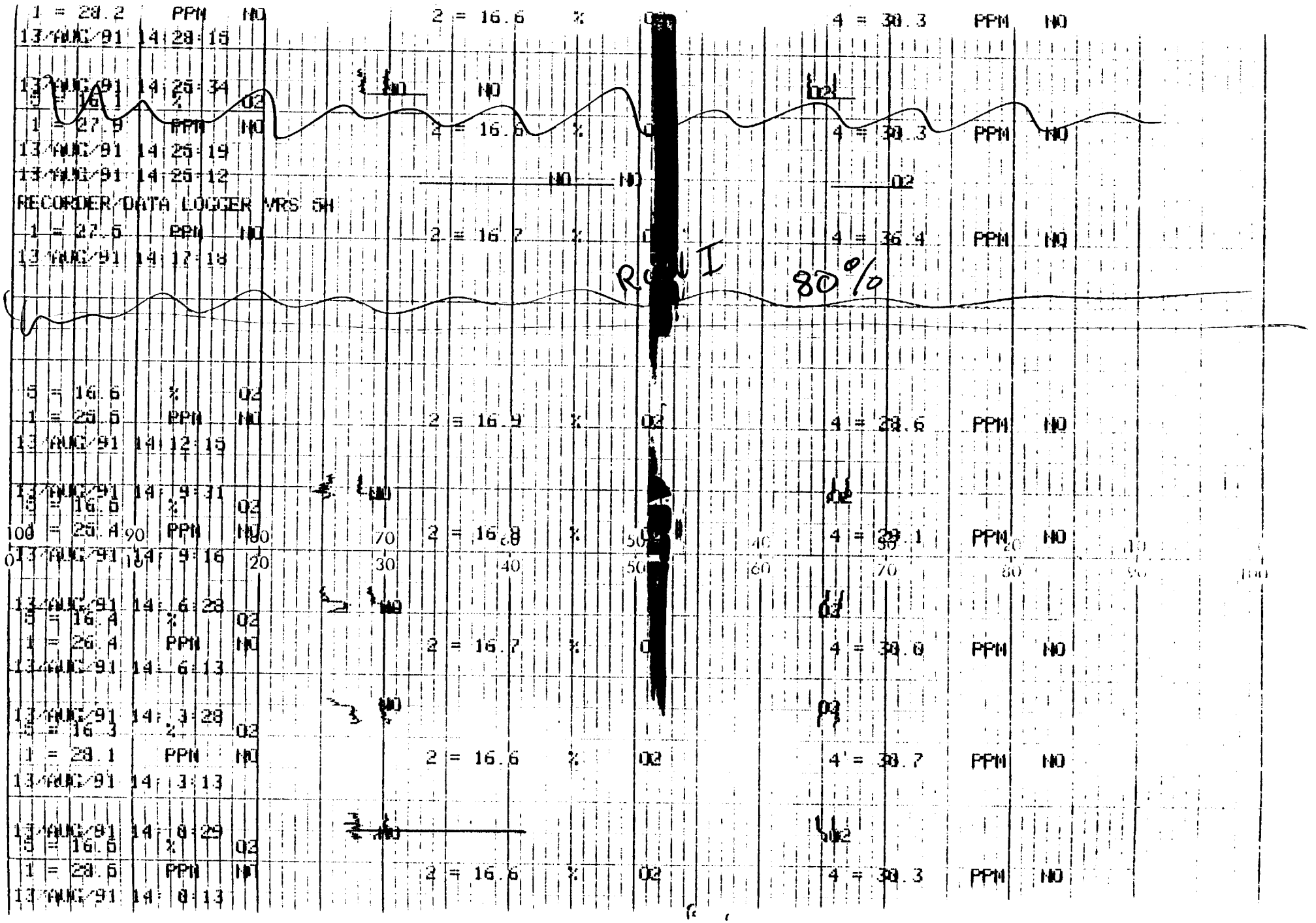

RECORDER/DATA LOGGER VRS 5H
RUN I
SOUTH & NORTH
65% LOADS

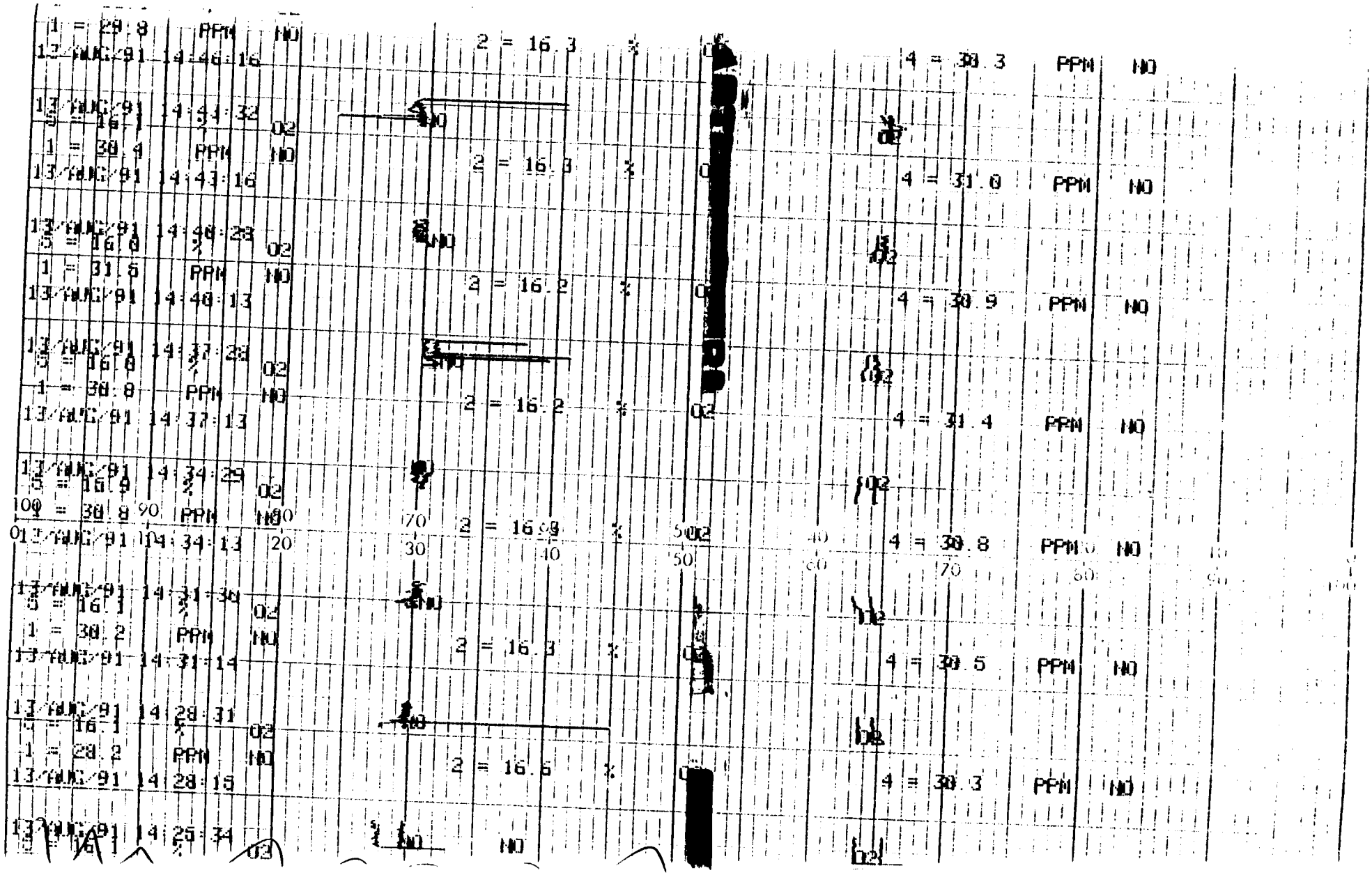

13/AUG/91 13:14:32
0 = 16.3 % O2
1 = 34.2 PPM NO
13/AUG/91 13:13:16
2 = 16.9 % O2
4 = 30.0 PPM NO
13/AUG/91 13:9:28
0 = 16.3 % O2
1 = 27.7 PPM NO
13/AUG/91 13:9:13
2 = 16.8 % O2
4 = 30.4 PPM NO
13/AUG/91 13:6:28
0 = 16.4 % O2
1 = 27.9 PPM NO
13/AUG/91 13:6:13
2 = 16.8 % O2
4 = 29.7 PPM NO
13/AUG/91 13:3:28
0 = 16.3 % O2
1 = 26.8 PPM NO
13/AUG/91 13:3:13
2 = 16.9 % O2
4 = 29.8 PPM NO
13/AUG/91 13:0:30
0 = 16.3 % O2
1 = 27.0 PPM NO
13/AUG/91 13:0:14
2 = 17.0 % O2
4 = 29.3 PPM NO
13/AUG/91 12:57:31
0 = 16.4 % O2
1 = 25.9 PPM NO
13/AUG/91 12:57:15
2 = 17.2 % O2
4 = 29.6 PPM NO
13/AUG/91 12:54:34
0 = 16.4 % O2
1 = 25.0 PPM NO
13/AUG/91 12:54:18
2 = 17.2 % O2
4 = 29.7 PPM NO
13/AUG/91 12:54:12
RECORDER/DATA LOGGER VRS 5H
0 10 20 30 40 50 60 70 80 90 100
CHART NO 41446

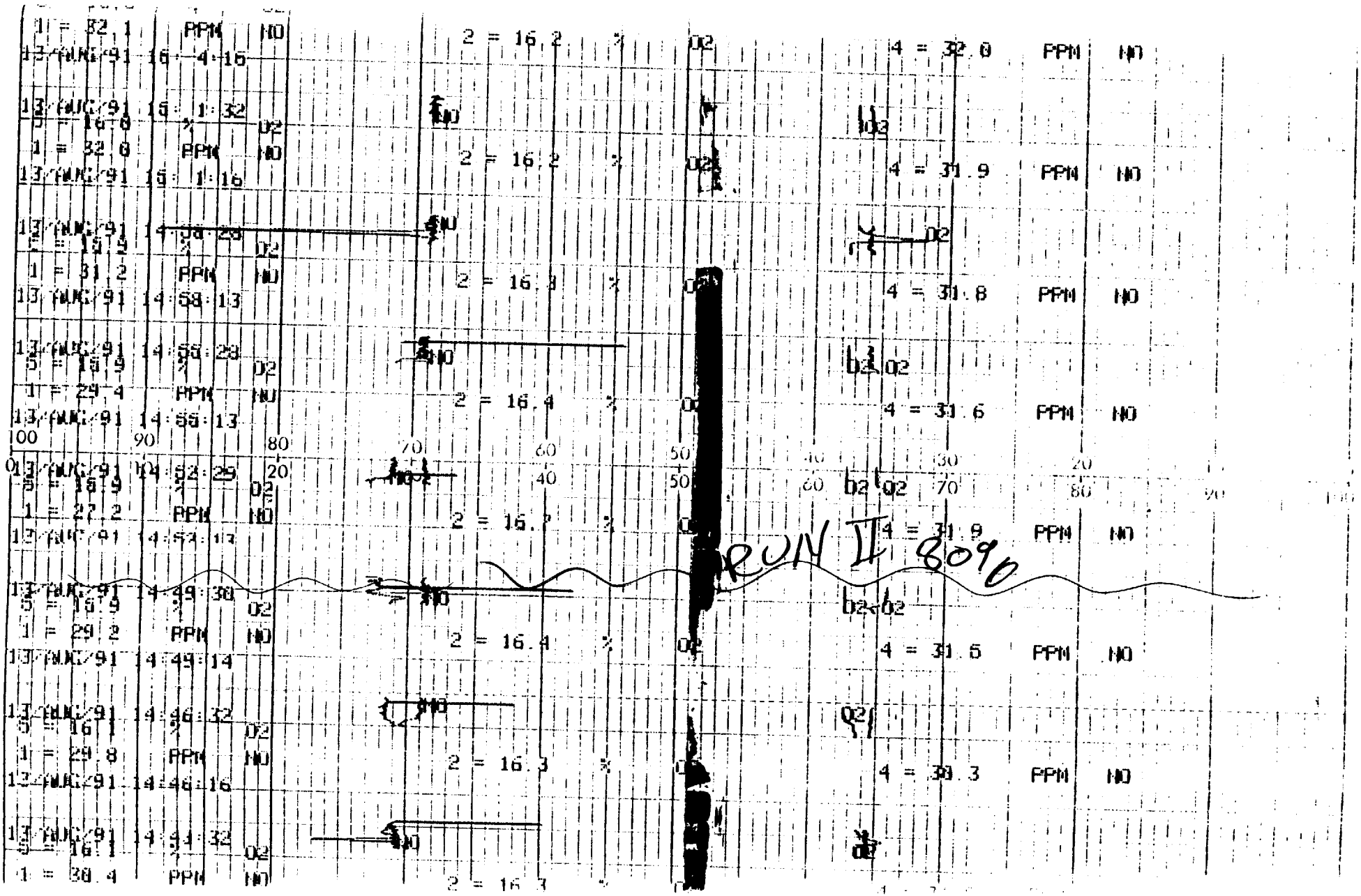

13/AUG/91 13:22:28
5 = 16.3 % 02
1 = PPM NO
13/AUG/91 13:27:13
2 = 17.9 % 02
4 = 29.7 PPM NO
13/AUG/91 13:24:28
5 = 16.6 % 02
1 = 23.2 PPM NO
13/AUG/91 13:24:13
2 = 17.2 % 02
4 = 28.5 PPM NO
RON II
North
& South
13/AUG/91 13:21:31
5 = 16.6 % 02
1 = 23.7 PPM NO
13/AUG/91 13:21:15
2 = 17.1 % 02
4 = 28.3 PPM NO
13/AUG/91 13:18:30
5 = 16.4 % 02
1 = 25.6 PPM NO
13/AUG/91 13:18:14
2 = 17.9 % 02
4 = 28.9 PPM NO
13/AUG/91 13:16:32
5 = 16.4 % 02
1 = 26.5 PPM NO
13/AUG/91 13:16:16
2 = 17.8 % 02
4 = 29.3 PPM NO
13/AUG/91 13:12:32
5 = 16.3 % 02
1 = 24.2 PPM NO
2 = 16.9 % 02
4 = 29.0 PPM NO

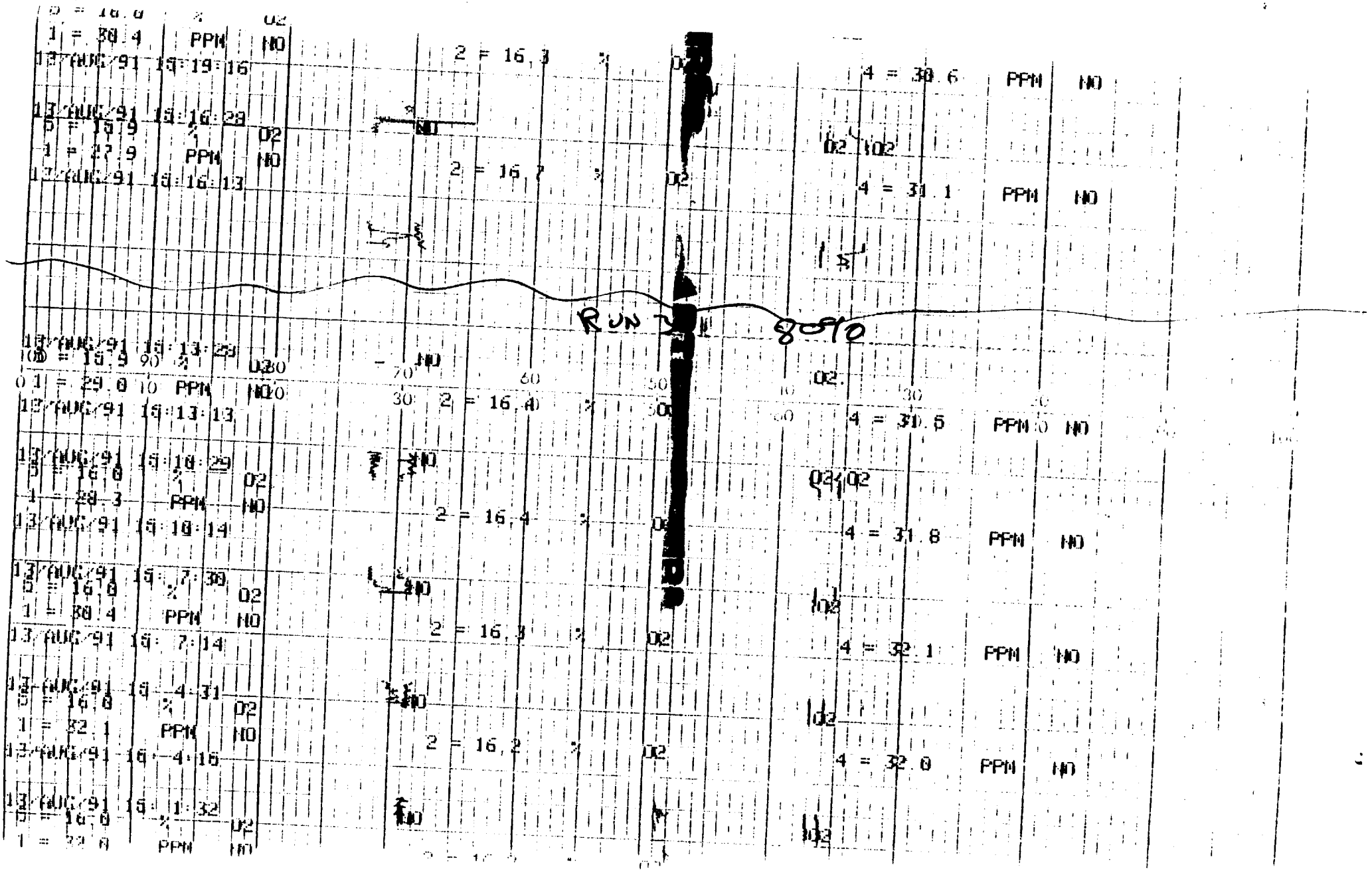

13/MAR/91 13:48:16
13/MAR/91 13:48:28
3 = 16.3 % 02
1 = 26.2 PPM NO
13/MAR/91 13:45:13
13/MAR/91 13:42:28
3 = 16.4 % 02
1 = 26.8 PPM NO
13/MAR/91 13:42:13
13/MAR/91 13:39:29
3 = 16.6 % 02
1 = 27.9 PPM NO
13/MAR/91 13:39:14
13/MAR/91 13:36:30
3 = 16.6 % 02
1 = 28.1 PPM NO
13/MAR/91 13:36:14
13/MAR/91 13:33:31
3 = 16.6 % 02
1 = 28.1 PPM NO
13/MAR/91 13:33:15
13/MAR/91 13:30:32
3 = 16.4 % 02
1 = 27.6 PPM NO
13/MAR/91 13:30:16
13/MAR/91 13:27:28
3 = 16.3 % 02
1 = [illegible] PPM NO
13/MAR/91 13:27:13
13/MAR/91 13:24:28
3 = 16.6 % 02
1 = 23.2 PPM NO
2 = 17.8 % 02
2 = 16.9 % 02
2 = 16.9 % 02
2 = 16.8 % 02
2 = 16.8 % 02
2 = 16.9 % 02
2 = 17.8 % 02
4 = 29.4 PPM NO
4 = 29.4 PPM NO
4 = 28.8 PPM NO
4 = 28.3 PPM NO
4 = 28.8 PPM NO
4 = 29.6 PPM NO
4 = 29.7 PPM NO

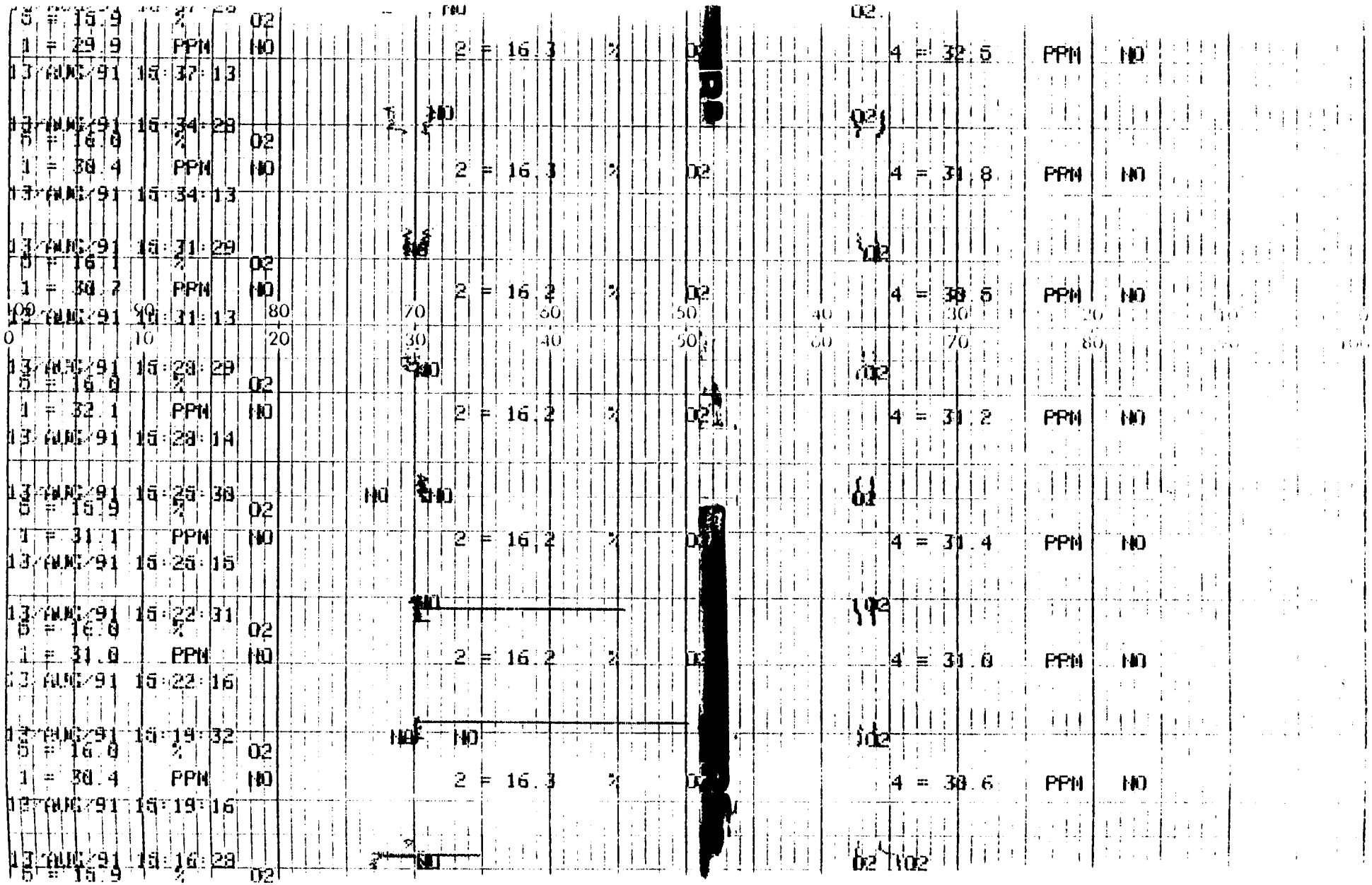

13/NOV/91 14: 3:29
3 = 16.3 % O2
1 = 28.1 PPM NO
13/NOV/91 14: 3:13
2 = 16.6 % O2
4 = 30.7 PPM NO
13/NOV/91 14: 0:29
3 = 16.5 % O2
1 = 28.6 PPM NO
13/NOV/91 14: 0:13
2 = 16.6 % O2
4 = 30.3 PPM NO
13/NOV/91 13:57:29
3 = 16.3 % O2
1 = 28.2 PPM NO
13/NOV/91 13:57:14
2 = 16.7 % O2
4 = 30.4 PPM NO
CHANGE POINTS SOUTH STACK
13/NOV/91 13:54:30
3 = 16.3 % O2
1 = 27.6 PPM NO
13/NOV/91 13:54:15
2 = 16.8 % O2
4 = 30.2 PPM NO
13/NOV/91 13:51:31
3 = 16.5 % O2
1 = 24.9 PPM NO
13/NOV/91 13:51:16
2 = 17.2 % O2
4 = 29.1 PPM NO
13/NOV/91 13:48:33
3 = 16.5 % O2
1 = 26.4 PPM NO
13/NOV/91 13:48:16
2 = 17.0 % O2
4 = 29.0 PPM NO
13/NOV/91 13:45:28
3 = 16.3 % O2
1 = 26.2 PPM NO
0 10 20 30 40 50 60 70 80
RUN 3 65% NORTH + SOUTH STACK


1 = 28.2 PPM NO
13/NOV/91 14:28:16
5 = 16.1 % O2
1 = 27.9 PPM NO
13/NOV/91 14:25:19
13/NOV/91 14:25:12
RECORDER/DATA LOGGER VRS 5H
1 = 27.6 PPM NO
13/NOV/91 14:12:18
5 = 16.6 % O2
1 = 28.6 PPM NO
13/NOV/91 14:12:15
13/NOV/91 14:9:31
5 = 16.6 % O2
100 = 28.4 90 PPM NO90
13/NOV/91 14:9:16
13/NOV/91 14:6:28
5 = 16.4 % O2
1 = 26.4 PPM NO
13/NOV/91 14:6:13
13/NOV/91 14:3:28
5 = 16.3 % O2
1 = 28.1 PPM NO
13/NOV/91 14:3:13
13/NOV/91 14:0:29
5 = 16.6 % O2
1 = 28.6 PPM NO
13/NOV/91 14:0:13
2 = 16.6 % O2
4 = 38.3 PPM NO
2 = 16.6 % O2
4 = 38.3 PPM NO
2 = 16.7 % O2
4 = 36.4 PPM NO
2 = 16.9 % O2
4 = 28.6 PPM NO
2 = 16.8 % O2
4 = 28.1 PPM NO
2 = 16.7 % O2
4 = 38.0 PPM NO
2 = 16.6 % O2
4' = 38.7 PPM NO
2 = 16.6 % O2
4 = 38.3 PPM NO
RUN I
80%
0 10 20 30 40 50 60 70 80 90 100


1 = 29.8 PPM NO
13/JUN/91 14:46:16
13/JUN/91 14:44:32
2 = 16.1 % 02
1 = 30.4 PPM NO
13/JUN/91 14:43:16
13/JUN/91 14:40:28
2 = 16.0 % 02
1 = 31.5 PPM NO
13/JUN/91 14:40:13
13/JUN/91 14:37:28
2 = 16.0 % 02
1 = 30.8 PPM NO
13/JUN/91 14:37:13
13/JUN/91 14:34:29
2 = 16.0 % 02
1 = 30.8 PPM NO
13/JUN/91 14:34:13
13/JUN/91 14:31:30
2 = 16.1 % 02
1 = 30.2 PPM NO
13/JUN/91 14:31:14
13/JUN/91 14:28:31
2 = 16.1 % 02
1 = 28.2 PPM NO
13/JUN/91 14:28:15
13/JUN/91 14:25:34
2 = 16.1 % 02
4 = 30.3 PPM NO
4 = 31.0 PPM NO
4 = 30.9 PPM NO
4 = 31.4 PPM NO
4 = 30.8 PPM NO
4 = 30.5 PPM NO
4 = 30.3 PPM NO


1 = 32.1 PPM NO
13/NOV/91 16:4:16
13/NOV/91 15:1:32
5 = 16.8 % O2
1 = 32.0 PPM NO
13/NOV/91 15:1:16
13/NOV/91 14:58:28
5 = 15.9 % O2
1 = 31.2 PPM NO
13/NOV/91 14:58:13
13/NOV/91 14:56:28
5 = 15.9 % O2
1 = 29.4 PPM NO
13/NOV/91 14:56:13
13/NOV/91 14:54:29
5 = 15.9 % O2
1 = 27.2 PPM NO
13/NOV/91 14:54:14
13/NOV/91 14:49:30
5 = 15.9 % O2
1 = 29.2 PPM NO
13/NOV/91 14:49:14
13/NOV/91 14:46:32
5 = 16.1 % O2
1 = 29.8 PPM NO
13/NOV/91 14:46:16
13/NOV/91 14:44:32
5 = 16.1 % O2
1 = 30.4 PPM NO
2 = 16.2 % O2
2 = 16.2 % O2
2 = 16.3 % O2
2 = 16.4 % O2
2 = 16.? % O2
2 = 16.4 % O2
2 = 16.3 % O2
2 = 16.3 % O2
4 = 32.0 PPM NO
4 = 31.9 PPM NO
4 = 31.8 PPM NO
4 = 31.6 PPM NO
4 = 31.9 PPM NO
4 = 31.6 PPM NO
4 = 30.3 PPM NO
RUN II 8096


RUN 2
8090


13/AUG/91 15:37:13
13/AUG/91 15:34:28
O2 = 16.0 %
1 = 30.4 PPM
13/AUG/91 15:34:13
13/AUG/91 15:31:29
O2 = 16.1 %
1 = 30.2 PPM
13/AUG/91 15:31:13
13/AUG/91 15:28:29
O2 = 16.0 %
1 = 32.1 PPM
13/AUG/91 15:28:14
13/AUG/91 15:25:30
O2 = 15.9 %
1 = 31.1 PPM
13/AUG/91 15:25:15
13/AUG/91 15:22:31
O2 = 16.0 %
1 = 31.0 PPM
13/AUG/91 15:22:16
13/AUG/91 15:19:32
O2 = 16.0 %
1 = 30.4 PPM
13/AUG/91 15:19:16
13/AUG/91 15:16:28
O2 = 15.9 %
2 = 16.3 %
2 = 16.3 %
2 = 16.2 %
2 = 16.2 %
2 = 16.2 %
2 = 16.3 %
4 = 32.5 PPM
4 = 31.8 PPM
4 = 30.6 PPM
4 = 31.2 PPM
4 = 31.4 PPM
4 = 31.0 PPM
4 = 30.6 PPM
0 10 20 30 40 50 60 70 80 90 100

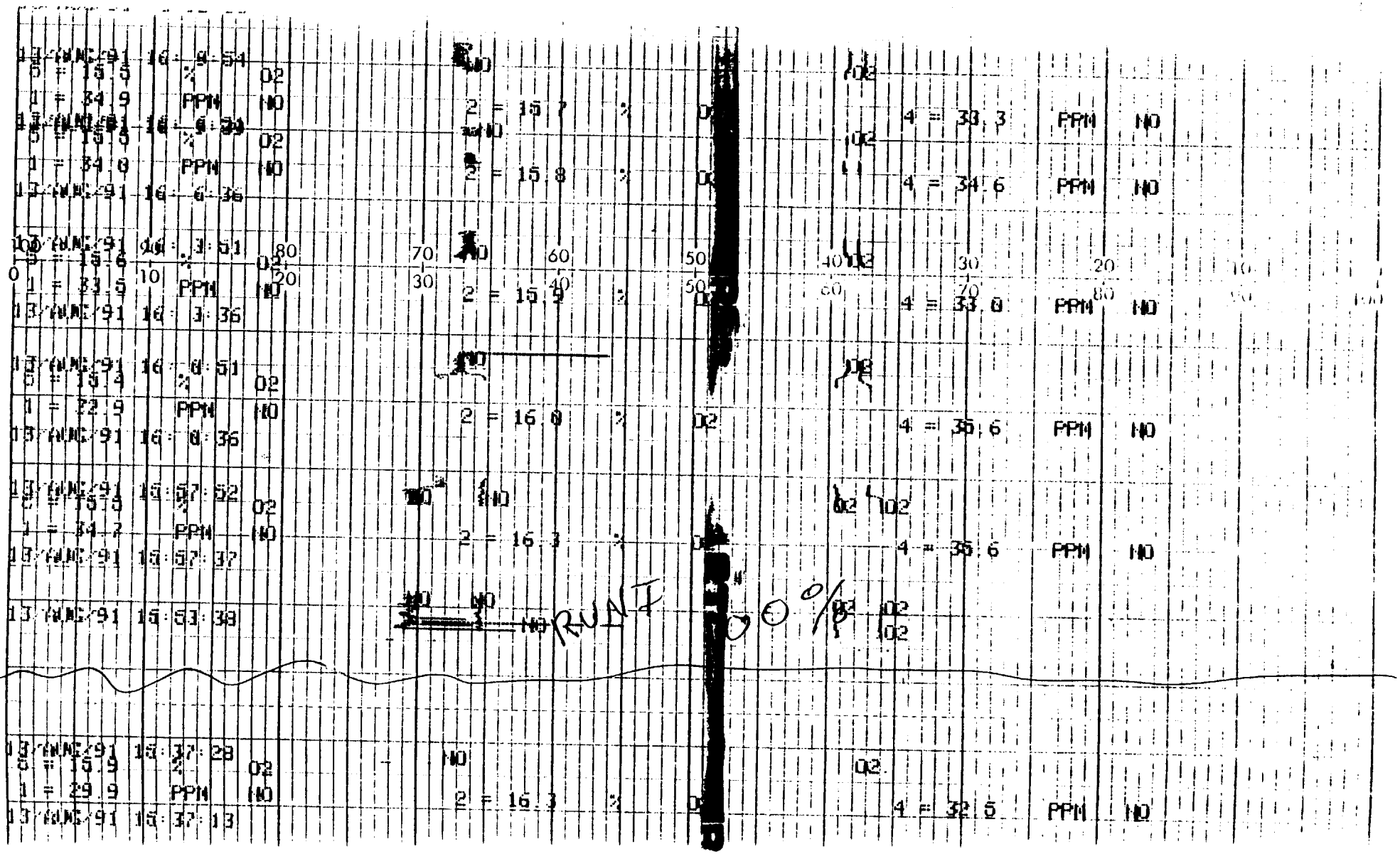
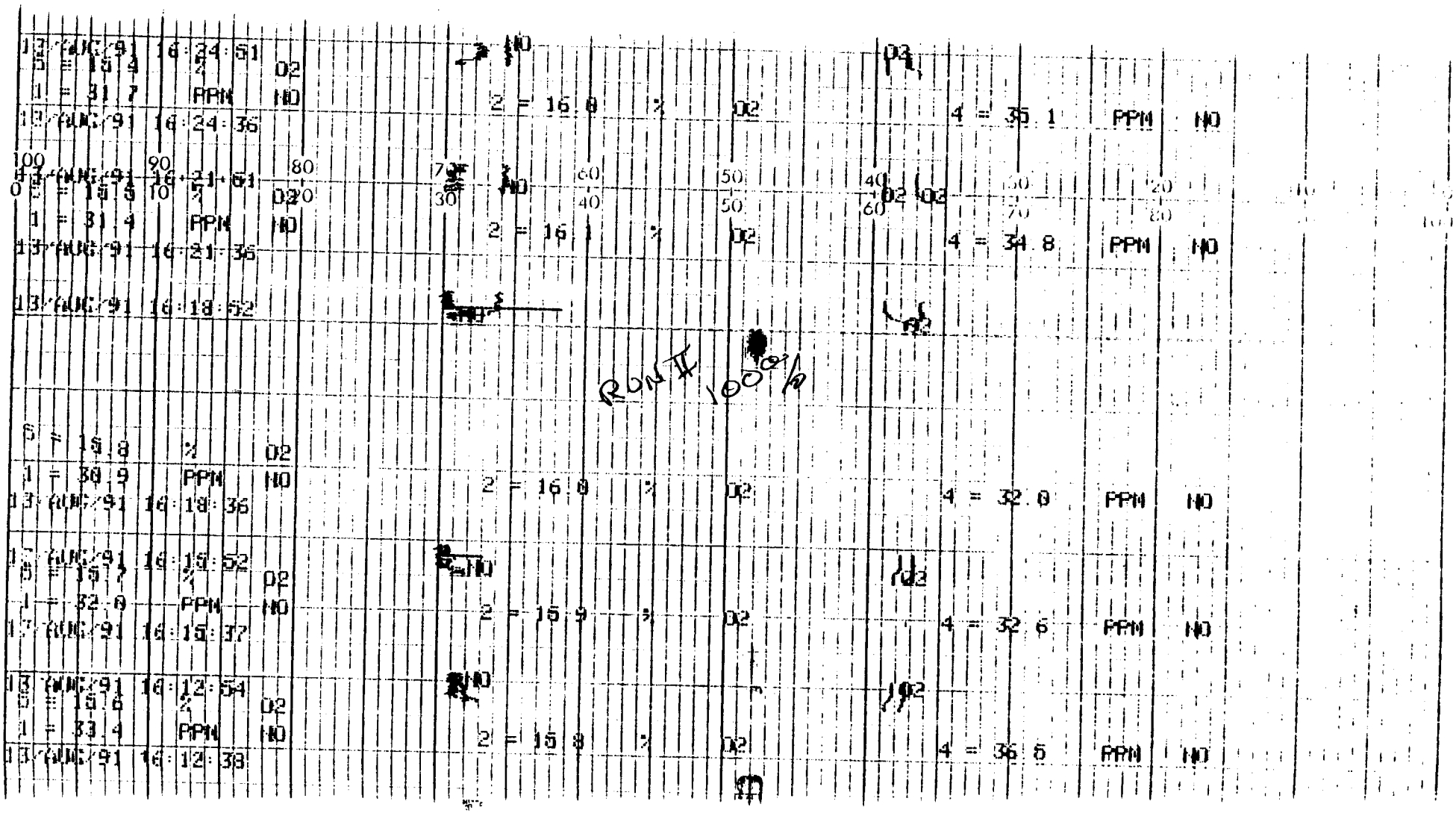
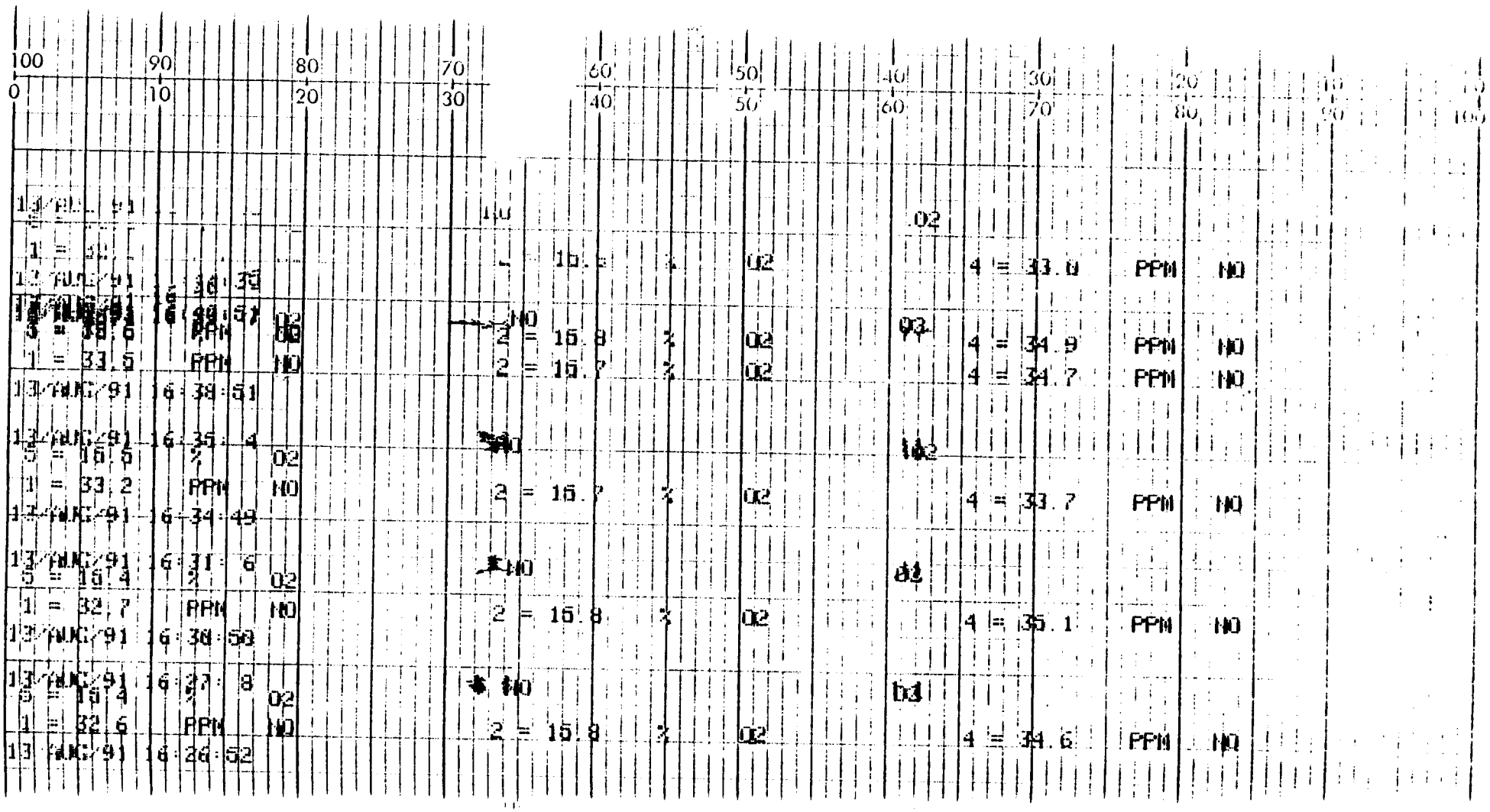
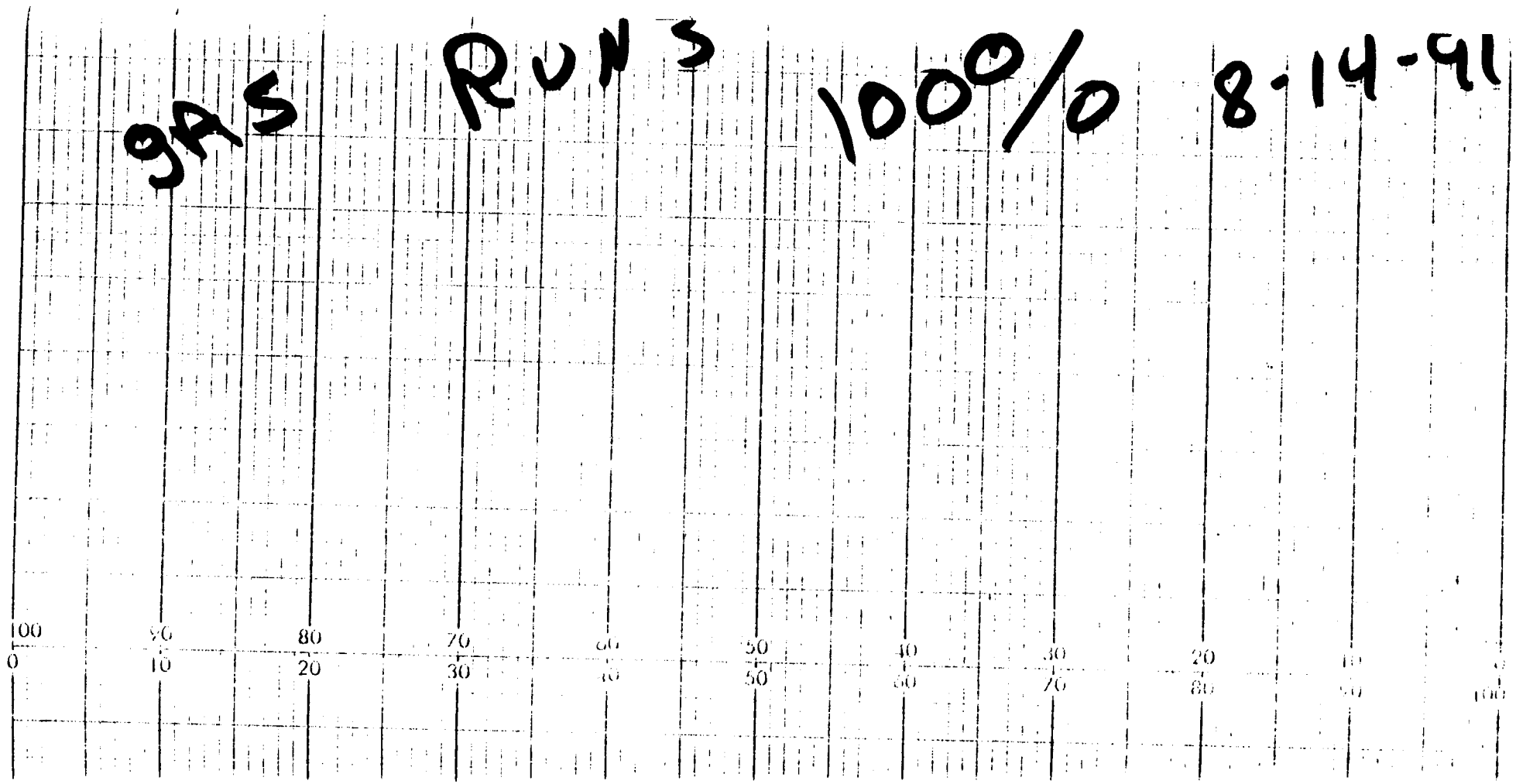
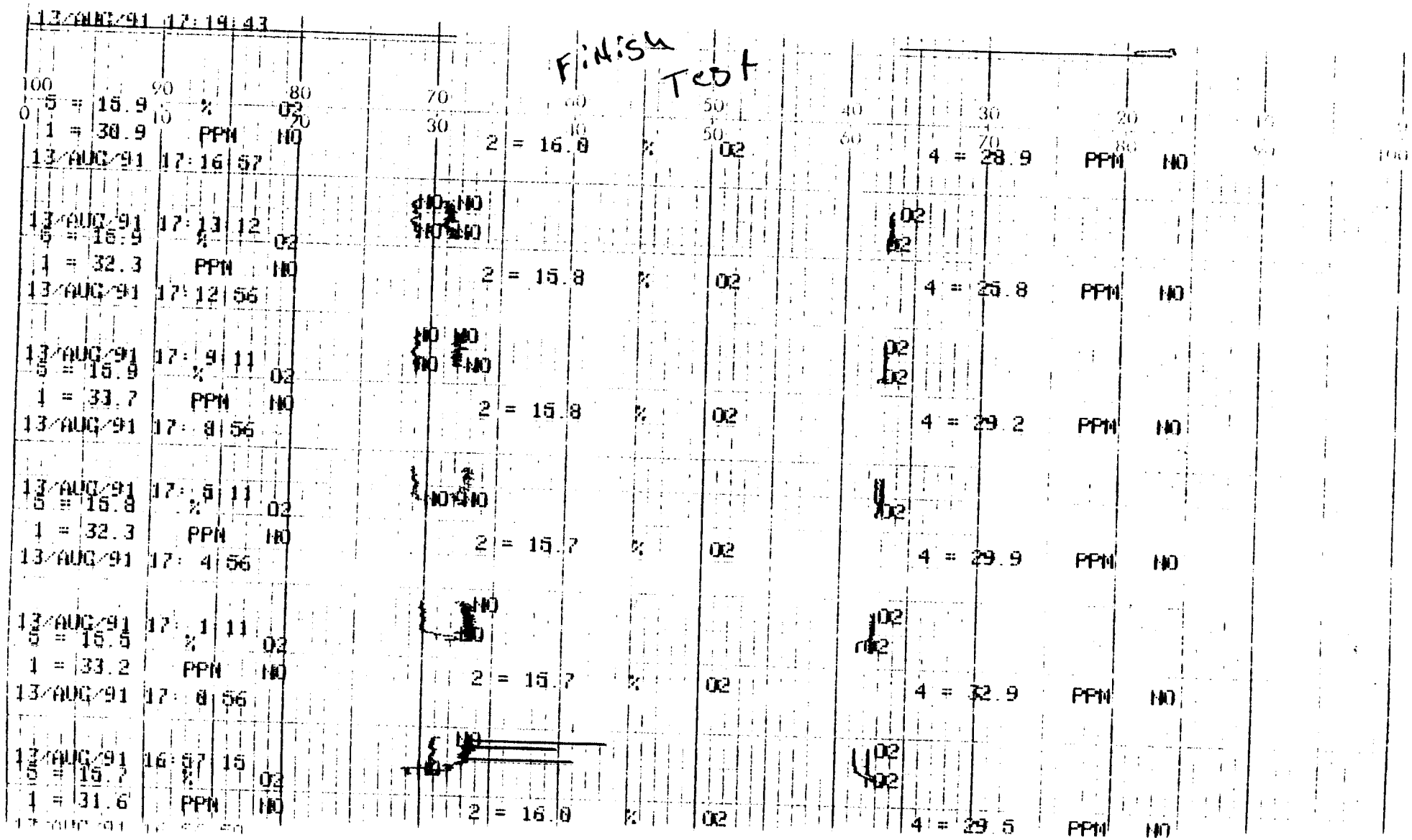


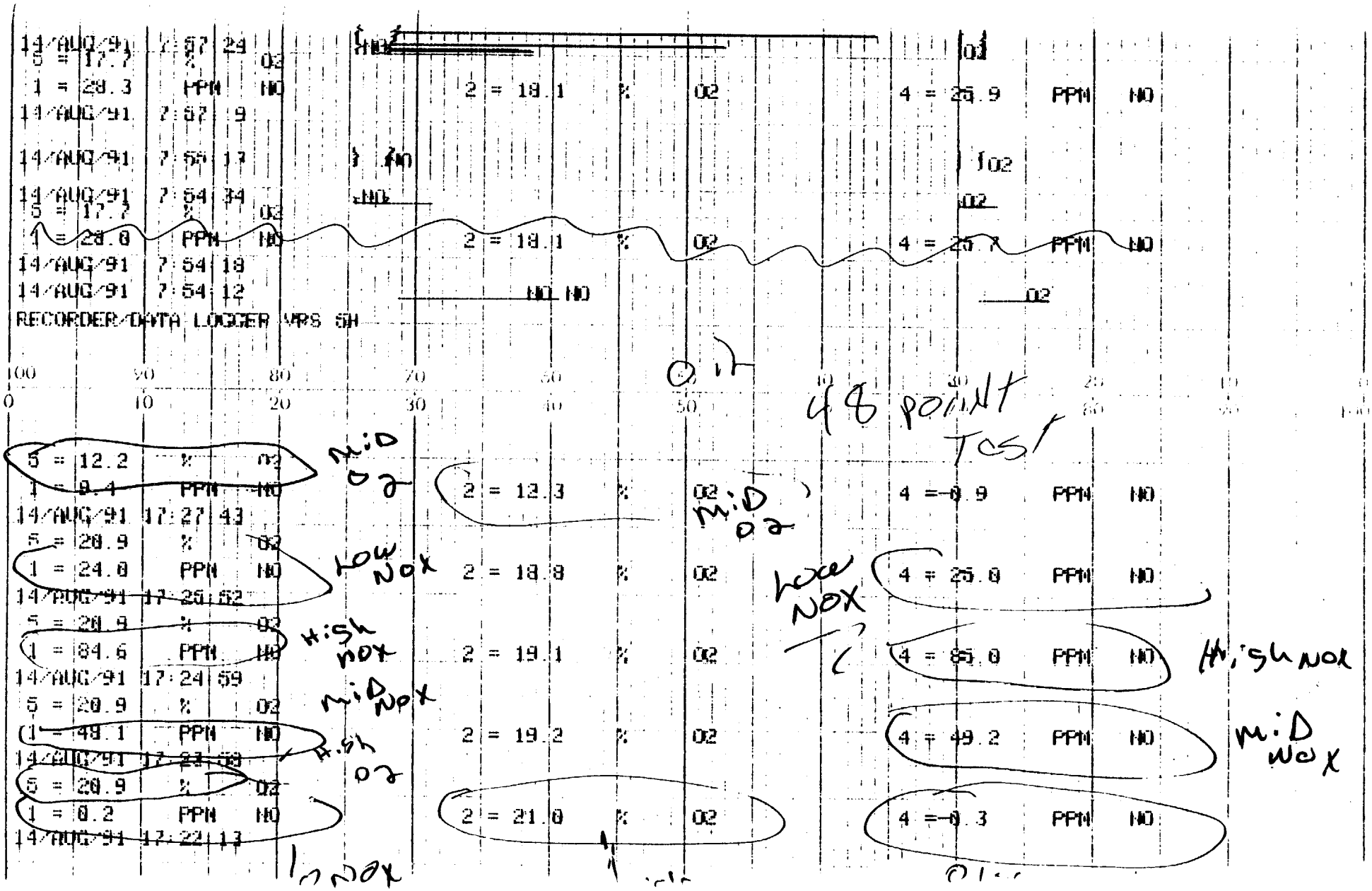
CHART NO 414446
13-JUN-91 16:3:54
0 = 15.5 % 02
1 = 34.9 PPM NO
13-JUN-91 16:3:39
0 = 15.6 % 02
1 = 34.8 PPM NO
13-JUN-91 16:3:36
13-JUN-91 16:3:51
0 = 15.6 % 02
1 = 33.5 PPM NO
13-JUN-91 16:3:36
13-JUN-91 16:0:51
0 = 15.4 % 02
1 = 22.9 PPM NO
13-JUN-91 16:0:36
13-JUN-91 15:57:52
0 = 15.5 % 02
1 = 34.2 PPM NO
13-JUN-91 15:57:37
13-JUN-91 15:53:38
13-JUN-91 15:37:28
0 = 15.9 % 02
1 = 29.9 PPM NO
13-JUN-91 15:37:13
2 = 15.7 % 02
2 = 15.8 % 02
2 = 15.9 % 02
2 = 16.0 % 02
2 = 16.3 % 02
2 = 16.3 % 02
4 = 33.3 PPM NO
4 = 34.6 PPM NO
4 = 33.0 PPM NO
4 = 36.6 PPM NO
4 = 36.6 PPM NO
4 = 32.5 PPM NO
RUN

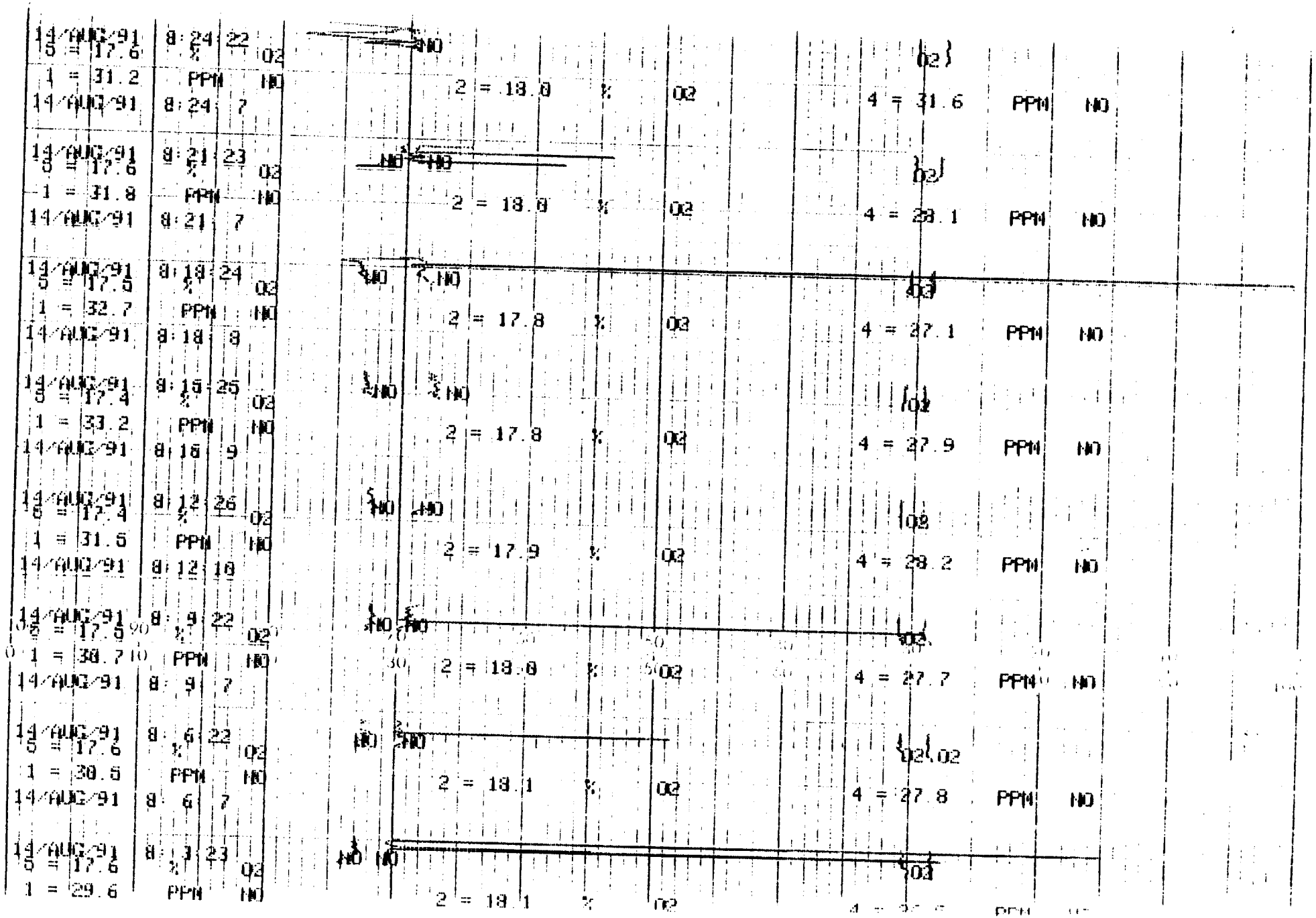

RUN # 100%


100
0
90
10
80
20
70
30
60
40
50
50
40
60
30
70
20
80
10
90
0
100
02
4 = 33.0 PPM NO
03
4 = 34.9 PPM NO
4 = 34.7 PPM NO
02
4 = 33.7 PPM NO
02
4 = 35.1 PPM NO
02
4 = 34.6 PPM NO


9RS RUNS 1000/0 8-14-91
100
0
90
10
80
20
70
30
60
40
50
50
40
60
30
70
20
80
10
90
100


FINISH TEST
13/AUG/91 17:19:43
5 = 15.9 % O2
1 = 30.9 PPM NO
13/AUG/91 17:16:57
13/AUG/91 17:13:12
5 = 16.9 % O2
1 = 32.3 PPM NO
13/AUG/91 17:12:56
13/AUG/91 17: 9:11
5 = 16.9 % O2
1 = 33.7 PPM NO
13/AUG/91 17: 8:56
13/AUG/91 17: 5:11
5 = 15.8 % O2
1 = 32.3 PPM NO
13/AUG/91 17: 4:56
13/AUG/91 17: 1:11
5 = 15.5 % O2
1 = 33.2 PPM NO
13/AUG/91 17: 0:56
13/AUG/91 16:57:15
5 = 15.7 % O2
1 = 31.6 PPM NO
2 = 16.0 % O2
2 = 15.8 % O2
2 = 15.8 % O2
2 = 15.7 % O2
2 = 15.7 % O2
2 = 16.0 % O2
4 = 28.9 PPM NO
4 = 26.8 PPM NO
4 = 29.2 PPM NO
4 = 29.9 PPM NO
4 = 32.9 PPM NO
4 = 29.5 PPM NO


14/AUG/91 7:57:29
5 = 17.7 % 02
1 = 28.3 PPM NO
14/AUG/91 7:57:9
14/AUG/91 7:55:17
14/AUG/91 7:54:34
5 = 17.7 % 02
1 = 28.0 PPM NO
14/AUG/91 7:54:18
14/AUG/91 7:54:12
RECORDER/DATA LOGGER VRS 5H
2 = 18.1 % 02
4 = 25.9 PPM NO
4 = 25.7 PPM NO
5 = 12.2 % 02
1 = 9.4 PPM NO
14/AUG/91 17:27:43
5 = 20.9 % 02
1 = 24.8 PPM NO
14/AUG/91 17:26:52
5 = 20.9 % 02
1 = 84.6 PPM NO
14/AUG/91 17:24:59
5 = 20.9 % 02
1 = 49.1 PPM NO
14/AUG/91 17:23:59
5 = 20.9 % 02
1 = 0.2 PPM NO
14/AUG/91 17:22:13
2 = 12.3 % 02
2 = 18.8 % 02
2 = 19.1 % 02
2 = 19.2 % 02
2 = 21.0 % 02
4 = 0.9 PPM NO
4 = 25.0 PPM NO
4 = 85.0 PPM NO
4 = 49.2 PPM NO
4 = 0.3 PPM NO
48 point Test
Low NOx
High NOx
Mid NOx
Mid O2
High O2
Low NOx


14/AUG/91 8:24 22
5 = 17.6 % 02
1 = 31.2 PPM NO
14/AUG/91 8:24 7
14/AUG/91 8:21 23
5 = 17.6 % 02
1 = 31.8 PPM NO
14/AUG/91 8:21 7
14/AUG/91 8:18 24
5 = 17.5 % 02
1 = 32.7 PPM NO
14/AUG/91 8:18 8
14/AUG/91 8:15 26
5 = 17.4 % 02
1 = 33.2 PPM NO
14/AUG/91 8:15 9
14/AUG/91 8:12 26
5 = 17.4 % 02
1 = 31.5 PPM NO
14/AUG/91 8:12 10
14/AUG/91 8:9 22
5 = 17.5 % 02
1 = 30.7 PPM NO
14/AUG/91 8:9 7
14/AUG/91 8:6 22
5 = 17.6 % 02
1 = 30.6 PPM NO
14/AUG/91 8:6 7
14/AUG/91 8:3 23
5 = 17.6 % 02
1 = 29.6 PPM NO
2 = 18.0 % 02
4 = 31.6 PPM NO
2 = 18.0 % 02
4 = 28.1 PPM NO
2 = 17.8 % 02
4 = 27.1 PPM NO
2 = 17.8 % 02
4 = 27.9 PPM NO
2 = 17.9 % 02
4 = 28.2 PPM NO
2 = 18.0 % 02
4 = 27.7 PPM NO
2 = 18.1 % 02
4 = 27.8 PPM NO
2 = 18.1 % 02

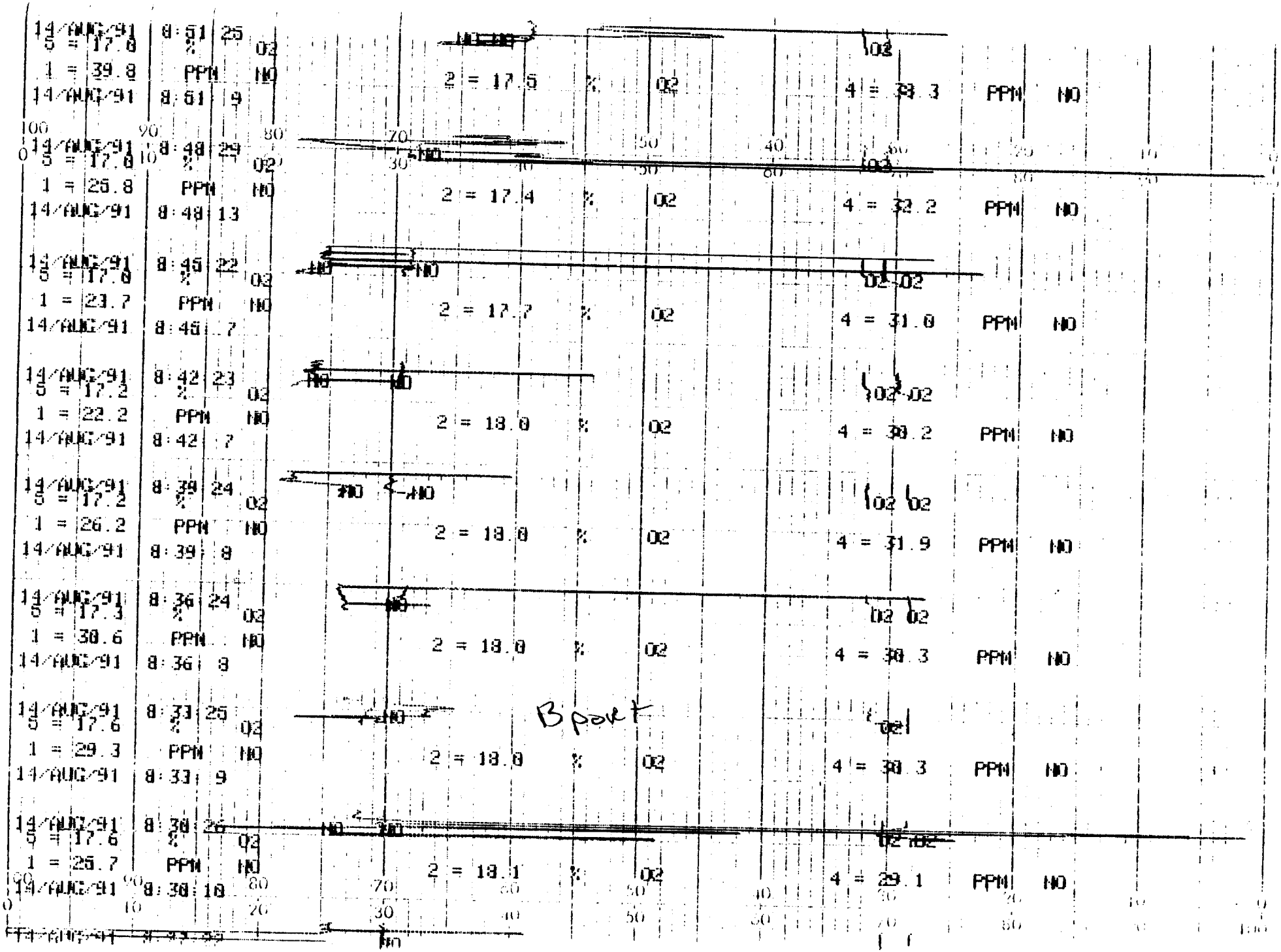
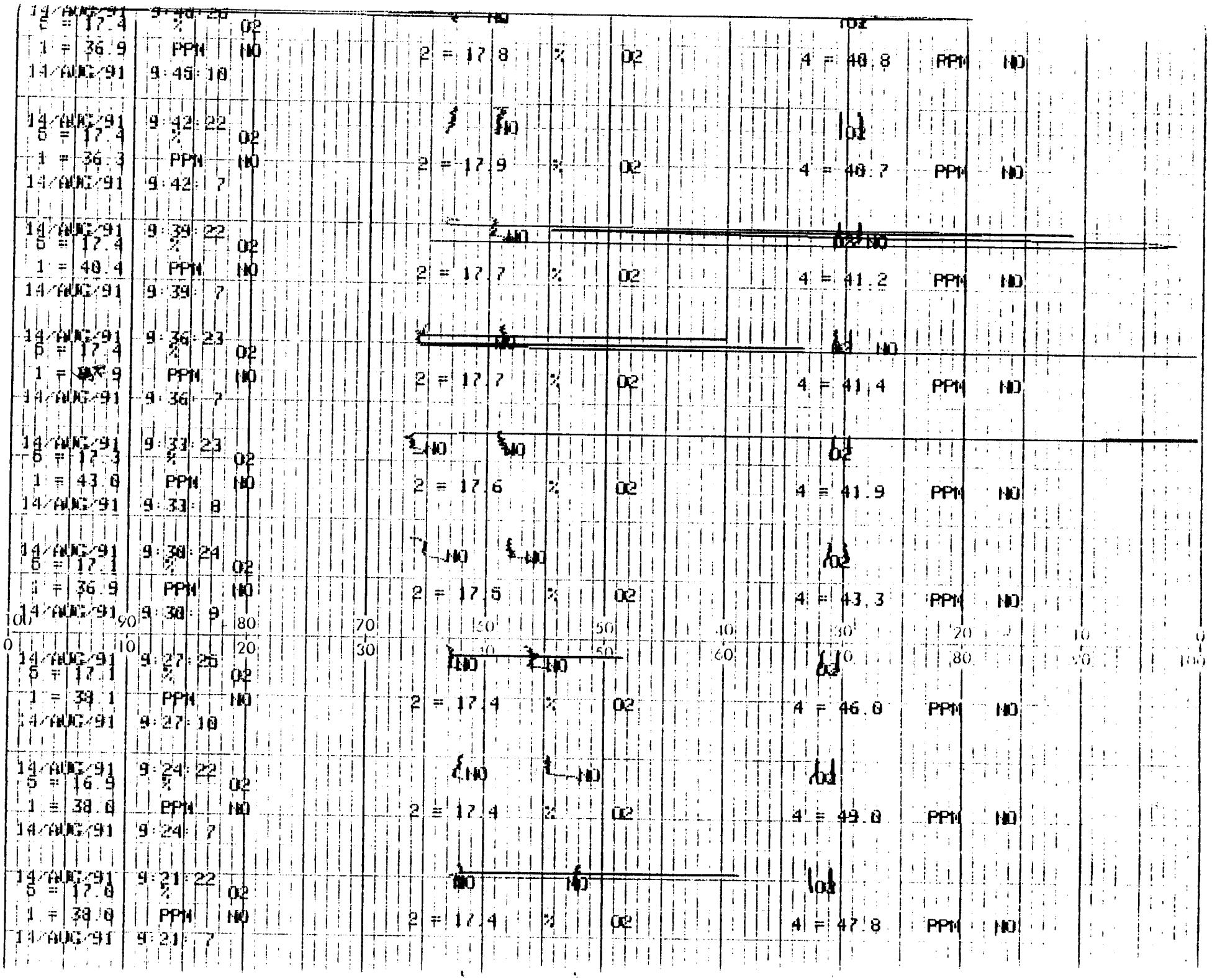
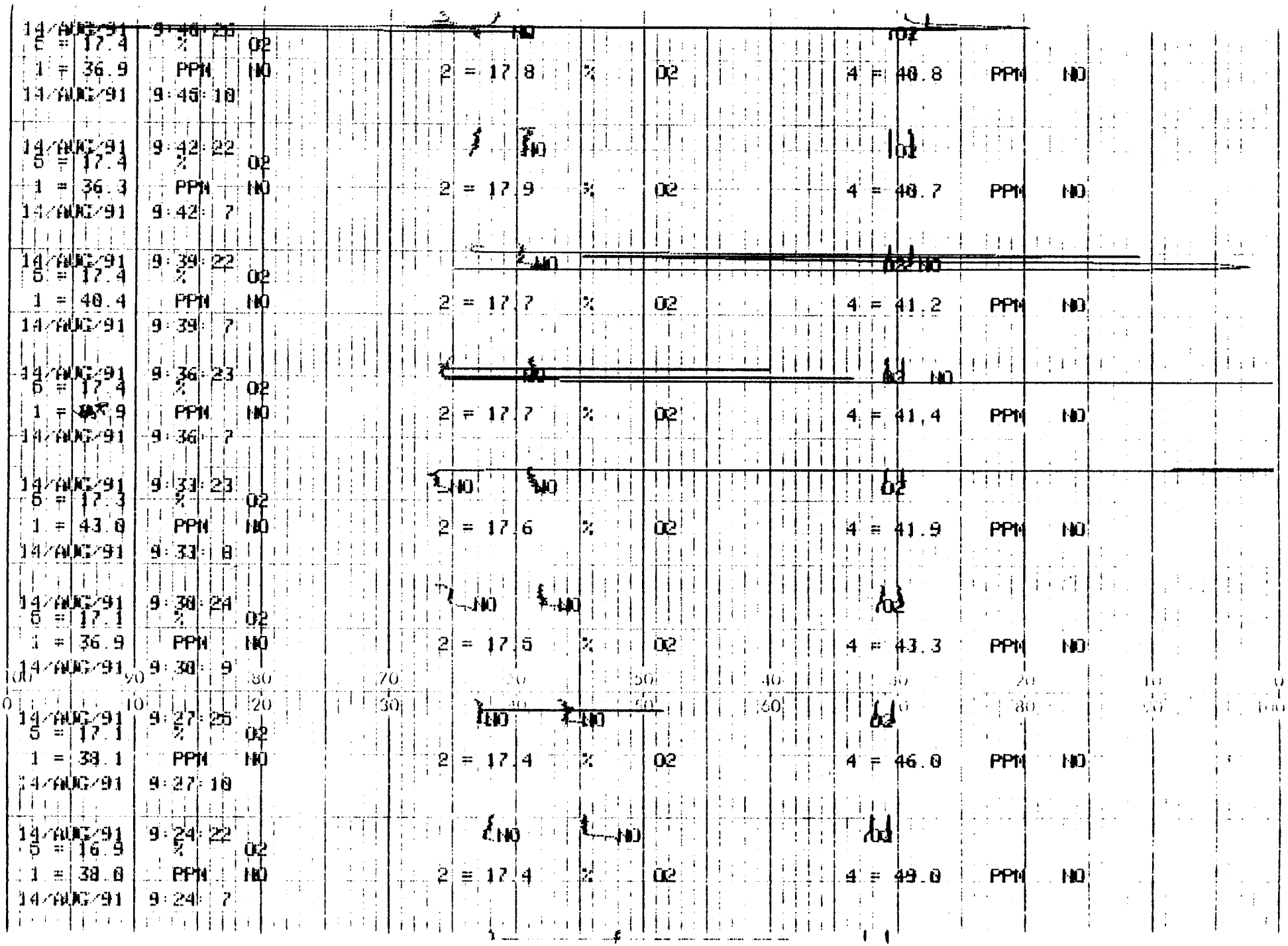
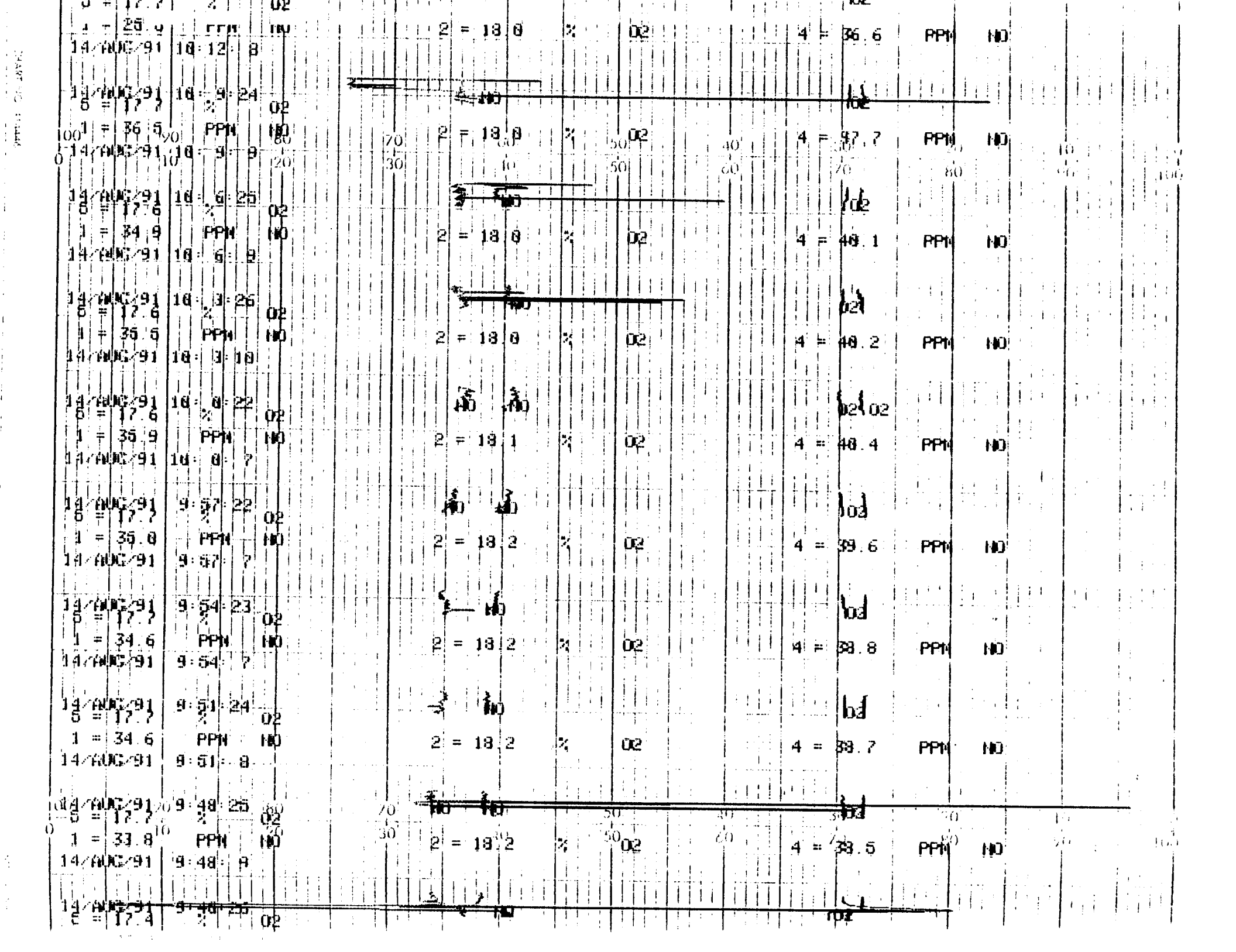
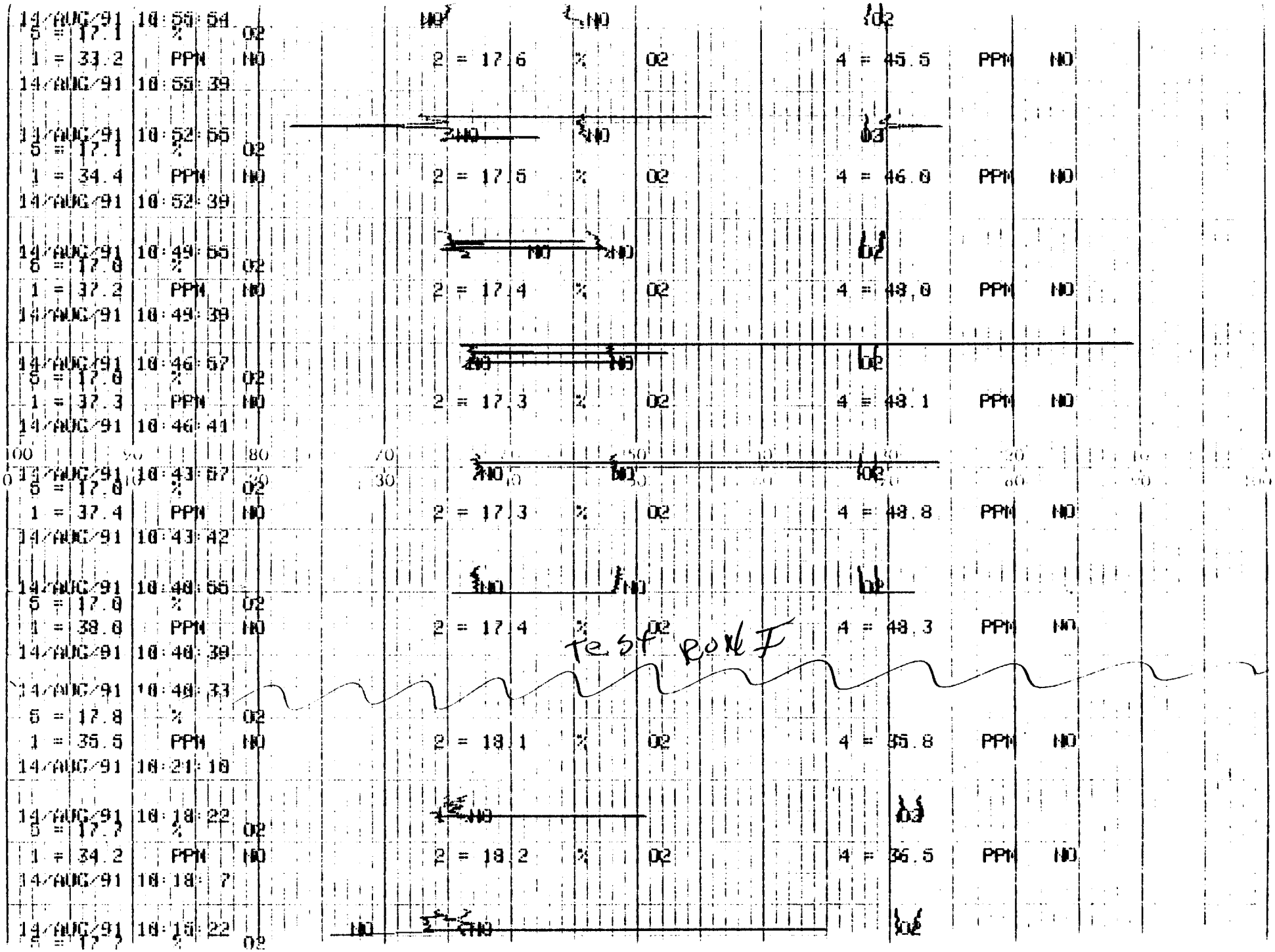

14/AUG/91 8:51 25
5 = 17.6 % 02
1 = 39.8 PPM NO
14/AUG/91 8:51 9
2 = 17.5 % 02
4 = 33.3 PPM NO
14/AUG/91 8:48 29
5 = 17.0 % 02
1 = 25.8 PPM NO
14/AUG/91 8:48 13
2 = 17.4 % 02
4 = 32.2 PPM NO
14/AUG/91 8:45 22
5 = 17.0 % 02
1 = 23.7 PPM NO
14/AUG/91 8:45 7
2 = 17.7 % 02
4 = 31.0 PPM NO
14/AUG/91 8:42 23
5 = 17.2 % 02
1 = 22.2 PPM NO
14/AUG/91 8:42 7
2 = 18.0 % 02
4 = 30.2 PPM NO
14/AUG/91 8:39 24
5 = 17.2 % 02
1 = 26.2 PPM NO
14/AUG/91 8:39 8
2 = 18.0 % 02
4 = 31.9 PPM NO
14/AUG/91 8:36 24
5 = 17.3 % 02
1 = 30.6 PPM NO
14/AUG/91 8:36 8
2 = 18.0 % 02
4 = 30.3 PPM NO
14/AUG/91 8:33 25
5 = 17.6 % 02
1 = 29.3 PPM NO
14/AUG/91 8:33 9
2 = 18.0 % 02
4 = 30.3 PPM NO
14/AUG/91 8:30 26
5 = 17.6 % 02
1 = 25.7 PPM NO
14/AUG/91 8:30 10
2 = 18.1 % 02
4 = 29.1 PPM NO
Bport

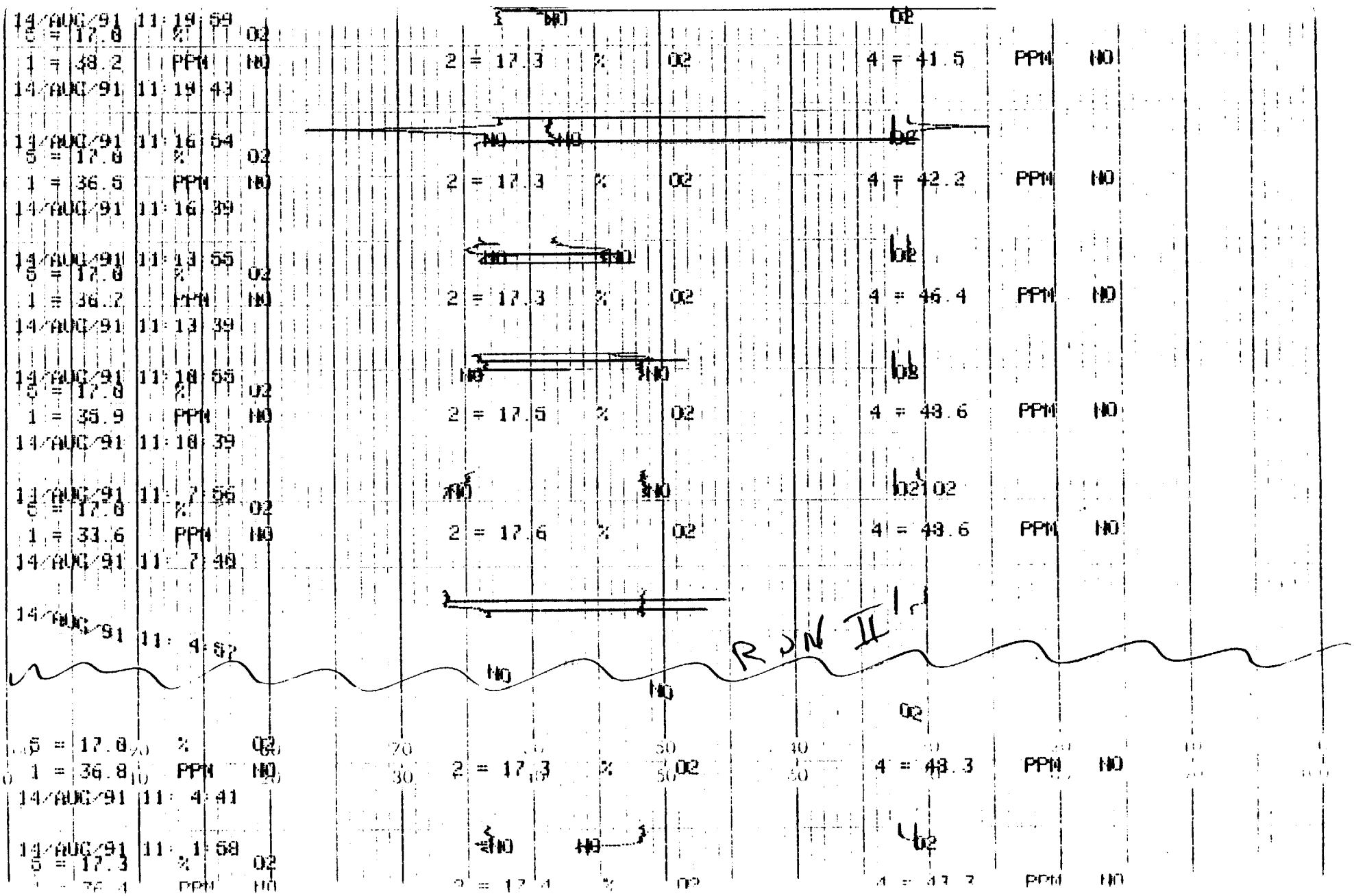
CHART NO. 41446

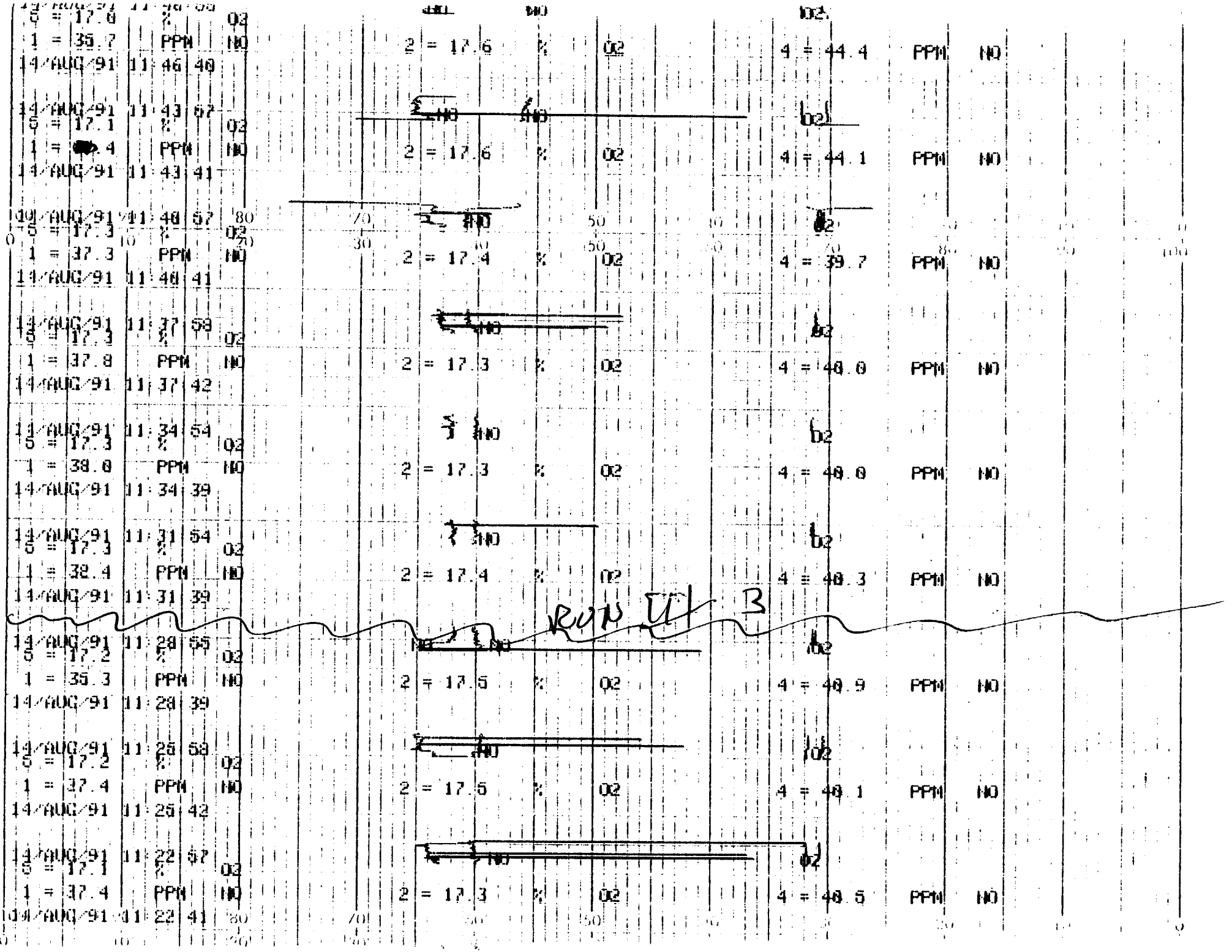

14/AUG/91 9:45:10
1 = 36.9 PPM NO
2 = 17.8 % O2
4 = 40.8 PPM NO
14/AUG/91 9:42:22
5 = 17.4 % O2
1 = 36.3 PPM NO
2 = 17.9 % O2
4 = 40.7 PPM NO
14/AUG/91 9:39:22
5 = 17.4 % O2
1 = 40.4 PPM NO
2 = 17.7 % O2
4 = 41.2 PPM NO
14/AUG/91 9:36:23
5 = 17.4 % O2
1 = 43.9 PPM NO
2 = 17.7 % O2
4 = 41.4 PPM NO
14/AUG/91 9:33:23
5 = 17.3 % O2
1 = 43.0 PPM NO
2 = 17.6 % O2
4 = 41.9 PPM NO
14/AUG/91 9:30:24
5 = 17.1 % O2
1 = 36.9 PPM NO
2 = 17.5 % O2
4 = 43.3 PPM NO
14/AUG/91 9:27:25
5 = 17.1 % O2
1 = 38.1 PPM NO
2 = 17.4 % O2
4 = 46.0 PPM NO
14/AUG/91 9:24:22
5 = 16.9 % O2
1 = 38.0 PPM NO
2 = 17.4 % O2
4 = 49.0 PPM NO
14/AUG/91 9:21:22
5 = 17.0 % O2
1 = 38.0 PPM NO
2 = 17.4 % O2
4 = 47.8 PPM NO

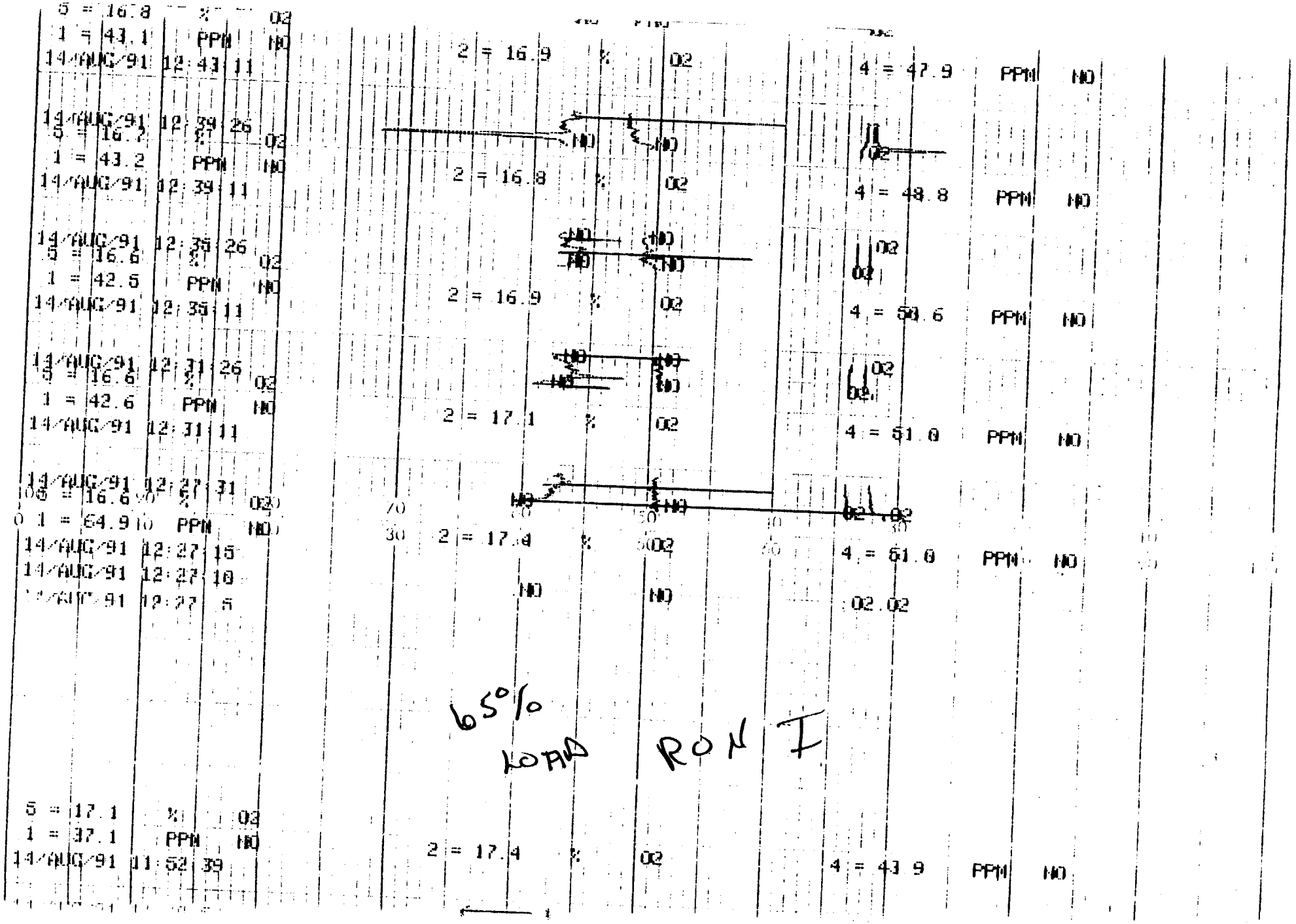

14/AUG/91 9:46:25
6 = 17.4 % 02
1 = 36.9 PPM NO
2 = 17.8 % 02
4 = 40.8 PPM NO
14/AUG/91 9:46:10
14/AUG/91 9:42:22
6 = 17.4 % 02
1 = 36.3 PPM NO
2 = 17.9 % 02
4 = 40.7 PPM NO
14/AUG/91 9:42:7
14/AUG/91 9:39:22
6 = 17.4 % 02
1 = 40.4 PPM NO
2 = 17.7 % 02
4 = 41.2 PPM NO
14/AUG/91 9:39:7
14/AUG/91 9:36:23
6 = 17.4 % 02
1 = 43.9 PPM NO
2 = 17.7 % 02
4 = 41.4 PPM NO
14/AUG/91 9:36:7
14/AUG/91 9:33:23
6 = 17.3 % 02
1 = 43.0 PPM NO
2 = 17.6 % 02
4 = 41.9 PPM NO
14/AUG/91 9:33:8
14/AUG/91 9:30:24
6 = 17.1 % 02
1 = 36.9 PPM NO
2 = 17.5 % 02
4 = 43.3 PPM NO
14/AUG/91 9:30:9
14/AUG/91 9:27:25
6 = 17.1 % 02
1 = 38.1 PPM NO
2 = 17.4 % 02
4 = 46.0 PPM NO
14/AUG/91 9:27:10
14/AUG/91 9:24:22
6 = 16.9 % 02
1 = 38.0 PPM NO
2 = 17.4 % 02
4 = 49.0 PPM NO
14/AUG/91 9:24:7
100 90 80 70 60 50 40 30 20 10 0
0 10 20 30 40 50 60 70 80 90 100

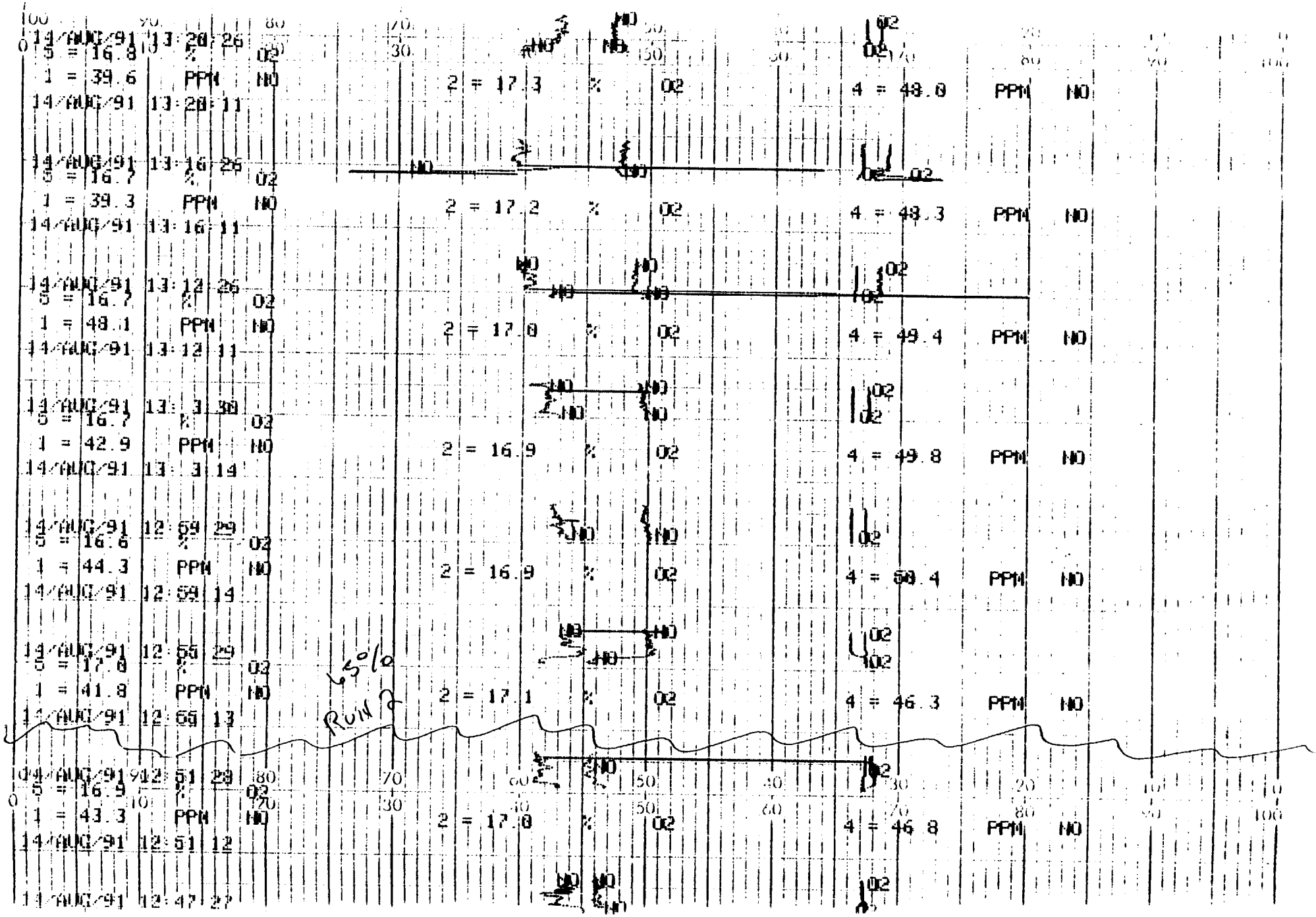

14/AUG/91 10:12: 8
14/AUG/91 10: 9:24
14/AUG/91 10: 9: 9
14/AUG/91 10: 6:25
14/AUG/91 10: 6: 9
14/AUG/91 10: 3:26
14/AUG/91 10: 3:10
14/AUG/91 10: 0:22
14/AUG/91 10: 0: 7
14/AUG/91 9:57:22
14/AUG/91 9:57: 7
14/AUG/91 9:54:23
14/AUG/91 9:54: 7
14/AUG/91 9:51:24
14/AUG/91 9:51: 8
14/AUG/91 9:48:25
14/AUG/91 9:48: 8
14/AUG/91 9:45:25
1 = 25.9 PPM NO
2 = 18.0 % 02
4 = 36.6 PPM NO
1 = 36.5 PPM NO
2 = 18.0 % 02
4 = 37.7 PPM NO
1 = 34.9 PPM NO
2 = 18.0 % 02
4 = 40.1 PPM NO
1 = 35.6 PPM NO
2 = 18.0 % 02
4 = 40.2 PPM NO
1 = 35.9 PPM NO
2 = 18.1 % 02
4 = 40.4 PPM NO
1 = 35.0 PPM NO
2 = 18.2 % 02
4 = 39.6 PPM NO
1 = 34.6 PPM NO
2 = 18.2 % 02
4 = 38.8 PPM NO
1 = 34.6 PPM NO
2 = 18.2 % 02
4 = 38.7 PPM NO
1 = 33.8 PPM NO
2 = 18.2 % 02
4 = 38.5 PPM NO

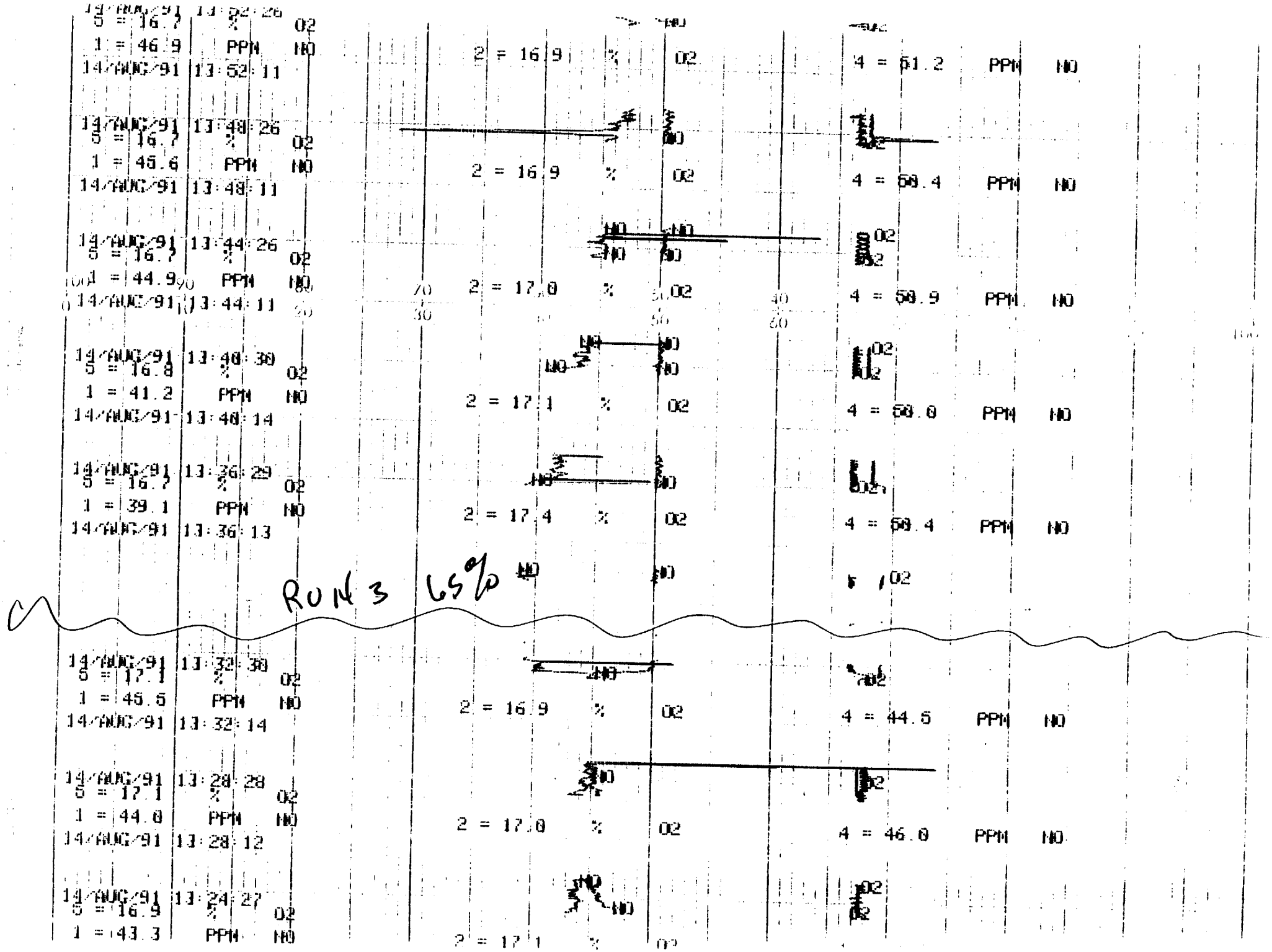

14/AUG/91 10:55:54
5 = 17.1 % 02
1 = 33.2 PPM NO
2 = 17.6 % 02
4 = 45.5 PPM NO
14/AUG/91 10:55:39
14/AUG/91 10:52:55
5 = 17.1 % 02
1 = 34.4 PPM NO
2 = 17.5 % 02
4 = 46.0 PPM NO
14/AUG/91 10:52:39
14/AUG/91 10:49:55
5 = 17.0 % 02
1 = 37.2 PPM NO
2 = 17.4 % 02
4 = 48.0 PPM NO
14/AUG/91 10:49:39
14/AUG/91 10:46:57
5 = 17.0 % 02
1 = 37.3 PPM NO
2 = 17.3 % 02
4 = 48.1 PPM NO
14/AUG/91 10:46:41
14/AUG/91 10:43:57
5 = 17.0 % 02
1 = 37.4 PPM NO
2 = 17.3 % 02
4 = 48.8 PPM NO
14/AUG/91 10:43:42
14/AUG/91 10:40:55
5 = 17.0 % 02
1 = 38.0 PPM NO
2 = 17.4 % 02
4 = 48.3 PPM NO
14/AUG/91 10:40:39
14/AUG/91 10:40:33
5 = 17.8 % 02
1 = 35.5 PPM NO
2 = 18.1 % 02
4 = 35.8 PPM NO
14/AUG/91 10:21:10
14/AUG/91 10:18:22
5 = 17.7 % 02
1 = 34.2 PPM NO
2 = 18.2 % 02
4 = 36.5 PPM NO
14/AUG/91 10:18:7
14/AUG/91 10:16:22
5 = 17.7 % 02
Test Book F

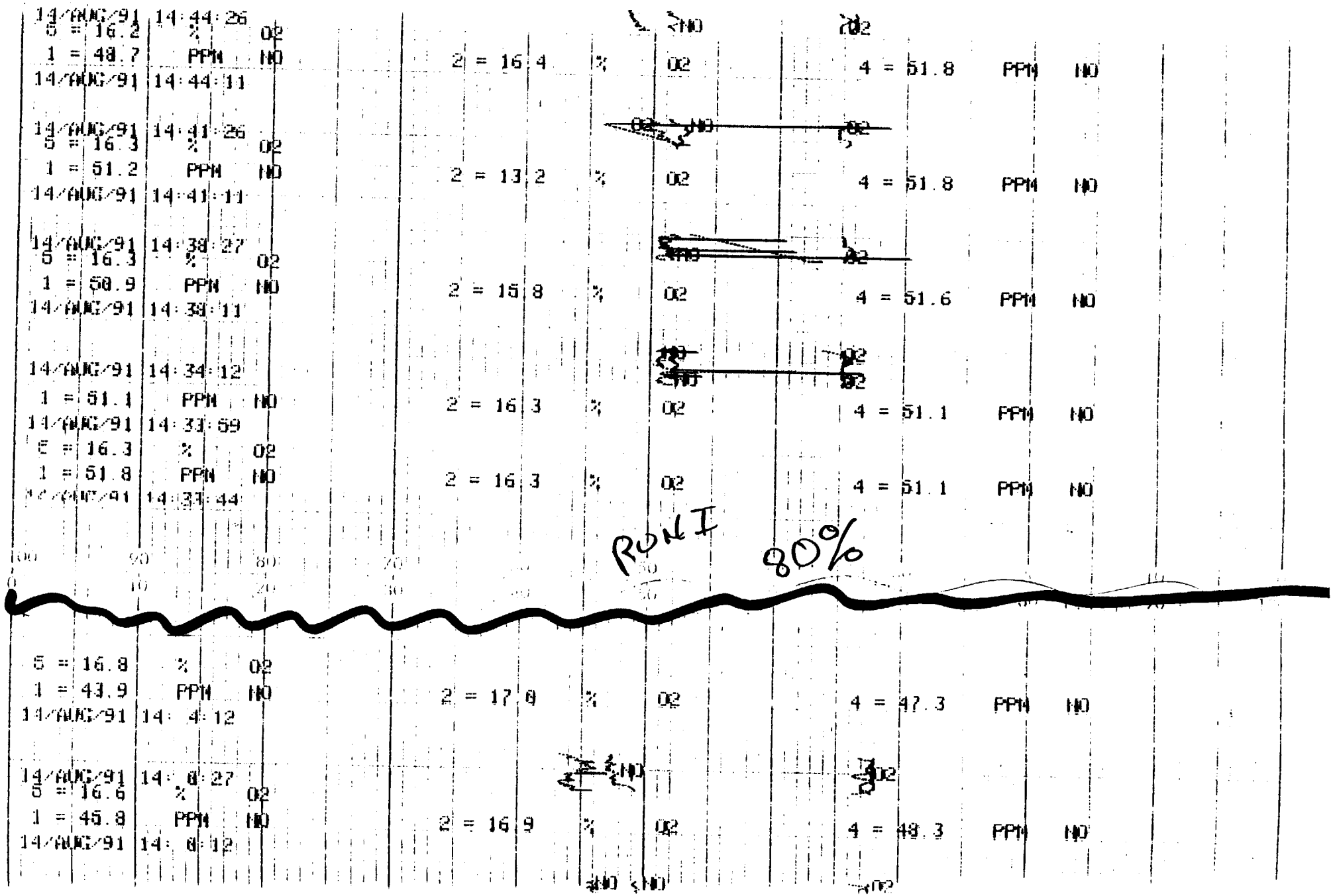

14/AUG/91 11:19:59
5 = 17.8 % O2
1 = 48.2 PPM NO
14/AUG/91 11:19:43
14/AUG/91 11:16:54
5 = 17.8 % O2
1 = 36.5 PPM NO
14/AUG/91 11:16:39
14/AUG/91 11:13:55
5 = 17.8 % O2
1 = 36.2 PPM NO
14/AUG/91 11:13:39
14/AUG/91 11:10:55
5 = 17.8 % O2
1 = 35.9 PPM NO
14/AUG/91 11:10:39
14/AUG/91 11:7:56
5 = 17.8 % O2
1 = 33.6 PPM NO
14/AUG/91 11:7:40
14/AUG/91 11:4:57
5 = 17.8 % O2
1 = 36.8 PPM NO
14/AUG/91 11:4:41
14/AUG/91 11:1:58
5 = 17.3 % O2
2 = 17.3 % O2
4 = 41.5 PPM NO
2 = 17.3 % O2
4 = 42.2 PPM NO
2 = 17.3 % O2
4 = 46.4 PPM NO
2 = 17.5 % O2
4 = 43.6 PPM NO
2 = 17.6 % O2
4 = 43.6 PPM NO
2 = 17.3 % O2
4 = 43.3 PPM NO
RUN II

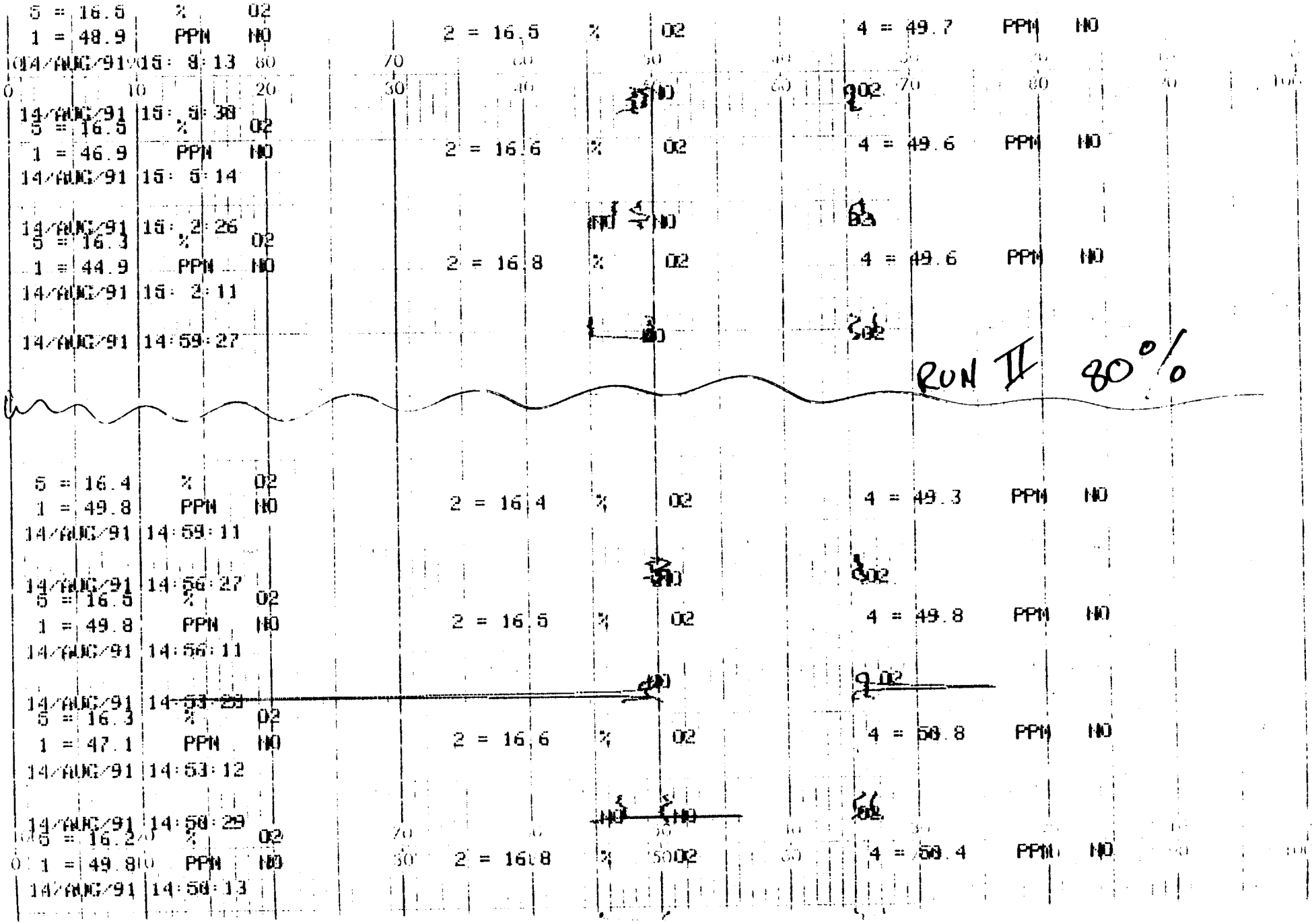

14/AUG/91 11:46:40
5 = 17.0 % O2
1 = 35.7 PPM NO
2 = 17.6 % O2
4 = 44.4 PPM NO
14/AUG/91 11:43:57
5 = 17.1 % O2
1 = 37.4 PPM NO
2 = 17.6 % O2
4 = 44.1 PPM NO
14/AUG/91 11:40:41
5 = 17.3 % O2
1 = 37.3 PPM NO
2 = 17.4 % O2
4 = 39.7 PPM NO
14/AUG/91 11:37:58
5 = 17.3 % O2
1 = 37.8 PPM NO
2 = 17.3 % O2
4 = 40.0 PPM NO
14/AUG/91 11:34:54
5 = 17.3 % O2
1 = 38.0 PPM NO
2 = 17.3 % O2
4 = 40.0 PPM NO
14/AUG/91 11:31:54
5 = 17.3 % O2
1 = 32.4 PPM NO
2 = 17.4 % O2
4 = 40.3 PPM NO
RUN #3
14/AUG/91 11:28:55
5 = 17.2 % O2
1 = 35.3 PPM NO
2 = 17.5 % O2
4 = 40.9 PPM NO
14/AUG/91 11:25:58
5 = 17.2 % O2
1 = 37.4 PPM NO
2 = 17.5 % O2
4 = 40.1 PPM NO
14/AUG/91 11:22:57
5 = 17.1 % O2
1 = 37.4 PPM NO
2 = 17.3 % O2
4 = 40.5 PPM NO
14/AUG/91 11:22:41

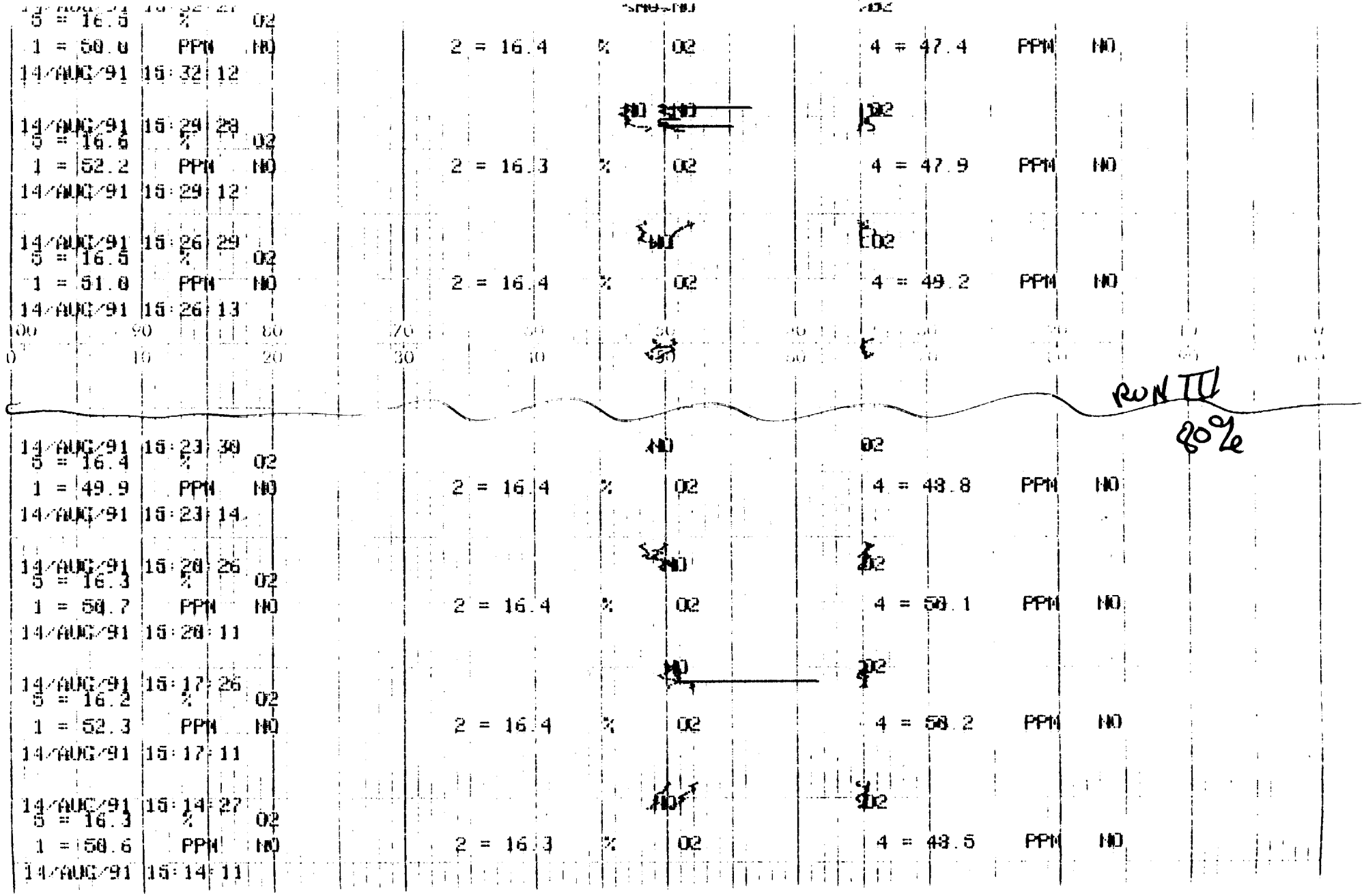

5 = 16.8 % 02
1 = 43.1 PPM NO
14/AUG/91 12:43:11
14/AUG/91 12:39:26
5 = 16.2 % 02
1 = 43.2 PPM NO
14/AUG/91 12:39:11
14/AUG/91 12:35:26
5 = 16.6 % 02
1 = 42.6 PPM NO
14/AUG/91 12:35:11
14/AUG/91 12:31:26
5 = 16.6 % 02
1 = 42.6 PPM NO
14/AUG/91 12:31:11
14/AUG/91 12:27:31
5 = 16.6 % 02
1 = 64.9 PPM NO
14/AUG/91 12:27:15
14/AUG/91 12:27:10
14/AUG/91 12:27:5
5 = 17.1 % 02
1 = 37.1 PPM NO
14/AUG/91 11:52:39
2 = 16.9 % 02
NO NO
2 = 16.8 % 02
NO NO
2 = 16.9 % 02
NO NO
2 = 17.1 % 02
NO NO
2 = 17.4 % 02
4 = 47.9 PPM NO
02
4 = 48.8 PPM NO
02
02
4 = 50.6 PPM NO
02
02
4 = 51.0 PPM NO
02 02
4 = 51.0 PPM NO
02.02
4 = 43.9 PPM NO
65%
LOAD
RON I

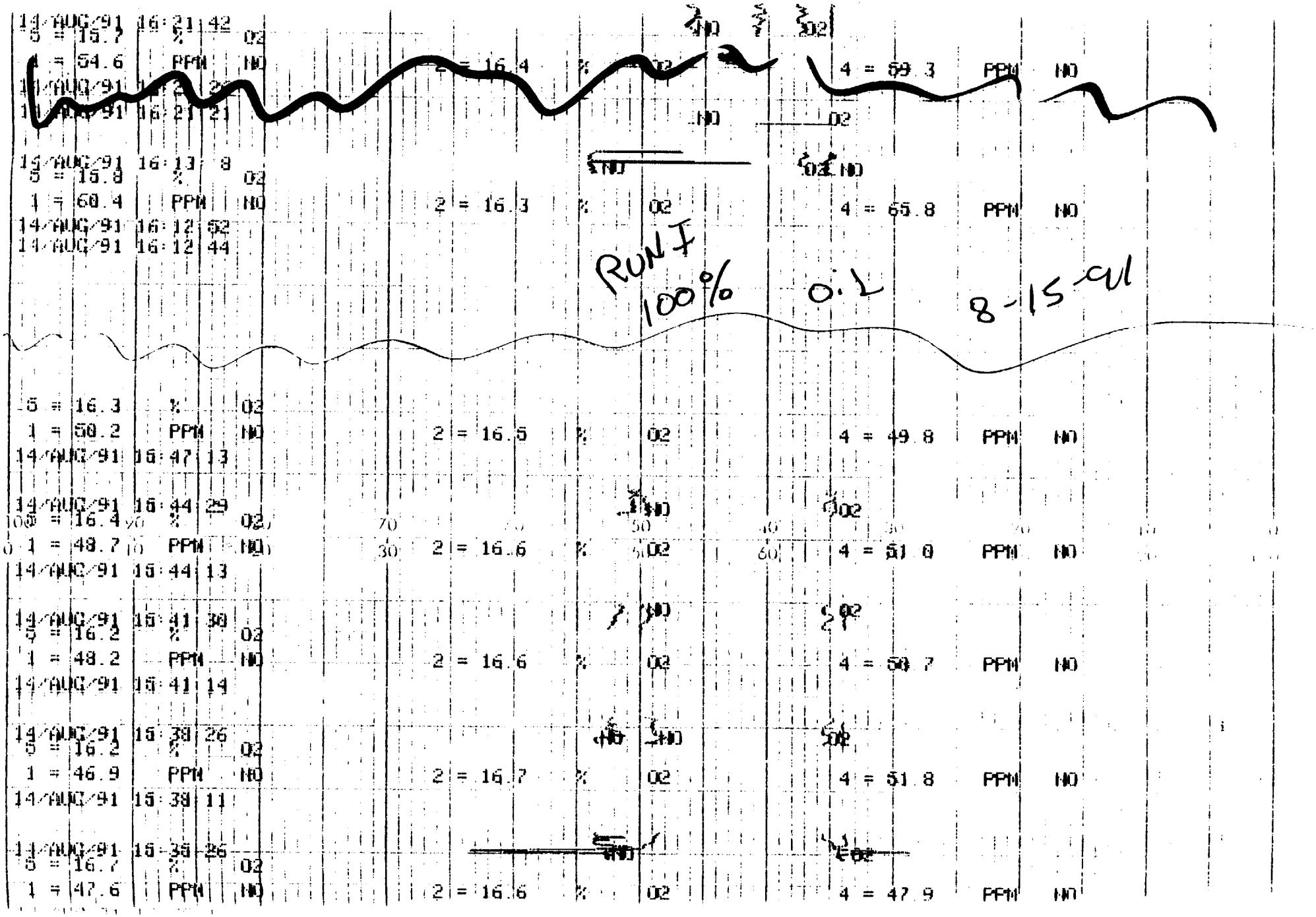

14/AUG/91 13:20:26
5 = 16.8 % 02
1 = 39.6 PPM NO
14/AUG/91 13:20:11
2 = 17.3 % 02
4 = 48.0 PPM NO
14/AUG/91 13:16:26
5 = 16.7 % 02
1 = 39.3 PPM NO
14/AUG/91 13:16:11
2 = 17.2 % 02
4 = 48.3 PPM NO
14/AUG/91 13:12:26
5 = 16.7 % 02
1 = 48.1 PPM NO
14/AUG/91 13:12:11
2 = 17.0 % 02
4 = 49.4 PPM NO
14/AUG/91 13:3:30
5 = 16.7 % 02
1 = 42.9 PPM NO
14/AUG/91 13:3:14
2 = 16.9 % 02
4 = 49.8 PPM NO
14/AUG/91 12:59:29
5 = 16.6 % 02
1 = 44.3 PPM NO
14/AUG/91 12:59:14
2 = 16.9 % 02
4 = 48.4 PPM NO
14/AUG/91 12:55:29
5 = 17.0 % 02
1 = 41.8 PPM NO
14/AUG/91 12:55:13
2 = 17.1 % 02
4 = 46.3 PPM NO
14/AUG/91 12:51:28
5 = 16.9 % 02
1 = 43.3 PPM NO
14/AUG/91 12:51:12
2 = 17.0 % 02
4 = 46.8 PPM NO
14/AUG/91 12:47:27
15%
RUN 2

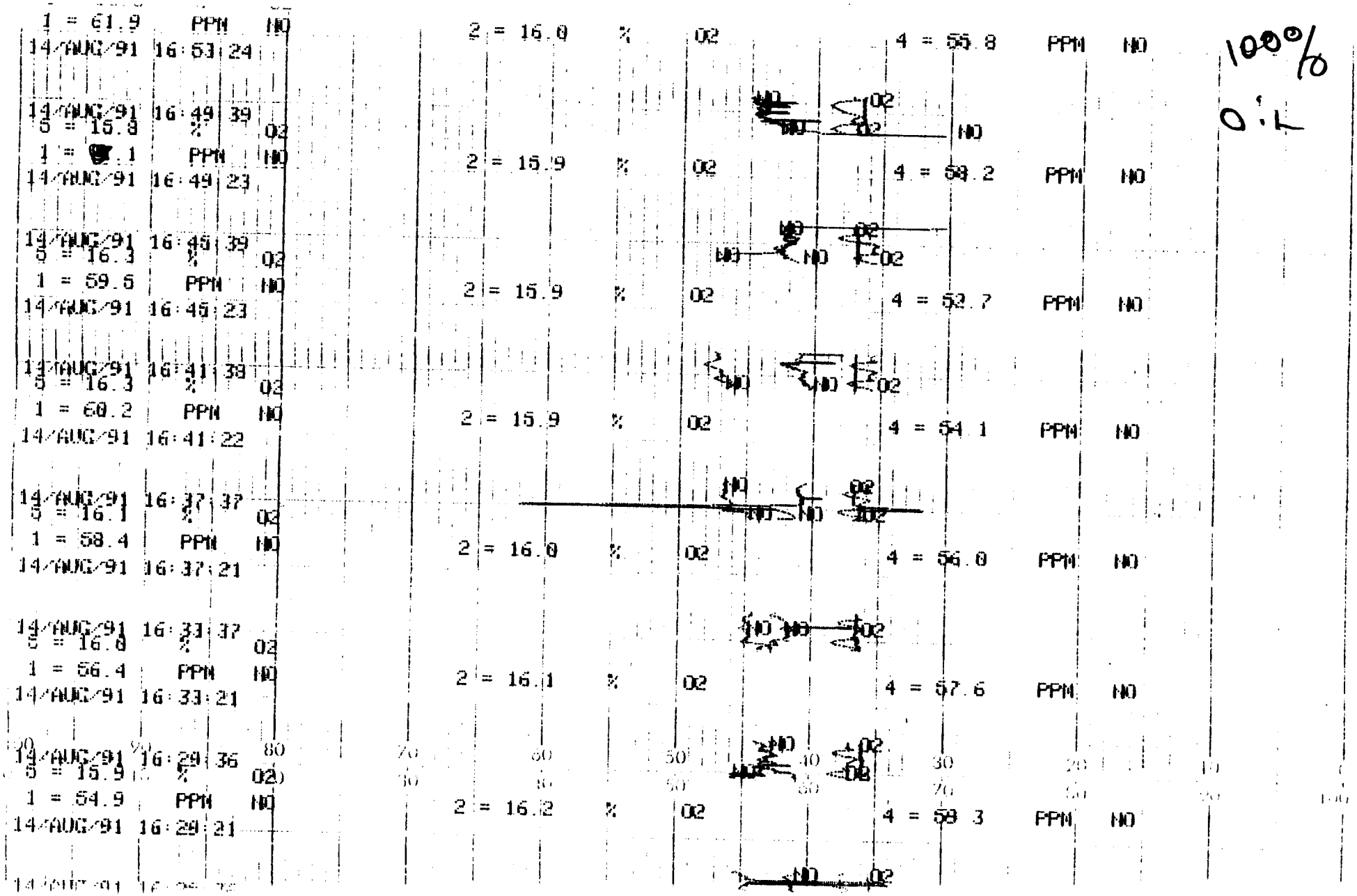

14/AUG/91 13:52:26
5 = 16.7 % 02
1 = 46.9 PPM NO
14/AUG/91 13:52:11
14/AUG/91 13:48:26
5 = 16.7 % 02
1 = 45.6 PPM NO
14/AUG/91 13:48:11
14/AUG/91 13:44:26
5 = 16.7 % 02
1 = 44.9 PPM NO
14/AUG/91 13:44:11
14/AUG/91 13:40:30
5 = 16.8 % 02
1 = 41.2 PPM NO
14/AUG/91 13:40:14
14/AUG/91 13:36:29
5 = 16.7 % 02
1 = 39.1 PPM NO
14/AUG/91 13:36:13
2 = 16.9 % 02
4 = 61.2 PPM NO
2 = 16.9 % 02
4 = 58.4 PPM NO
2 = 17.0 % 02
4 = 58.9 PPM NO
2 = 17.1 % 02
4 = 58.0 PPM NO
2 = 17.4 % 02
4 = 59.4 PPM NO
RUN 3 65%
14/AUG/91 13:32:30
5 = 17.1 % 02
1 = 45.5 PPM NO
14/AUG/91 13:32:14
14/AUG/91 13:28:28
5 = 17.1 % 02
1 = 44.0 PPM NO
14/AUG/91 13:28:12
14/AUG/91 13:24:27
5 = 16.9 % 02
1 = 43.3 PPM NO
2 = 16.9 % 02
4 = 44.5 PPM NO
2 = 17.0 % 02
4 = 46.0 PPM NO
2 = 17.1 % 02

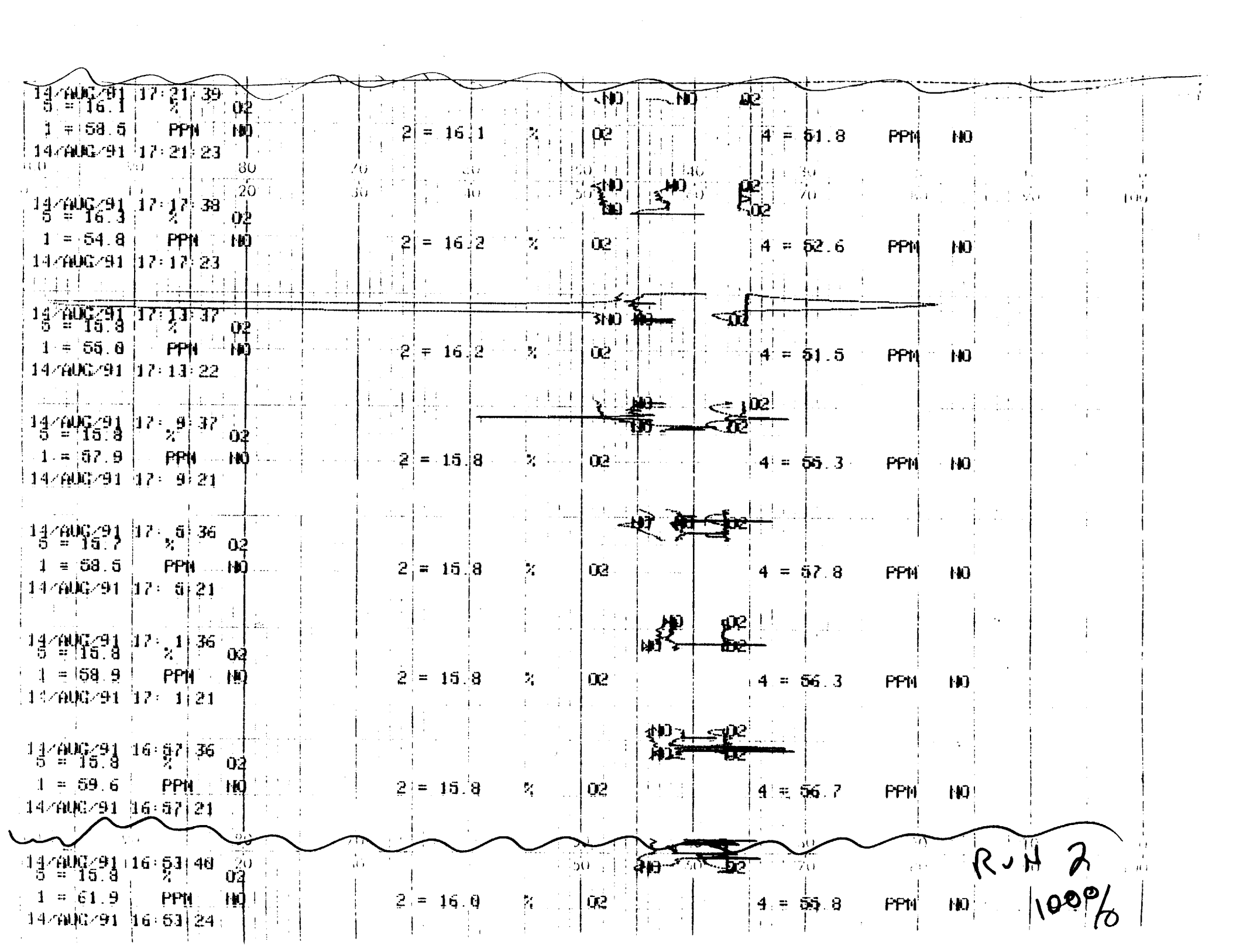

14/AUG/91 14:44:26
5 = 16.2 % O2
1 = 48.7 PPM NO
14/AUG/91 14:44:11
14/AUG/91 14:41:26
5 = 16.3 % O2
1 = 51.2 PPM NO
14/AUG/91 14:41:11
14/AUG/91 14:38:27
5 = 16.3 % O2
1 = 50.9 PPM NO
14/AUG/91 14:38:11
14/AUG/91 14:34:12
1 = 51.1 PPM NO
14/AUG/91 14:33:59
5 = 16.3 % O2
1 = 51.8 PPM NO
14/AUG/91 14:33:44
2 = 16.4 % O2
4 = 51.8 PPM NO
2 = 13.2 % O2
4 = 51.8 PPM NO
2 = 15.8 % O2
4 = 51.6 PPM NO
2 = 16.3 % O2
4 = 51.1 PPM NO
2 = 16.3 % O2
4 = 51.1 PPM NO
RUN I
80%
5 = 16.8 % O2
1 = 43.9 PPM NO
14/AUG/91 14:4:12
14/AUG/91 14:0:27
5 = 16.6 % O2
1 = 45.8 PPM NO
14/AUG/91 14:0:12
2 = 17.0 % O2
4 = 47.3 PPM NO
2 = 16.9 % O2
4 = 48.3 PPM NO

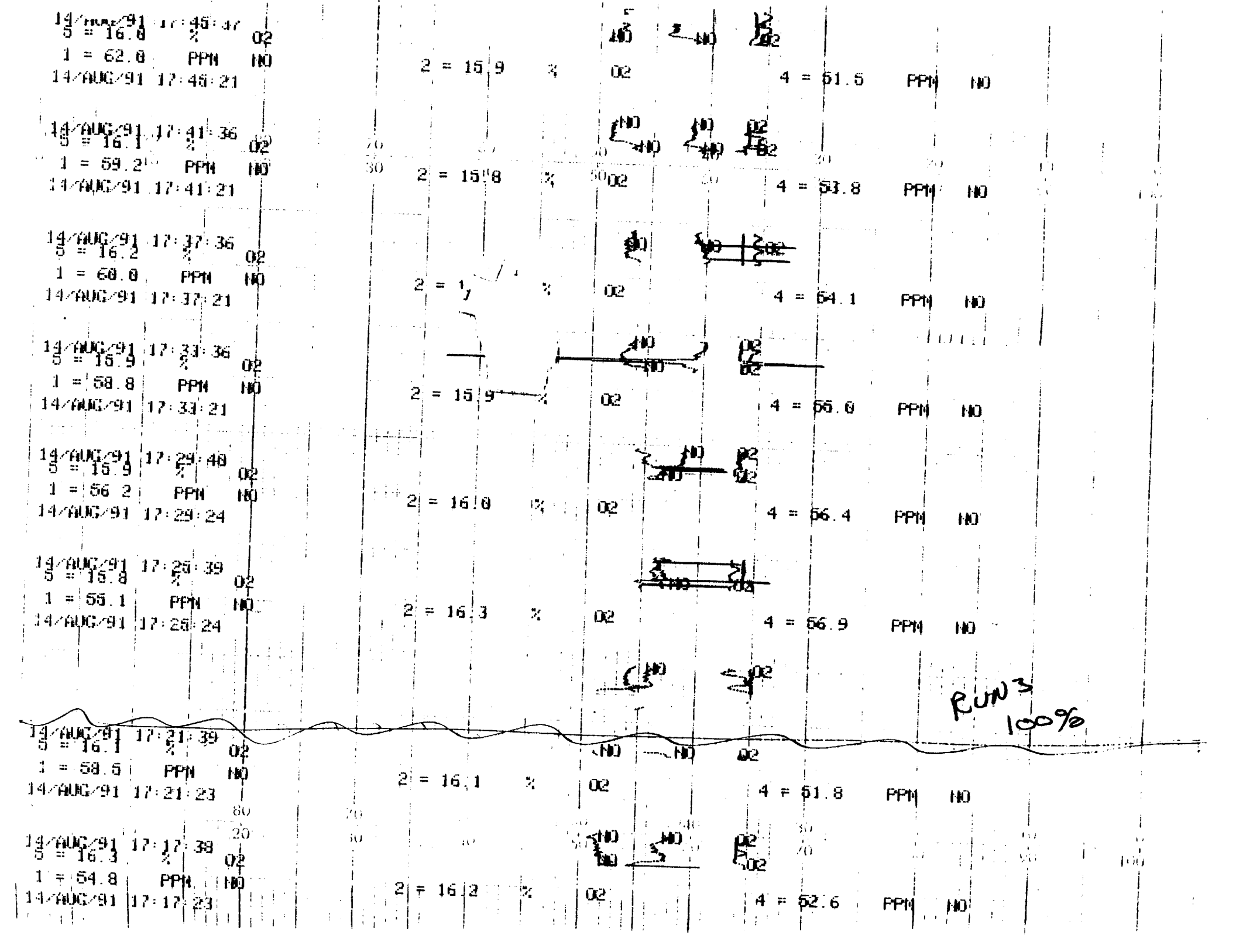

5 = 16.5 % O2
1 = 48.9 PPM NO
14/AUG/91 15: 8:13
14/AUG/91 15: 5:38
5 = 16.5 % O2
1 = 46.9 PPM NO
14/AUG/91 15: 5:14
14/AUG/91 15: 2:26
5 = 16.3 % O2
1 = 44.9 PPM NO
14/AUG/91 15: 2:11
14/AUG/91 14:59:27
2 = 16.5 % O2
2 = 16.6 % O2
2 = 16.8 % O2
4 = 49.7 PPM NO
4 = 49.6 PPM NO
4 = 49.6 PPM NO
RUN II 80%
5 = 16.4 % O2
1 = 49.8 PPM NO
14/AUG/91 14:59:11
14/AUG/91 14:56:27
5 = 16.5 % O2
1 = 49.8 PPM NO
14/AUG/91 14:56:11
14/AUG/91 14:53:29
5 = 16.3 % O2
1 = 47.1 PPM NO
14/AUG/91 14:53:12
14/AUG/91 14:50:29
5 = 16.2 % O2
1 = 49.8 PPM NO
14/AUG/91 14:50:13
2 = 16.4 % O2
2 = 16.5 % O2
2 = 16.6 % O2
2 = 16.8 % O2
4 = 49.3 PPM NO
4 = 49.8 PPM NO
4 = 50.8 PPM NO
4 = 50.4 PPM NO


5 = 16.5 % O2
1 = 50.0 PPM NO
14/AUG/91 15:32:12
14/AUG/91 15:29:28
5 = 16.6 % O2
1 = 52.2 PPM NO
14/AUG/91 15:29:12
14/AUG/91 15:26:29
5 = 16.5 % O2
1 = 51.0 PPM NO
14/AUG/91 15:26:13
2 = 16.4 % O2
4 = 47.4 PPM NO
2 = 16.3 % O2
4 = 47.9 PPM NO
2 = 16.4 % O2
4 = 49.2 PPM NO
RUN III
80%
14/AUG/91 15:23:30
5 = 16.4 % O2
1 = 49.9 PPM NO
14/AUG/91 15:23:14
14/AUG/91 15:20:26
5 = 16.3 % O2
1 = 50.7 PPM NO
14/AUG/91 15:20:11
14/AUG/91 15:17:26
5 = 16.2 % O2
1 = 52.3 PPM NO
14/AUG/91 15:17:11
14/AUG/91 15:14:27
5 = 16.3 % O2
1 = 50.6 PPM NO
14/AUG/91 15:14:11
2 = 16.4 % O2
4 = 48.8 PPM NO
2 = 16.4 % O2
4 = 50.1 PPM NO
2 = 16.4 % O2
4 = 50.2 PPM NO
2 = 16.3 % O2
4 = 48.5 PPM NO


14/AUG/91 16:21:42
5 = 15.7 % 02
4 = 54.6 PPM NO
14/AUG/91 16:21:25
14/AUG/91 16:21:21
2 = 16.4 % 02
4 = 59.3 PPM NO
14/AUG/91 16:13: 8
5 = 15.8 % 02
1 = 60.4 PPM NO
14/AUG/91 16:12:52
14/AUG/91 16:12:44
2 = 16.3 % 02
4 = 65.8 PPM NO
RUN F
100%
0.2
8-15-91
5 = 16.3 % 02
1 = 50.2 PPM NO
14/AUG/91 16:47:13
2 = 16.5 % 02
4 = 49.8 PPM NO
14/AUG/91 16:44:29
5 = 16.4 % 02
1 = 48.7 PPM NO
14/AUG/91 16:44:13
2 = 16.6 % 02
4 = 51.0 PPM NO
14/AUG/91 16:41:30
5 = 16.2 % 02
1 = 48.2 PPM NO
14/AUG/91 16:41:14
2 = 16.6 % 02
4 = 50.7 PPM NO
14/AUG/91 16:38:26
5 = 16.2 % 02
1 = 46.9 PPM NO
14/AUG/91 16:38:11
2 = 16.7 % 02
4 = 51.8 PPM NO
14/AUG/91 16:35:26
5 = 16.7 % 02
1 = 47.6 PPM NO
2 = 16.6 % 02
4 = 47.9 PPM NO


1 = 61.9 PPM NO
14/AUG/91 16:53:24
14/AUG/91 16:49:39
5 = 15.8 % O2
1 = 59.1 PPM NO
14/AUG/91 16:49:23
14/AUG/91 16:45:39
5 = 16.3 % O2
1 = 59.6 PPM NO
14/AUG/91 16:45:23
14/AUG/91 16:41:38
5 = 16.3 % O2
1 = 60.2 PPM NO
14/AUG/91 16:41:22
14/AUG/91 16:37:37
5 = 16.1 % O2
1 = 58.4 PPM NO
14/AUG/91 16:37:21
14/AUG/91 16:33:37
5 = 16.0 % O2
1 = 56.4 PPM NO
14/AUG/91 16:33:21
14/AUG/91 16:29:36
5 = 15.9 % O2
1 = 54.9 PPM NO
14/AUG/91 16:29:21
2 = 16.0 % O2
4 = 55.8 PPM NO
2 = 15.9 % O2
4 = 58.2 PPM NO
2 = 15.9 % O2
4 = 52.7 PPM NO
2 = 15.9 % O2
4 = 54.1 PPM NO
2 = 16.0 % O2
4 = 56.0 PPM NO
2 = 16.1 % O2
4 = 57.6 PPM NO
2 = 16.2 % O2
4 = 58.3 PPM NO
100%
O.L


14/AUG/91 17:21:39
5 = 16.1 % O2
1 = 58.5 PPM NO
2 = 16.1 % O2
4 = 61.8 PPM NO
14/AUG/91 17:21:23
14/AUG/91 17:17:38
5 = 16.3 % O2
1 = 54.8 PPM NO
2 = 16.2 % O2
4 = 52.6 PPM NO
14/AUG/91 17:17:23
14/AUG/91 17:13:37
5 = 15.8 % O2
1 = 55.0 PPM NO
2 = 16.2 % O2
4 = 51.5 PPM NO
14/AUG/91 17:13:22
14/AUG/91 17: 9:37
5 = 15.8 % O2
1 = 57.9 PPM NO
2 = 15.8 % O2
4 = 55.3 PPM NO
14/AUG/91 17: 9:21
14/AUG/91 17: 5:36
5 = 15.7 % O2
1 = 58.5 PPM NO
2 = 15.8 % O2
4 = 57.8 PPM NO
14/AUG/91 17: 5:21
14/AUG/91 17: 1:36
5 = 15.8 % O2
1 = 58.9 PPM NO
2 = 15.8 % O2
4 = 56.3 PPM NO
14/AUG/91 17: 1:21
14/AUG/91 16:57:36
5 = 15.8 % O2
1 = 59.6 PPM NO
2 = 15.8 % O2
4 = 56.7 PPM NO
14/AUG/91 16:57:21
14/AUG/91 16:53:40
5 = 15.8 % O2
1 = 61.9 PPM NO
2 = 16.0 % O2
4 = 55.8 PPM NO
14/AUG/91 16:53:24
RUN 2
100%


14/AUG/91 17:45:47
5 = 16.0 %
1 = 62.0 PPM
14/AUG/91 17:45:21
2 = 15.9 %
4 = 61.6 PPM
14/AUG/91 17:41:36
5 = 16.1 %
1 = 59.2 PPM
14/AUG/91 17:41:21
2 = 15.8 %
4 = 53.8 PPM
14/AUG/91 17:37:36
5 = 16.2 %
1 = 60.0 PPM
14/AUG/91 17:37:21
2 = 15.9 %
4 = 54.1 PPM
14/AUG/91 17:33:36
5 = 15.9 %
1 = 58.8 PPM
14/AUG/91 17:33:21
2 = 15.9 %
4 = 55.0 PPM
14/AUG/91 17:29:40
5 = 15.9 %
1 = 56.2 PPM
14/AUG/91 17:29:24
2 = 16.0 %
4 = 56.4 PPM
14/AUG/91 17:25:39
5 = 15.8 %
1 = 55.1 PPM
14/AUG/91 17:25:24
2 = 16.3 %
4 = 56.9 PPM
RUN 3
100%
14/AUG/91 17:21:39
5 = 16.1 %
1 = 58.5 PPM
14/AUG/91 17:21:23
2 = 16.1 %
4 = 51.8 PPM
14/AUG/91 17:17:38
5 = 16.3 %
1 = 54.8 PPM
14/AUG/91 17:17:23
2 = 16.2 %
4 = 52.6 PPM
02
NO

Plant Data Sheets

DATE: 08/06/1991
TEST: Particulate Test
UNIT: Gas Turbine #2
LOAD: 100% (50 MW)

RUN: #1
START TIME: 10:11:00
STOP TIME: 12:30:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter	Engine "A"		Engine "B"		Total	Total	Engine "A"		Engine "B"		Total	Total
TIME	Gas Flow	Water Flow		Water Flow		Gas Flow	Water Flow	Gas Flow	Water Flow	Gas Flow	Water Flow	Gas Flow	Water Flow
(24 hr)	(Mcf/hr)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
10:10:00		21.0	10,508	24.0	12,010		22,518	15,032	9,417	14,168	12,369	29,200	21,786
10:15:00	672.00					29,279							
10:20:00		19.5	9,758	24.0	12,010		21,767	15,228	10,201	14,227	11,969	29,455	22,170
10:25:00													
10:30:00	693.30	19.5	9,758	24.0	12,010	30,207	21,767						
10:35:00													
10:40:00		18.8	9,408	24.0	12,010		21,417	15,151	10,797	14,154	11,766	29,305	22,563
10:45:00	670.30					29,205							
10:50:00		21.0	10,508	24.0	12,010		22,518	15,302	9,827	14,196	12,522	29,498	22,349
10:55:00													
11:00:00	670.40	19.0	9,508	24.5	12,260	29,209	21,767	15,313	10,204	14,199	11,679	29,512	21,883
11:05:00													
11:10:00		18.8	9,408	24.0	12,010		21,417	15,250	9,697	14,201	12,129	29,451	21,826
11:15:00	690.80					30,098							
11:20:00		19.5	9,758	24.0	12,010		21,767	15,237	9,578	13,999	12,264	29,236	21,842
11:25:00													
11:30:00	668.60	20.5	10,258	24.0	12,010	29,131	22,268	15,440	9,464	14,169	12,161	29,609	21,625
11:35:00													
11:40:00		19.5	9,758	24.0	12,010		21,767	15,415	10,090	14,154	11,882	29,569	21,972
11:45:00	668.20					29,113							
11:50:00		18.5	9,257	24.0	12,010		21,267	15,486	10,002	14,076	11,966	29,562	21,968
11:55:00													
12:00:00	668.90	20.0	10,008	24.0	12,010	29,144	22,018	15,430	9,878	14,153	12,040	29,583	21,918
12:05:00													
12:10:00		20.2	10,108	24.0	12,010		22,118	15,348	9,570	14,081	12,502	29,429	22,072
12:15:00	667.60					29,087							
12:20:00		20.8	10,408	24.0	12,010		22,418	15,265	9,972	13,963	11,728	29,228	21,700
12:25:00													
12:30:00	689.50	20.2	10,108	24.0	12,010	30,042	22,118	15,551	9,535	14,138	12,422	29,689	21,957
AVERAGES	675.96	19.8	9,901	24.0	12,026	29,452	21,928	15,318	9,874	14,134	12,100	29,452	21,974

DATE: 08/06/1991
TEST: Particulate Test
UNIT: Gas Turbine #2
LOAD: 100% (50 MW)

RUN: #2
START TIME: 14:06:00
STOP TIME: 16:30:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
		Engine "A"		Engine "B"				Engine "A"		Engine "B"			
TIME (24 hr)	Meter Gas Flow (Mcf/hr)	Water Flow (gpm)	Water Flow (lb/hr)	Water Flow (gpm)	Water Flow (lb/hr)	Total Gas Flow (lb/hr)	Total Water Flow (lb/hr)	Gas Flow (lb/hr)	Water Flow (lb/hr)	Gas Flow (lb/hr)	Water Flow (lb/hr)	Total Gas Flow (lb/hr)	Total Water Flow (lb/hr)
14:05:00		18.5	9,257	24.0	12,010		21,267	15,189	9,417	14,035	12,197	29,224	21,614
14:10:00													
14:15:00	692.20	20.5	10,258	24.0	12,010	30,159	22,268	15,428	10,372	13,966	11,528	29,394	21,900
14:20:00													
14:25:00		19.0	9,508	24.0	12,010		21,517	15,229	9,654	13,937	12,163	29,166	21,817
14:30:00	671.90					29,275							
14:35:00		21.0	10,508	24.0	12,010		22,518	15,279	9,947	13,857	11,432	29,136	21,379
14:40:00													
14:45:00	690.80	21.0	10,508	24.0	12,010	30,098	22,518	15,413	10,087	13,976	11,802	29,389	21,889
14:50:00													
14:55:00		18.8	9,408	24.0	12,010		21,417	15,413	9,399	13,946	11,793	29,359	21,192
15:00:00	668.70					29,135							
15:05:00		19.0	9,508	24.0	12,010		21,517	15,318	9,122	14,069	11,732	29,387	20,854
15:10:00													
15:15:00	670.00	19.0	9,508	24.0	12,010	29,192	21,517	15,275	9,685	13,994	12,093	29,269	21,778
15:20:00													
15:25:00		20.0	10,008	24.0	12,010		22,018	15,440	10,068	13,837	11,968	29,277	22,036
15:30:00	669.90					29,188							
15:35:00		20.0	10,008	24.0	12,010		22,018	15,388	9,407	13,829	11,676	29,217	21,083
15:40:00													
15:45:00	690.90	19.3	9,658	24.0	12,010	30,103	21,667	15,477	9,759	13,979	11,669	29,456	21,428
15:50:00													
15:55:00		21.0	10,508	23.8	11,910		22,418	15,651	9,295	13,972	11,876	29,623	21,171
16:00:00	647.30					28,203							
16:05:00		19.0	9,508	24.0	12,010		21,517	15,352	9,271	13,897	12,230	29,249	21,501
16:10:00													
16:15:00	666.80	19.0	9,508	24.0	12,010	29,052	21,517	15,552	9,576	13,909	11,877	29,461	21,453
16:20:00													
16:25:00		19.0	9,508	24.0	12,010		21,517	15,514	9,960	13,975	12,109	29,489	22,069
16:30:00	667.00					29,061							
AVERAGES	674.28	19.6	9,811	24.0	12,003	29,347	21,814	15,395	9,668	13,945	11,876	29,340	21,544

DATE: 08/06/1991
TEST: Particulate Test
UNIT: Gas Turbine #2
LOAD: 100% (50 MW)

RUN: #3
START TIME: 17:35:00
STOP TIME: 19:35:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter	Engine "A"		Engine "B"		Total	Total	Engine "A"		Engine "B"		Total	Total
TIME	Gas Flow	Water Flow		Water Flow		Gas Flow	Water Flow	Gas Flow	Water Flow	Gas Flow	Water Flow	Gas Flow	Water Flow
(24 hr)	(Mcf/hr)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
17:30:00	667.90					29,100							
17:35:00		19.0	9,508	24.0	12,010		21,517	15,493	9,430	14,074	11,870	29,567	21,300
17:40:00													
17:45:00	690.40	18.8	9,408	24.0	12,010	30,081	21,417	15,490	10,108	14,035	12,084	29,525	22,192
17:50:00													
17:55:00		20.0	10,008	23.5	11,759		21,767	15,440	10,135	13,977	12,051	29,417	22,186
18:00:00													
18:05:00		19.0	9,508	24.0	12,010		21,517	15,622	10,113	14,149	12,149	29,771	22,262
18:10:00													
18:15:00	691.20	20.0	10,008	24.0	12,010	30,116	22,018	15,514	10,054	14,135	12,256	29,649	22,310
18:20:00													
18:25:00		20.5	10,258	24.0	12,010		22,268	15,277	9,542	14,213	11,868	29,490	21,410
18:30:00	669.80					29,183							
18:35:00		18.8	9,408	24.0	12,010		21,417	15,431	9,713	14,226	11,584	29,657	21,297
18:40:00													
18:45:00	670.90	19.0	9,508	24.0	12,010	29,231	21,517	15,418	9,728	14,185	11,847	29,603	21,575
18:50:00													
18:55:00		19.0	9,508	24.0	12,010		21,517	15,359	9,989	14,234	11,901	29,593	21,890
19:00:00	692.90					30,190							
19:05:00		19.8	9,908	24.0	12,010		21,918	15,305	9,606	14,225	11,631	29,530	21,237
19:10:00													
19:15:00		20.5	10,258	24.0	12,010		22,268						
19:20:00													
19:25:00		18.4	9,207	24.0	12,010		21,217	15,172	9,291	14,234	11,880	29,406	21,171
19:30:00													
TOTALS	680.52	19.4	9,708	24.0	11,989	29,650	21,697	15,411	9,792	14,153	11,920	29,564	21,712

DATE: 08/07/1991
TEST: Particulate Test
UNIT: Gas Turbine #2
LOAD: 100% (50 MW)

RUN: #1
START TIME: 08:16:00
STOP TIME: 10:36:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
		Engine "A"		Engine "B"				Engine "A"		Engine "B"			
TIME (24 hr)	Meter Oil Flow (s/20 gal)	Water Flow (gpm)	Water Flow (lb/hr)	Water Flow (gpm)	Water Flow (lb/hr)	Total Oil Flow (lb/hr)	Total Water Flow (lb/hr)	Oil Flow (lb/hr)	Water Flow (lb/hr)	Oil Flow (lb/hr)	Water Flow (lb/hr)	Total Oil Flow (lb/hr)	Total Water Flow (lb/hr)
08:15:00	15.43	18.5	9,257	20.5	10,258	32,678	19,516	16,140	9,410	16,405	10,518	32,545	19,926
08:20:00													
08:25:00	15.49	19.0	9,508	20.5	10,258	32,551	19,766	16,283	9,563	16,456	10,717	32,739	20,280
08:30:00													
08:35:00	15.44	19.0	9,508	20.5	10,258	32,656	19,766	16,301	9,377	16,327	9,980	32,628	19,357
08:40:00													
08:45:00	15.41	18.5	9,257	20.0	10,008	32,720	19,265	16,397	9,719	16,403	10,850	32,800	20,569
08:50:00													
08:55:00	15.33	18.3	9,157	20.3	10,158	32,891	19,315	16,472	9,439	16,486	10,345	32,958	19,784
09:00:00													
09:05:00	15.37	18.0	9,007	20.8	10,408	32,805	19,416	16,559	9,600	16,399	10,439	32,958	20,039
09:10:00													
09:15:00	15.49	18.0	9,007	20.5	10,258	32,551	19,265	16,428	9,648	16,307	9,941	32,735	19,589
09:20:00													
09:25:00	15.47	18.8	9,408	20.0	10,008	32,593	19,416	16,430	9,159	16,388	10,723	32,818	19,882
09:30:00													
09:35:00	15.48	18.0	9,007	19.0	9,508	32,572	18,515	16,527	9,270	16,385	10,560	32,912	19,830
09:40:00													
09:45:00	15.35	18.0	9,007	20.5	10,258	32,848	19,265	16,746	8,999	16,218	10,092	32,964	19,091
09:50:00													
09:55:00	15.42	18.3	9,157	20.0	10,008	32,699	19,165	16,757	9,253	16,218	10,391	32,975	19,644
10:00:00													
10:05:00	15.60	17.0	8,507	20.5	10,258	32,322	18,765	16,736	9,133	16,134	10,073	32,870	19,206
10:10:00													
10:15:00	15.46	18.0	9,007	21.0	10,508	32,814	19,516	16,854	9,358	16,135	10,009	32,989	19,367
10:20:00													
10:25:00	15.51	17.0	8,507	20.5	10,258	32,509	18,765	16,832	9,227	16,152	10,392	32,984	19,819
10:30:00													
10:35:00	15.58	18.0	9,007	20.5	10,258	32,363	19,265	16,882	9,977	16,122	10,040	33,004	20,017
AVERAGES	15.46	18.2	9,087	20.3	10,178	32,625	19,265	16,556	9,409	16,302	10,338	32,859	19,747

DATE: 08/07/1991
TEST: Particulate Test
UNIT: Gas Turbine #2
LOAD: 100% (50 MW)

RUN: #2
START TIME: 11:41:00
STOP TIME: 14:02:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8438
Oil temp correction -- 0.3881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter Oil Flow	Engine "A" Water Flow		Engine "B" Water Flow		Total Oil Flow	Total Water Flow	Engine "A" Oil Flow	Engine "A" Water Flow	Engine "B" Oil Flow	Engine "B" Water Flow	Total Oil Flow	Total Water Flow
TIME (24 hr)	(s/20 gal)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
11:40:00	15.70	17.5	8,757	21.0	10,508	32,116	19,265	16,952	9,275	16,012	10,115	32,964	19,390
11:45:00													
11:50:00	15.58	18.5	9,257	20.2	10,108	32,363	19,365	16,918	8,881	16,091	9,914	33,009	18,795
11:55:00													
12:00:00	15.47	18.0	9,007	20.0	10,008	32,593	19,015						
12:05:00													
12:10:00	15.52	18.5	9,257	20.0	10,008	32,488	19,265						
12:15:00													
12:20:00	15.51	17.5	8,757	20.2	10,108	32,509	18,865	17,009	8,892	15,733	10,119	32,742	18,811
12:25:00													
12:30:00	15.49	18.5	9,257	20.5	10,258	32,551	19,516	17,186	8,679	15,870	10,088	33,056	18,767
12:35:00													
12:40:00	15.59	17.5	8,757	20.8	10,408	32,342	19,165	17,013	8,727	16,037	10,096	33,050	18,823
12:45:00													
12:50:00	15.40	18.0	9,007	20.0	10,008	32,741	19,015	16,980	8,696	15,961	10,028	32,941	18,724
12:55:00													
13:00:00	15.43	18.0	9,007	20.0	10,008	32,678	19,015	17,366	9,161	15,881	9,940	33,247	19,101
13:05:00													
13:10:00	15.38	18.5	9,257	20.0	10,008	32,784	19,265	17,165	8,779	16,178	10,072	33,343	18,851
13:15:00													
13:20:00	15.45	18.5	9,257	20.0	10,008	32,635	19,265	17,218	8,880	15,979	9,511	33,197	18,391
13:25:00													
13:30:00	15.48	17.5	8,757	20.0	10,008	32,572	18,765	17,150	9,000	15,999	10,209	33,149	19,209
13:35:00													
13:40:00	15.50	17.0	8,507	20.5	10,258	32,530	18,765	17,132	8,583	15,925	10,572	33,057	19,155
13:45:00													
13:50:00	15.62	17.5	8,757	20.0	10,008	32,280	18,765	17,067	8,607	15,996	10,370	33,063	18,977
13:55:00													
14:00:00	15.51	17.3	8,657	20.0	10,008	32,509	18,665	17,188	8,840	16,039	9,923	33,227	18,763
AVERAGES	15.51	17.9	8,950	20.2	10,115	32,513	19,065	17,103	8,831	15,977	10,074	33,080	18,904

DATE: 08/07/1991
TEST: Particulate Test
UNIT: Gas Turbine #2
LOAD: 100% (50 MW)

RUN: #3
START TIME: 15:54:00
STOP TIME: 18:07:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter					Total	Total	Engine "A"		Engine "B"		Total	Total
	Oil	Engine "A"		Engine "B"		Oil	Water	Oil	Water	Oil	Water	Oil	Water
TIME	Flow	Water Flow		Water Flow		Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
(24 hr)	(s/20 gal)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
15:55:00	15.50	18.2	9,107	20.2	10,108	32,530	19,215	17,134	8,862	16,108	10,000	33,242	18,862
16:00:00													
16:05:00	15.60	18.8	9,408	20.5	10,258	32,322	19,666	17,189	8,981	15,914	10,291	33,103	19,272
16:10:00													
16:15:00	15.57	18.2	9,107	20.2	10,108	32,384	19,215	17,292	9,030	16,132	10,146	33,424	19,176
16:20:00													
16:25:00	15.69	19.0	9,508	20.2	10,108	32,136	19,616						
16:30:00													
16:35:00	15.63	18.0	9,007	20.5	10,258	32,259	19,265	17,483	8,978	15,830	10,393	33,313	19,371
16:40:00													
16:45:00	15.59	17.5	8,757	21.0	10,508	32,342	19,265	17,297	9,360	16,011	10,211	33,308	19,571
16:50:00													
16:55:00	15.49	18.3	9,157	20.5	10,258	32,551	19,416	17,130	8,832	16,174	10,462	33,304	19,294
17:00:00													
17:05:00	15.52	18.0	9,007	20.8	10,408	32,488	19,416	17,124	9,274	16,191	10,285	33,315	19,559
17:10:00													
17:15:00	15.70	18.2	9,107	20.5	10,258	32,116	19,365	17,358	9,616	16,151	10,671	33,509	20,287
17:20:00													
17:25:00	15.44	17.8	8,907	20.8	10,408	32,656	19,315	17,247	9,153	16,195	10,378	33,442	19,531
17:30:00													
17:35:00	15.64	18.0	9,007	20.5	10,258	32,239	19,265	17,243	9,284	16,132	10,235	33,375	19,519
17:40:00													
17:45:00	15.48	18.2	9,107	20.3	10,158	32,572	19,265	17,243	9,377	16,180	10,189	33,423	19,566
17:50:00													
17:55:00	15.57	17.5	8,757	21.0	10,508	32,384	19,265	17,166	9,194	16,105	10,398	33,271	19,592
18:00:00													
18:05:00	15.63	18.5	9,257	20.5	10,258	32,259	19,516						
AVERAGES	15.58	18.2	9,086	20.5	10,276	32,374	19,362	17,242	9,162	16,094	10,305	33,336	19,467

DATE: 08/08/1991
TEST: 02 Traverse
UNIT: Gas Turbine #2
LOAD: 50% (27 MW)

RUN: #1
START TIME: 10:09:00
STOP TIME: 12:53:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
		Engine "A"		Engine "B"				Engine "A"		Engine "B"			
TIME (24 hr)	Meter Gas Flow (Mcf/hr)	Water Flow (gpm)	Water Flow (lb/hr)	Water Flow (gpm)	Water Flow (lb/hr)	Total Gas Flow (lb/hr)	Total Water Flow (lb/hr)	Gas Flow (lb/hr)	Water Flow (lb/hr)	Gas Flow (lb/hr)	Water Flow (lb/hr)	Total Gas Flow (lb/hr)	Total Water Flow (lb/hr)
10:10:00		6.5	3,253	6.0	3,002		6,255	10,688	3,516	10,176	3,648	20,864	7,164
10:15:00	414.00					18,038		10,720	3,508	10,192	3,460	20,912	6,968
10:20:00		6.5	3,253	6.2	3,102		6,355	10,720	3,244	10,224	3,788	20,944	7,032
10:25:00								10,688	3,364	10,192	3,568	20,880	6,932
10:30:00	414.60	5.8	2,902	6.7	3,353	18,064	6,255	10,624	3,160	10,096	3,548	20,720	6,708
10:35:00								10,624	3,312	10,064	3,316	20,688	6,628
10:40:00		5.3	2,652	6.5	3,253		5,905	10,608	3,420	10,112	3,432	20,720	6,852
10:45:00	436.20					19,005		10,624	3,248	10,080	3,544	20,704	6,792
10:50:00		8.5	4,253	5.5	2,752		7,006	10,840	3,436	10,080	3,344	20,720	6,780
10:55:00								10,704	4,856	10,128	3,292	20,832	8,148
11:00:00	412.50	9.0	4,504	5.2	2,602	17,973	7,106	10,656	4,696	10,096	3,272	20,752	7,968
11:05:00								10,688	4,704	10,080	3,336	20,768	8,040
11:10:00		9.2	4,804	6.0	3,002		7,606	10,720	4,664	10,128	3,180	20,848	7,844
11:15:00	433.10					18,870		10,736	4,760	10,160	3,524	20,896	8,284
11:20:00		10.8	5,404	6.0	3,002		8,407	10,784	5,360	10,176	3,524	20,960	8,884
11:25:00								10,816	5,816	10,224	3,488	21,040	9,304
11:30:00	432.10	11.3	5,655	6.5	3,253	18,827	8,907	10,848	5,848	10,272	3,420	21,120	9,268
11:35:00								10,864	5,832	10,272	3,816	21,136	9,648
11:40:00		11.5	5,755	6.3	3,153		8,907	10,896	5,808	10,288	3,472	21,184	9,280
11:45:00	454.10					19,785		10,896	5,920	10,288	3,892	21,184	9,812
11:50:00		11.5	5,755	6.5	3,253		9,007	10,880	5,832	10,272	3,564	21,152	9,396
11:55:00								10,896	5,944	10,288	3,484	21,184	9,428
12:00:00	433.50	11.0	5,504	6.2	3,102	18,888	8,607	10,848	5,752	10,224	3,628	21,072	9,380
12:05:00								10,784	5,864	10,160	3,800	20,944	9,664
12:10:00		11.0	5,504	6.2	3,102		8,607	10,736	5,680	10,128	3,592	20,864	9,272
12:15:00	432.30					18,835		10,752	5,408	10,144	3,476	20,896	8,884
12:20:00		9.0	4,504	9.2	4,604		9,107	10,688	4,752	10,192	4,392	20,880	9,144
12:25:00								10,720	4,464	10,240	4,952	20,960	9,416
12:30:00	432.80	8.8	4,404	9.5	4,754	18,857	9,157	10,704	4,672	10,240	4,944	20,944	9,616
12:35:00								10,704	4,536	10,288	4,912	20,992	9,448
12:40:00		8.50	4,253	9.00	4,504		8,757	10,752	4,488	10,304	5,096	21,056	9,584
12:45:00	432.30					18,835		10,752	4,536	10,272	4,874	21,024	9,410
12:50:00		8.30	4,153	9.30	4,654		8,807	10,752	4,544	10,288	5,136	21,040	9,680
12:55:00		8.80	4,404	9.80	4,904		9,307	10,784	4,600	10,320	5,144	21,104	9,744
AVERAGES	429.77	8.96	4,484	7.03	3,519	18,725	8,004	10,744	4,692	10,197	3,849	20,941	8,541

DATE: 08/08/1991
TEST: NOx - 8 pts
UNIT: Gas Turbine #2
LOAD: 50% (28 MW)

RUN: #2
START TIME: 13:02:00
STOP TIME: 14:30:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter					Total	Total	Engine "A"		Engine "B"		Total	Total
	Gas	Engine "A"		Engine "B"		Gas	Water	Gas	Water	Gas	Water	Gas	Water
TIME	Flow	Water Flow		Water Flow		Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
(24 hr)	(Mcf/hr)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
13:00:00	454.80	8.8	4,404	10.0	5,004	19,807	9,408	10,784	4,512	10,368	5,048	21,152	9,560
13:05:00								10,784	4,544	10,368	5,064	21,152	9,608
13:10:00		8.8	4,404	10.0	5,004		9,408	10,784	4,864	10,368	5,256	21,152	9,920
13:15:00	455.40					19,842		10,768	4,480	10,352	5,336	21,120	9,816
13:20:00		8.3	4,153	9.2	4,604		8,757	10,720	4,592	10,304	4,832	21,024	9,424
13:25:00								10,704	4,576	10,272	5,144	20,976	9,720
13:30:00	453.70	8.5	4,253	9.5	4,754	19,768	9,007	10,736	4,416	10,304	4,888	21,040	9,304
13:35:00								10,768	4,576	10,336	4,880	21,104	9,456
13:40:00		8.5	4,253	9.5	4,754		9,007	10,768	4,472	10,368	5,232	21,136	9,704
13:45:00	431.00					18,779		10,800	4,616	10,368	5,288	21,168	9,904
13:50:00		8.3	4,153	9.5	4,754		8,907	10,816	4,600	10,384	5,072	21,200	9,672
13:55:00								10,816	4,464	10,400	5,224	21,216	9,688
14:00:00	433.10	8.3	4,153	10.0	5,004	18,870	9,157	10,752	4,512	10,336	5,040	21,088	9,552
14:05:00								10,736	4,400	10,272	4,848	21,008	9,248
14:10:00		8.5	4,253	9.4	4,704		8,957	10,720	4,456	10,272	5,048	20,992	9,504
14:15:00	433.60					18,892		10,672	4,656	10,240	4,984	20,912	9,640
14:20:00		8.5	4,253	9.2	4,604		8,857	10,656	4,592	10,176	4,784	20,832	9,376
14:25:00								10,640	4,464	10,176	4,664	20,816	9,128
14:30:00	453.10	8.6	4,303	9.5	4,754	19,742	9,057	10,688	4,576	10,240	4,744	20,928	9,320
AVERAGES	444.93	8.51	4,258	9.58	4,794	19,386	9,052	10,743	4,535	10,311	5,020	21,053	9,555

ENGINE "A"
LOAD 50%

TOTAL AVERAGES
NOx 23.27
O2 17.28
Adj NOx 37.88

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
18.50	18.00	37.64	23.80	17.10	36.95	24.50	17.10	38.04
21.70	17.40	36.58	21.90	17.50	38.00	24.30	17.10	37.73
23.80	17.10	36.95	22.90	17.10	35.56	21.90	17.40	36.92
24.70	17.10	38.35	24.30	17.10	37.73	18.40	18.10	38.77
23.50	17.20	37.47	24.70	17.10	38.35	25.00	17.10	38.82
24.20	17.20	38.59	24.00	17.10	37.26	24.70	17.20	39.39
24.00	17.10	37.26	23.40	17.30	38.35	23.80	17.30	39.01
25.30	17.10	39.28	22.90	17.30	37.53	22.30	17.50	38.70

ENGINE "B"
LOAD 50%

TOTAL AVERAGES
NOx 23.20
O2 17.43
Adj NOx 39.45

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
22.50	17.40	37.93	22.40	17.40	37.76	23.40	17.50	40.61
22.90	17.40	38.60	23.00	17.40	38.77	23.30	17.40	39.28
22.50	17.40	37.93	23.10	17.40	38.94	23.20	17.40	39.11
22.90	17.50	39.74	22.80	17.50	39.56	22.80	17.50	39.56
22.20	17.50	38.52	23.90	17.50	41.47	23.90	17.40	40.29
22.50	17.40	37.93	23.20	17.40	39.11	24.60	17.40	41.47
23.40	17.40	39.45	22.90	17.40	38.60	25.20	17.40	42.48
23.90	17.40	40.29	22.10	17.40	37.25	24.30	17.50	42.17

DATE: 08/08/1991
TEST: NOx - 8 pts
UNIT: Gas Turbine #2
LOAD: 65% (32 MW)

RUN: #3
START TIME: 14:49:00
STOP TIME: 16:25:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

Manual Meter Readings

TIME (24 hr)	Meter Gas Flow (Mcf/hr)	Engine "A" Water Flow (gpm)	Engine "A" Water Flow (lb/hr)	Engine "B" Water Flow (gpm)	Engine "B" Water Flow (lb/hr)	Total Gas Flow (lb/hr)	Total Water Flow (lb/hr)
14:45:00	516.80					22,517	
14:50:00		10.00	5,004	15.00	7,506		12,510
14:55:00							
15:00:00	496.20	10.00	5,004	15.00	7,506	21,619	12,510
15:05:00							
15:10:00		9.60	4,804	15.40	7,706		12,510
15:15:00	495.90					21,606	
15:20:00		9.20	4,604	14.20	7,106		11,709
15:25:00							
15:30:00	495.40	9.30	4,654	13.80	6,906	21,585	11,559
15:35:00							
15:40:00		9.80	4,904	14.80	7,406		12,310
15:45:00	494.30					21,537	
15:50:00		9.20	4,604	15.00	7,506		12,110
15:55:00							
16:00:00	495.50	9.20	4,604	15.00	7,506	21,589	12,110
16:05:00							
16:10:00		9.00	4,504	14.80	7,406		11,910
16:15:00	497.10					21,659	
16:20:00		9.20	4,604	13.80	6,906		11,509
16:25:00							
AVERAGES	498.74	9.45	4,729	14.68	7,346	21,730	12,075

On-line Performance Monitoring Readings

Engine "A" Gas Flow (lb/hr)	Engine "A" Water Flow (lb/hr)	Engine "B" Gas Flow (lb/hr)	Engine "B" Water Flow (lb/hr)	Total Gas Flow (lb/hr)	Total Water Flow (lb/hr)
11,712	5,016	11,472	8,128	23,184	13,144
11,744	5,032	11,488	7,840	23,232	12,872
11,776	4,992	11,472	8,240	23,248	13,232
11,744	5,008	11,504	7,712	23,248	12,720
11,712	5,136	11,472	8,072	23,184	13,208
11,776	5,056	11,520	7,864	23,296	12,920
11,808	5,080	11,488	7,696	23,296	12,776
11,728	5,144	11,440	7,576	23,168	12,720
11,712	4,816	11,392	7,624	23,104	12,440
11,680	4,936	11,344	7,512	23,024	12,448
11,696	4,880	11,392	7,536	23,088	12,416
11,648	4,872	11,312	7,352	22,960	12,224
11,664	4,832	11,360	7,656	23,024	12,488
11,616	4,704	11,328	7,472	22,944	12,176
11,664	4,880	11,328	7,496	22,992	12,376
11,600	5,088	11,344	7,552	22,944	12,640
11,616	4,784	11,312	7,232	22,928	12,016
11,600	5,016	11,328	7,480	22,928	12,496
11,568	4,792	11,296	7,576	22,864	12,368
11,536	4,680	11,280	7,376	22,816	12,056
11,600	4,896	11,264	7,352	22,864	12,248
11,676	4,935	11,387	7,635	23,064	12,571

ENGINE "A"
LOAD 65%

TOTAL AVERAGES
NOx 25.87
O2 16.66
Adj NOx 36.09

Run #1 NOx	Run #1 O2	Run #1 Adj NOx	Run #2 NOx	Run #2 O2	Run #2 Adj NOx	Run #3 NOx	Run #3 O2	Run #3 Adj NOx
28.30	16.10	34.79	24.40	16.50	32.72	25.10	16.50	33.66
29.00	16.60	39.79	24.00	16.60	32.93	25.40	16.60	34.85
27.80	16.80	40.00	24.50	16.80	35.26	25.40	16.80	36.55
24.60	17.20	39.23	23.80	17.20	37.95	24.80	17.10	38.51
29.60	16.50	39.69	24.00	16.50	32.18	24.40	16.50	32.72
29.60	16.50	39.69	24.60	16.50	32.99	25.00	16.50	33.52
28.80	16.50	38.62	25.20	16.60	34.58	25.50	16.50	34.19
26.60	16.80	38.28	25.60	16.80	36.84	24.90	16.90	36.73

ENGINE "B"
LOAD 65%

TOTAL AVERAGES
NOx 27.58
O2 16.80
Adj NOx 39.63

Run #1 NOx	Run #1 O2	Run #1 Adj NOx	Run #2 NOx	Run #2 O2	Run #2 Adj NOx	Run #3 NOx	Run #3 O2	Run #3 Adj NOx
27.90	16.60	38.28	28.80	16.70	40.46	29.60	16.60	40.61
28.70	16.70	40.32	28.60	16.70	40.18	29.10	16.70	40.88
27.10	16.90	39.97	26.20	16.90	38.65	26.70	16.90	39.38
24.00	17.30	39.33	23.10	17.30	37.86	24.50	17.30	40.15
29.60	16.60	40.61	29.00	16.60	39.79	29.30	16.60	40.20
30.10	16.60	41.30	28.40	16.60	38.97	28.70	16.60	39.38
28.60	16.70	40.18	28.30	16.70	39.75	28.10	16.70	39.47
26.50	16.90	39.09	25.70	16.90	37.91	25.40	17.00	38.43

DATE: 08/08/1991
TEST: NOx - 8 pts
UNIT: Gas Turbine #2
LOAD: 80% (40 MW)

RUN: #4
START TIME: 16:48:00
STOP TIME: 18:10:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter	Engine "A"		Engine "B"		Total	Total	Engine "A"		Engine "B"		Total	Total
TIME	Gas Flow	Water Flow		Water Flow		Gas Flow	Water Flow	Gas Flow	Water Flow	Gas Flow	Water Flow	Gas Flow	Water Flow
(24 hr)	(Mcf/hr)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
16:45:00	581.80					25,349		12,128	5,912	13,968	12,544	26,096	18,456
16:50:00		11.50	5,755	24.50	12,260		18,014	12,048	6,152	13,936	12,208	25,984	18,360
16:55:00								12,000	5,992	13,872	12,352	25,872	18,344
17:00:00	601.50	12.00	6,005	25.00	12,510	26,207	18,515	12,112	6,320	13,872	12,288	25,984	18,608
17:05:00								12,288	6,488	13,872	12,400	26,160	18,888
17:10:00		13.00	6,505	25.00	12,510		19,015	12,192	6,400	13,776	12,272	25,968	18,672
17:15:00	581.10					25,319		12,224	6,576	13,792	12,208	26,016	18,784
17:20:00		12.50	6,255	25.00	12,510		18,765	12,256	6,416	13,872	12,304	26,128	18,720
17:25:00								12,128	6,536	13,824	12,448	25,952	18,984
17:30:00	582.70	12.50	6,255	24.50	12,260	25,388	18,515	12,048	6,656	13,616	12,224	25,664	18,880
17:35:00								12,080	6,584	13,648	12,368	25,728	18,952
17:40:00		12.50	6,255	24.50	12,260		18,515	12,080	6,472	13,712	12,240	25,792	18,712
17:45:00	581.80					25,349		12,064	6,368	13,712	12,464	25,776	18,832
17:50:00		12.00	6,005	25.00	12,510		18,515	12,144	6,656	13,776	12,224	25,920	18,880
17:55:00								12,176	6,688	13,808	12,384	25,984	19,072
18:00:00	581.60	12.00	6,005	25.00	12,510	25,340	18,515	12,144	6,320	13,888	12,720	26,032	19,040
18:05:00								12,144	6,368	13,920	12,416	26,064	18,784
18:10:00		13.00	6,505	25.00	12,510		19,015	12,144	6,480	13,904	12,656	26,048	19,136
AVERAGES	585.08	12.33	6,172	24.83	12,427	25,492	18,598	12,133	6,410	13,820	12,373	25,954	18,784

ENGINE "A"
LOAD 80%

TOTAL AVERAGES
NOx 27.72
O2 16.43
Adj NOx 36.59

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
28.50	16.40	37.37	24.40	16.30	31.30	29.40	16.40	38.55
28.60	16.40	37.50	25.40	16.40	33.30	27.30	16.30	35.02
28.60	16.30	36.68	27.00	16.40	35.40	29.70	16.30	38.09
28.80	16.40	37.76	27.10	16.30	34.76	26.60	16.40	34.88
28.10	16.50	37.68	27.80	16.60	38.14	25.50	16.50	34.19
28.70	16.40	37.63	28.30	16.60	38.83	27.10	16.40	35.53
29.20	16.40	38.28	28.70	16.90	42.33	26.70	16.40	35.01
28.70	16.50	38.48	28.40	16.30	36.43	26.70	16.40	35.01

ENGINE "B"
LOAD 80%

TOTAL AVERAGES
NOx 27.37
O2 16.68
Adj NOx 38.29

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
28.70	16.50	38.48	27.70	16.70	38.91	27.50	16.70	38.63
29.10	16.50	39.02	27.50	16.70	38.63	27.30	16.70	38.35
27.70	16.70	38.91	26.40	16.70	37.09	26.50	16.70	37.23
24.60	17.10	38.19	26.00	16.80	37.41	25.30	16.80	36.41
28.80	16.60	39.52	29.10	16.60	39.93	27.50	16.60	37.73
29.40	16.60	40.34	30.20	16.60	41.44	28.30	16.30	36.30
28.20	16.60	38.69	27.40	16.70	38.49	26.30	16.70	36.95
26.30	16.80	37.85	26.30	16.80	37.85	24.80	16.90	36.58

DATE: 08/08/1991
TEST: NOx - 8 pts
UNIT: Gas Turbine #2
LOAD: 100% (50 MW)

RUN: #5
START TIME: 18:47:00
STOP TIME: 20:11:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter					Total	Total	Engine "A"		Engine "B"		Total	Total
	Gas	Engine "A"		Engine "B"		Gas	Water	Gas	Water	Gas	Water	Gas	Water
TIME	Flow	Water Flow		Water Flow		Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
(24 hr)	(Mcf/hr)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
18:45:00	673.80	16.50	8,257	25.00	12,510	29,357	20,767	14,848	8,768	14,608	12,432	29,456	21,200
18:50:00								14,832	8,512	14,608	12,112	29,440	20,624
18:55:00		16.50	8,257	24.50	12,260		20,516	14,832	8,896	14,576	12,128	29,408	21,024
19:00:00	655.60					28,564		14,784	9,040	14,576	12,320	29,360	21,360
19:05:00		17.50	8,757	24.00	12,010		20,767	14,656	8,656	14,592	12,224	29,248	20,880
19:10:00								14,544	8,480	14,560	12,384	29,104	20,864
19:15:00	679.10	16.50	8,257	24.00	12,010	29,588	20,266	14,560	8,816	14,528	12,352	29,088	21,168
19:20:00								14,528	8,576	14,544	12,240	29,072	20,816
19:25:00		17.00	8,507	24.00	12,010		20,516	14,528	8,432	14,512	12,288	29,040	20,720
19:30:00	656.00					28,582		14,688	8,656	14,624	12,208	29,312	20,864
19:35:00		16.20	8,106	24.50	12,260		20,366	14,800	8,768	14,800	12,256	29,600	21,024
19:40:00								14,832	8,672	14,688	12,144	29,520	20,816
19:45:00	678.90	17.00	8,507	24.00	12,010	29,580	20,516	14,816	8,544	14,624	12,336	29,440	20,880
19:50:00								14,852	8,416	14,656	12,224	29,508	20,640
19:55:00		17.00	8,507	24.00	12,010		20,516	14,848	8,896	14,704	12,576	29,552	21,472
20:00:00	701.90					30,582		14,880	8,432	14,736	12,416	29,616	20,848
20:05:00		16.00	8,006	24.50	12,260		20,266	14,896	8,368	14,784	12,304	29,680	20,672
20:10:00								14,880	8,336	14,720	12,304	29,600	20,640
AVERAGES	674.22	16.69	8,351	24.28	12,149	29,376	20,500	14,756	8,626	14,636	12,292	29,391	20,917

		Run #1			Run #2			Run #3		
		NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
ENGINE	"A"	24.50	16.00	29.50	23.60	16.00	28.42	28.30	16.00	34.08
LOAD	100%	24.20	16.00	29.14	24.60	16.00	29.82	28.30	16.10	34.79
		24.20	16.00	29.14	24.30	16.00	29.26	29.40	16.10	36.14
TOTAL AVERAGES		24.70	16.00	29.74	23.10	16.00	27.81	25.80	16.30	33.09
NOx	26.14	26.20	16.00	31.55	22.70	15.90	26.79	27.50	16.20	34.52
O2	16.07	26.10	16.00	31.43	27.20	15.70	30.86	27.30	16.20	34.27
Adj NOx	31.96	25.90	16.10	31.84	32.00	16.10	39.33	27.60	16.20	34.65
		25.00	16.10	30.73	27.00	16.40	35.40	27.80	16.20	34.90

		Run #1			Run #2			Run #3		
		NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
ENGINE	"B"	27.70	16.10	34.05	28.00	16.10	34.42	26.90	16.00	32.39
LOAD	100%	27.10	16.10	33.31	27.70	16.10	34.05	26.70	16.00	32.15
		26.60	16.10	32.70	26.40	16.10	32.45	26.30	16.10	32.33
TOTAL AVERAGES		23.90	16.30	30.65	25.30	16.20	31.76	22.70	16.20	28.50
NOx	27.13	29.70	16.10	36.51	27.80	16.10	34.17	28.80	16.10	35.40
O2	16.12	29.50	16.00	35.52	28.60	16.10	35.15	27.90	16.00	33.59
Adj NOx	33.49	29.00	16.20	36.40	26.60	16.10	32.70	27.70	16.00	33.35
		28.90	16.20	33.77	26.10	16.30	33.48	27.30	16.30	35.02

DATE: 08/09/1991
TEST: 02 Traverse
UNIT: Gas Turbine #2
LOAD: 50% (29 MW)

RUN: #1
START TIME: 08:33:00
STOP TIME: 11:17:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter					Total	Total	Engine "A"		Engine "B"		Total	Total
	Oil	Engine "A"		Engine "B"		Oil	Water	Oil	Water	Oil	Water	Oil	Water
TIME	Flow	Water Flow		Water Flow		Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
(24 hr)	(s/20 gal)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
08:35:00	23.21	9.0	4,504	10.0	5,004	21,724	9,508	10,336	4,664	10,384	5,112	20,720	9,776
08:40:00								10,400	4,904	10,448	5,272	20,848	10,176
08:45:00	23.27	9.2	4,604	10.0	5,004	21,668	9,608	10,416	4,824	10,432	5,160	20,848	9,984
08:50:00								10,448	4,704	10,496	5,576	20,944	10,280
08:55:00	22.88	9.0	4,504	11.0	5,504	22,037	10,008	10,496	4,704	10,624	5,640	21,120	10,344
09:00:00								10,496	4,648	10,704	6,080	21,200	10,728
09:05:00	23.14	8.0	4,003	11.5	5,755	21,790	9,758	10,336	4,016	10,640	6,296	20,976	10,312
09:10:00								10,368	4,168	10,640	6,312	21,008	10,480
09:15:00	23.23	7.8	3,903	11.0	5,504	21,705	9,408	10,352	4,128	10,624	6,280	20,976	10,408
09:20:00								10,368	4,376	10,656	6,392	21,024	10,768
09:25:00	23.32	8.0	4,003	11.8	5,905	21,622	9,908	10,352	4,080	10,672	6,248	21,024	10,328
09:30:00								10,368	4,296	10,672	5,976	21,040	10,272
09:35:00	23.16	8.8	4,404	12.0	6,005	21,771	10,408	10,416	4,152	10,720	6,048	21,136	10,200
09:40:00								10,464	4,312	10,704	6,424	21,168	10,736
09:45:00	23.18	8.0	4,003	12.2	6,105	21,752	10,108	10,448	4,208	10,688	6,320	21,136	10,528
09:50:00								10,448	4,136	10,704	6,720	21,152	10,856
09:55:00	22.93	8.2	4,103	11.8	5,905	21,989	10,008	10,464	4,184	10,736	6,696	21,200	10,880
10:00:00								10,432	4,092	10,736	6,176	21,168	10,268
10:05:00	23.13	8.0	4,003	12.0	6,005	21,799	10,008	10,416	4,160	10,704	6,552	21,120	10,712
10:10:00								10,480	4,104	10,736	6,704	21,216	10,808
10:15:00	23.02	8.0	4,003	11.0	5,504	21,903	9,508	10,496	4,296	10,752	6,560	21,248	10,856
10:20:00								10,432	4,323	10,864	6,616	21,296	10,939
10:25:00	22.85	8.0	4,003	13.0	6,505	22,066	10,508	10,544	4,272	10,784	6,088	21,328	10,360
10:30:00								10,528	4,184	10,864	6,424	21,392	10,608
10:35:00	22.74	8.0	4,003	12.5	6,255	22,173	10,258	10,528	4,496	10,864	7,016	21,392	11,512
10:40:00								10,592	4,352	10,848	6,920	21,440	11,272
10:45:00	22.95	8.0	4,003	12.0	6,005	21,970	10,008	10,560	4,208	10,800	6,848	21,360	11,056
10:50:00								10,544	4,080	10,768	6,512	21,312	10,592
10:55:00	22.77	8.20	4,103	13.00	6,505	22,144	10,608	10,560	4,120	10,848	6,576	21,408	10,696
11:00:00								10,528	4,096	10,864	6,856	21,392	10,952
11:05:00	22.91	8.00	4,003	13.00	6,505	22,009	10,508	10,464	4,176	10,768	6,640	21,232	10,816
11:10:00								10,464	4,288	10,816	6,768	21,280	11,056
11:15:00	23.06	7.80	3,903	12.00	6,005	21,865	9,908	10,480	4,168	10,784	6,784	21,264	10,952
11:20:00	23.24	7.50	3,753	12.00	6,005	21,696	9,758	10,448	4,168	10,704	6,336	21,152	10,504
AVERAGES	23.06	8.19	4,101	11.77	5,888	21,871	9,989	10,459	4,286	10,717	6,358	21,162	10,618

DATE: 08/09/1991
TEST: NOx - 8 pts
UNIT: Gas Turbine #2
LOAD: 50% (29 MW)

RUN: #2
START TIME: 11:25:00
STOP TIME: 12:18:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter	Engine "A"		Engine "B"		Total	Total	Engine "A"		Engine "B"		Total	Total
	Oil	Water Flow		Water Flow		Oil	Water	Oil	Water	Oil	Water	Oil	Water
TIME	Flow					Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
(24 hr)	(s/20 gal)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
11:25:00	22.95	8.0	4,003	12.5	6,255	21,970	10,258	10,432	4,208	10,704	6,376	21,184	10,584
11:30:00								10,448	4,192	10,736	6,752	21,152	10,944
11:35:00	22.87	8.0	4,003	12.5	6,255	22,047	10,258	10,432	4,136	10,720	6,520	21,296	10,656
11:40:00								10,496	4,304	10,800	6,848	21,264	11,152
11:45:00	23.05	8.3	4,153	11.8	5,905	21,875	10,058	10,480	4,176	10,784	6,872	21,248	11,048
11:50:00								10,464	4,160	10,784	6,992	21,312	11,152
11:55:00	23.13	8.0	4,003	12.5	6,255	21,799	10,258	10,512	4,232	10,800	6,776	21,248	11,008
12:00:00								10,480	4,064	10,768	6,368	21,216	10,432
12:05:00	23.11	7.5	3,753	11.0	5,504	21,818	9,257	10,448	4,144	10,768	6,360	21,280	10,504
12:10:00								10,448	4,240	10,832	6,576	21,376	10,816
12:15:00	22.93	8.0	4,003	12.0	6,005	21,989	10,008	10,496	4,336	10,880	5,848	21,376	10,184
AVERAGES	23.01	7.97	3,987	12.05	6,030	21,916	10,016	10,467	4,199	10,780	6,572	21,268	10,771

ENGINE "A"
LOAD 50%

TOTAL AVERAGES
NOx 44.04
O2 16.84
Adj NOx 64.08

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
44.20	16.70	62.09	46.60	16.80	67.06	43.90	17.00	66.41
42.50	16.60	58.31	46.40	16.70	65.18	43.50	17.00	65.81
39.80	16.70	55.91	45.90	16.70	64.48	43.70	17.00	66.11
40.20	16.80	57.85	43.10	17.00	65.20	43.70	17.00	66.11
41.40	16.80	59.58	42.90	17.00	64.90	47.00	16.70	66.02
43.00	16.80	61.88	46.40	16.80	66.77	46.30	16.80	66.63
43.60	16.80	62.74	46.00	16.90	67.85	45.70	16.90	67.41
41.90	16.80	60.30	44.10	17.00	66.72	45.20	16.90	66.67

ENGINE "B"
LOAD 50%

TOTAL AVERAGES
NOx 35.10
O2 17.06
Adj NOx 54.08

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
33.90	17.40	57.15	36.10	17.00	54.61	37.20	17.00	56.28
32.60	17.60	58.28	36.40	16.90	53.69	38.50	16.80	55.40
33.20	17.40	55.97	38.00	16.80	54.68	38.00	16.70	53.38
32.50	17.50	56.40	36.50	16.80	52.52	37.10	16.70	52.12
29.60	17.60	52.92	34.80	16.90	51.33	36.00	16.80	51.88
33.10	17.50	57.44	36.20	16.90	53.40	35.90	16.80	51.66
32.60	17.50	56.57	36.90	16.80	53.10	36.00	16.80	51.80
30.70	17.50	53.27	34.60	16.90	51.04	35.90	16.90	52.95

DATE: 08/09/1991
TEST: NOx - 8 pts
UNIT: Gas Turbine #2
LOAD: 65% (33 MW)

RUN: #3
START TIME: 16:57:00
STOP TIME: 18:08:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter	Engine "A"		Engine "B"		Total	Total	Engine "A"		Engine "B"		Total	Total
TIME	Oil Flow	Water Flow		Water Flow		Oil Flow	Water Flow	Oil Flow	Water Flow	Oil Flow	Water Flow	Oil Flow	Water Flow
(24 hr)	(s/20 gal)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
16:50:00	20.82	8.8	4,404	16.2	8,106	24,453	12,510	11,424	4,560	12,768	8,448	24,112	13,008
16:55:00								11,360	4,392	12,752	7,832	23,984	12,224
17:00:00	20.82	8.5	4,253	13.0	6,505	24,218	10,759	11,408	4,304	12,576	7,328	23,904	11,632
17:05:00								11,376	4,536	12,528	7,864	23,824	12,400
17:10:00	20.98	8.0	4,003	13.0	6,505	24,033	10,508	11,344	4,376	12,480	6,832	23,696	11,208
17:15:00								11,328	4,296	12,368	7,296	23,648	11,592
17:20:00	21.08	8.2	4,103	13.0	6,505	23,919	10,608	11,296	4,168	12,352	7,112	23,648	11,280
17:25:00								11,392	4,368	12,256	6,880	23,568	11,248
17:30:00	20.21	8.2	4,103	14.0	7,006	24,949	11,109	11,360	4,416	12,208	7,320	23,584	11,736
17:35:00								11,328	4,240	12,256	7,080	23,552	11,320
17:40:00	21.22	8.0	4,003	12.0	6,005	23,761	10,008	11,328	4,336	12,224	7,216	23,552	11,552
17:45:00								11,328	4,168	12,272	7,336	23,600	11,504
17:50:00	21.00	8.0	4,003	14.0	7,006	24,010	11,009	11,360	4,424	12,352	7,256	23,712	11,680
17:55:00								11,328	4,272	12,336	7,792	23,664	12,064
18:00:00	21.36	8.4	4,203	13.3	6,655	23,606	10,859	11,312	4,256	12,208	7,336	23,520	11,592
18:05:00								11,296	4,344	12,176	7,088	23,472	11,432
AVERAGES	20.91	8.3	4,135	13.6	6,787	24,119	10,921	11,348	4,341	12,382	7,376	23,690	11,717

ENGINE "A"
LOAD 65%

TOTAL AVERAGES
NOx 38.55
O2 17.08
Adj NOx 59.49

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
39.90	17.20	63.62	38.10	17.10	59.18	38.10	17.20	60.75
41.30	17.10	64.12	39.30	17.10	61.02	40.70	17.00	61.57
38.60	17.00	58.39	39.80	17.00	60.21	40.30	17.00	60.97
37.30	17.00	56.43	38.70	17.10	60.09	38.00	17.00	57.49
37.70	17.10	58.53	37.00	17.20	59.00	38.80	17.20	61.87
36.30	17.10	56.36	39.10	17.00	59.15	38.30	17.10	59.47
37.20	17.00	56.28	39.30	17.00	59.45	40.00	17.10	62.11
37.00	17.00	55.97	37.10	17.10	57.60	37.40	17.10	58.07

ENGINE "B"
LOAD 65%

TOTAL AVERAGES
NOx 39.73
O2 16.84
Adj NOx 57.74

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
38.30	16.80	55.11	36.70	17.00	55.52	40.50	16.80	58.28
40.90	16.70	57.45	38.80	16.90	57.23	43.40	16.80	62.45
41.00	16.70	57.80	41.00	16.70	57.80	40.30	16.80	57.99
40.30	16.80	57.99	39.70	16.90	58.56	38.10	16.90	56.20
40.40	16.90	59.59	41.10	16.80	59.14	35.70	17.10	55.43
42.00	16.70	59.00	40.00	16.70	56.19	39.70	16.90	58.56
40.30	16.90	59.44	39.40	16.80	56.70	40.40	16.80	58.14
37.90	17.00	57.34	38.20	16.90	56.35	39.30	16.90	57.97

DATE: 08/09/1991
TEST: NOx - 8 pts
UNIT: Gas Turbine #2
LOAD: 80% (42 MW)

RUN: #4
START TIME: 18:29:00
STOP TIME: 19:39:00

Note: Gas density -- 0.4357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter							Engine "A"		Engine "B"			
TIME	Oil Flow	Engine "A" Water Flow		Engine "B" Water Flow		Total Oil Flow	Total Water Flow	Oil Flow	Water Flow	Oil Flow	Water Flow	Total Oil Flow	Total Water Flow
(24 hr)	(s/20 gal)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
18:30:00	17.99	11.5	5,755	16.5	8,257	28,028	14,011	14,128	6,192	13,936	8,528	28,080	14,720
18:35:00								14,128	6,120	13,952	8,624	28,112	14,744
18:40:00	17.83	12.0	6,005	17.0	8,507	28,279	14,512	14,112	6,048	14,000	8,912	28,112	14,960
18:45:00								14,192	6,344	13,920	8,592	28,112	14,936
18:50:00	17.98	12.0	6,005	16.0	8,006	28,043	14,011	14,144	6,208	13,968	8,560	28,208	14,768
18:55:00								14,224	6,096	13,984	8,512	28,048	14,608
19:00:00	17.94	12.0	6,005	16.0	8,006	28,106	14,011	14,160	6,008	13,888	8,560	27,760	14,568
19:05:00								14,016	6,120	13,744	8,400	27,808	14,520
19:10:00	18.18	12.0	6,005	16.0	8,006	27,735	14,011	14,016	6,176	13,792	8,416	27,760	14,592
19:15:00								13,984	6,080	13,776	8,288	27,776	14,368
19:20:00	18.19	11.8	5,905	16.0	8,006	27,719	13,911	13,984	6,144	13,792	8,480	27,776	14,624
19:25:00								14,000	6,216	13,744	8,368	27,744	14,584
19:30:00	18.15	11.3	5,655	16.0	8,006	27,780	13,661	14,064	6,280	13,760	8,464	27,824	14,744
19:35:00								14,064	5,920	13,792	8,352	27,856	14,272
19:40:00	18.18	12.0	6,005	16.0	8,006	27,735	14,011	14,064	6,144	13,824	8,176	27,888	14,320
AVERAGES	18.06	11.8	5,917	16.2	8,100	27,928	14,017	14,085	6,140	13,858	8,482	27,924	14,622

ENGINE "A"
LOAD 80%

TOTAL AVERAGES
NOx 43.43
O2 16.60
Adj NOx 59.51

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
46.10	16.60	63.25	45.70	16.60	62.70	44.60	16.60	61.20
48.10	16.50	64.50	45.20	16.50	60.61	44.60	16.50	59.80
46.00	16.50	61.68	44.00	16.50	59.00	42.80	16.50	57.39
44.60	16.50	59.80	42.50	16.60	58.31	41.90	16.60	57.49
41.50	16.70	58.30	40.60	16.70	57.03	39.90	16.70	56.05
45.40	16.60	62.29	44.40	16.60	60.92	39.70	16.70	55.77
45.40	16.50	60.88	43.10	16.70	60.55	40.50	16.70	56.89
43.60	16.50	58.46	43.50	16.60	59.69	38.60	16.80	55.55

ENGINE "B"
LOAD 80%

TOTAL AVERAGES
NOx 43.85
O2 16.67
Adj NOx 61.20

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
43.20	16.70	60.69	44.30	16.70	62.23	43.50	16.70	61.11
43.40	16.70	60.97	43.40	16.70	60.97	43.70	16.70	61.39
44.20	16.70	62.09	43.80	16.60	60.10	42.90	16.80	61.73
45.10	16.80	64.90	43.70	16.70	61.39	42.90	16.80	61.73
44.10	16.60	60.51	44.10	16.70	61.95	44.80	16.60	61.47
44.40	16.60	60.92	45.00	16.70	63.21	44.90	16.60	61.61
43.10	16.60	59.14	43.10	16.50	57.79	45.50	16.50	61.01
42.10	16.70	59.14	42.50	16.60	58.31	44.80	16.80	64.47

DATE: 08/09/1991 RUN: #5
TEST: NOx - 8 pts START TIME: 19:54:00
UNIT: Gas Turbine #2 STOP TIME: 21:08:00
LOAD: 100% (50 MW)

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter					Total	Total	Engine "A"		Engine "B"		Total	Total
	Oil	Engine "A"		Engine "B"		Oil	Water	Oil	Water	Oil	Water	Oil	Water
TIME	Flow	Water Flow		Water Flow		Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
(24 hr)	(s/20 gal)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
19:55:00	15.43	13.0	6,505	20.5	10,258	32,678	16,763	15,728	6,784	16,800	10,592	32,528	17,376
20:00:00								15,760	6,848	16,768	10,416	32,560	17,264
20:05:00	15.61	13.0	6,505	20.5	10,258	32,301	16,763	15,760	6,952	16,800	10,384	32,592	17,336
20:10:00								15,792	6,920	16,800	10,528	32,608	17,448
20:15:00	15.55	13.8	6,906	20.5	10,258	32,425	17,164	15,808	7,016	16,800	10,384	32,576	17,400
20:20:00								15,776	6,752	16,800	10,560	32,576	17,312
20:25:00	15.47	12.5	6,255	20.5	10,258	32,593	16,513	15,776	6,952	16,800	10,432	32,608	17,384
20:30:00								15,808	7,040	16,800	10,592	32,688	17,632
20:35:00	15.52	13.5	6,755	20.5	10,258	32,488	17,014	15,856	6,792	16,832	10,592	32,624	17,384
20:40:00								15,824	6,904	16,800	10,672	32,656	17,576
20:45:00	15.53	13.2	6,805	20.8	10,408	32,467	17,014	15,824	6,736	16,832	10,512	32,656	17,248
20:50:00								15,856	6,672	16,864	10,528	32,720	17,200
20:55:00	15.51	13.0	6,505	20.5	10,258	32,509	16,763	15,840	6,984	16,832	10,464	32,672	17,448
21:00:00								15,840	6,880	16,832	10,480	32,672	17,360
21:05:00	15.55	13.5	6,755	20.5	10,258	32,425	17,014	15,856	6,912	16,832	10,464	32,688	17,376
AVERAGES	15.52	13.2	6,599	20.5	10,277	32,486	16,876	15,807	6,876	16,813	10,507	32,628	17,383

ENGINE "A"
LOAD 100%

TOTAL AVERAGES
NOx 50.60
O2 16.19
Adj NOx 63.35

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
51.00	16.20	64.02	51.30	16.20	64.40	50.20	16.30	64.39
51.20	16.10	62.93	51.60	16.10	63.43	50.50	16.30	64.77
51.60	16.10	63.43	51.40	16.20	64.52	50.80	16.10	62.44
49.90	16.30	64.00	48.10	16.30	61.69	51.40	16.10	63.18
50.80	16.20	63.77	47.10	16.30	60.41	51.10	16.20	64.15
50.30	16.10	61.83	49.50	16.30	63.49	52.00	16.10	63.92
51.00	16.10	62.69	50.70	16.20	63.64	51.80	16.10	63.67
49.40	16.30	63.36	50.90	16.10	62.56	50.70	16.20	63.64

ENGINE "B"
LOAD 100%

TOTAL AVERAGES
NOx 55.36
O2 16.10
Adj NOx 67.99

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
56.10	16.20	70.42	54.60	16.20	68.54	55.10	16.20	69.17
56.10	16.10	68.96	54.40	16.20	68.29	55.60	16.10	68.34
56.30	16.10	69.20	51.80	16.30	66.44	57.30	15.90	67.61
55.00	16.00	66.22	56.50	16.10	69.45	56.00	16.00	67.43
53.50	16.10	65.76	58.30	16.00	70.20	54.70	16.10	67.24
51.10	16.20	64.15	56.90	16.00	68.51	56.60	16.00	68.15
53.30	16.20	66.91	56.90	16.00	68.51	57.10	16.00	68.75
53.30	16.30	68.36	56.30	16.00	67.79	55.90	16.00	67.31

DATE: 08/12/1991
TEST: Particulate Test
UNIT: Gas Turbine #1
LOAD: 100% (55 MW)

RUN: #1
START TIME: 09:35:00
STOP TIME: 12:45:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter	Engine "A"		Engine "B"		Total	Total	Engine "A"		Engine "B"		Total	Total
	Gas	Water Flow		Water Flow		Gas	Water	Gas	Water	Gas	Water	Gas	Water
TIME	Flow					Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
(24 hr)	(Mcf/hr)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
09:35:00		17.8	8,907	28.5	14,261		23,169	16,736	9,440	17,376	14,400	34,112	23,840
09:40:00								16,704	9,392	17,216	14,336	33,920	23,728
09:45:00	775.20	17.5	8,757	28.2	14,111	33,775	22,868	16,640	9,520	17,344	14,368	33,984	23,888
09:50:00								16,672	9,424	17,344	14,336	34,016	23,760
09:55:00		17.5	8,757	28.5	14,261		23,018	16,640	9,328	17,184	14,320	33,824	23,648
10:00:00	750.80					32,712		16,608	9,408	17,408	14,336	34,016	23,744
10:05:00		17.5	8,757	28.5	14,261		23,018	16,608	9,424	17,408	14,288	34,016	23,712
10:10:00								16,544	9,408	17,120	14,336	33,664	23,744
10:15:00	750.90	17.5	8,757	28.5	14,261	32,717	23,018	16,544	9,360	17,248	14,336	33,792	23,696
10:20:00								16,576	9,424	17,248	14,304	33,824	23,728
10:25:00		17.5	8,757	28.7	14,361		23,118	16,608	9,408	17,248	14,320	33,856	23,728
10:30:00	747.50					32,569		16,608	9,568	17,344	14,288	33,952	23,856
10:35:00		17.5	8,757	28.5	14,261		23,018	16,544	9,568	17,280	14,320	33,824	23,888
10:40:00								16,544	9,344	17,056	14,336	33,600	23,680
10:45:00	744.70	17.5	8,757	28.4	14,211	32,447	22,968	16,512	9,552	17,024	14,368	33,536	23,920
10:50:00								16,512	9,056	17,216	14,272	33,728	23,328
10:55:00		17.5	8,757	28.4	14,211		22,968						
11:00:00	740.50					32,264		16,512	9,328	17,344	14,288	33,856	23,616
11:05:00		17.5	8,757	28.4	14,211		22,968	16,480	9,456	17,056	14,336	33,536	23,792
11:10:00								16,480	9,168	17,312	14,352	33,792	23,520
11:15:00	757.70	17.5	8,757	28.4	14,211	33,013	22,968	16,512	9,264	17,248	14,336	33,760	23,600
11:20:00								16,512	9,056	17,120	14,320	33,632	23,376
11:25:00		17.5	8,757	28.5	14,261		23,018	16,576	9,248	17,408	14,240	33,984	23,488
11:30:00	757.10					32,987		16,608	9,344	17,472	14,208	34,080	23,552
11:35:00		17.5	8,757	28.5	14,261		23,018	16,544	9,232	17,440	14,256	33,984	23,488
11:40:00								16,576	9,200	17,440	14,272	34,016	23,472
11:45:00	737.20	17.5	8,757	28.5	14,261	32,120	23,018	16,512	9,184	17,344	14,272	33,856	23,456
TOTALS	751.29	17.52	8,768	28.46	14,244	32,734	23,011	16,574	9,350	17,279	14,313	33,852	23,663

DATE: 08/12/1991
TEST: Particulate Test
UNIT: Gas Turbine #1
LOAD: 100% (54 MW)

RUN: #2
START TIME: 12:50:00
STOP TIME: 15:00:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter	Engine "A"		Engine "B"		Total	Total	Engine "A"		Engine "B"		Total	Total
	Gas	Water Flow		Water Flow		Gas	Water	Gas	Water	Gas	Water	Gas	Water
TIME	Flow					Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
(24 hr)	(Mcf/hr)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
12:55:00								16,208	9,168	16,960	14,224	33,168	23,392
13:00:00	731.40	17.50	8,757	28.5	14,261	31,867	23,018	16,304	9,136	16,928	14,192	33,232	23,328
13:05:00								16,208	9,264	16,864	14,272	33,072	23,536
13:10:00		17.50	8,757	28.5	14,261		23,018	16,160	9,152	16,800	14,256	32,960	23,408
13:15:00	727.00					31,675		16,144	9,344	16,832	14,192	32,976	23,536
13:20:00		17.50	8,757	28.5	14,261		23,018	16,032	9,248	16,800	14,160	32,832	23,408
13:25:00									9,136	17,056	14,112		23,248
13:30:00	724.70	17.50	8,757	28.5	14,261	31,575	23,018	16,384	8,992	16,960	14,160	33,344	23,152
13:35:00								16,240	9,120	16,832	14,208	33,072	23,328
13:40:00		17.50	8,757	28.5	14,261		23,018	16,320	9,200	17,056	14,176	33,376	23,376
13:45:00	720.70					31,401		16,336	9,008	16,896	41,460	33,232	50,468
13:50:00		17.50	8,757	28.5	14,261		23,018	16,272	8,992	17,024	14,064	33,296	23,056
13:55:00								16,176	9,072	16,992	14,144	33,168	23,216
14:00:00	699.00	17.50	8,757	28.5	14,261	30,455	23,018	16,176	9,104	17,088	14,128	33,264	23,232
14:05:00								16,016	9,152	16,800	14,176	32,816	23,328
14:10:00		17.50	8,757	28.5	14,261		23,018	16,288	9,040	17,216	14,128	33,504	23,168
14:15:00								16,352	9,104	16,960	14,144	33,312	23,248
14:20:00		17.50	8,757	28.5	14,261		23,018	16,224	9,120	16,992	14,144	33,216	23,264
14:25:00								16,256	9,104	16,960	14,032	33,216	23,136
14:30:00	720.60	17.50	8,757	28.5	14,261	31,397	23,018	16,048	9,056	16,800	14,160	32,848	23,216
14:35:00								16,176	8,896	16,896	14,160	33,072	23,056
14:40:00		17.50	8,757	28.5	14,261		23,018	16,096	8,976	16,896	14,176	32,992	23,152
14:45:00	699.60					30,482		16,224	9,040	17,152	14,112	33,376	23,152
14:50:00		17.50	8,757	28.5	14,261		23,018	16,240	9,120	17,056	14,080	33,296	23,200
14:55:00								16,144	8,832	16,960	14,128	33,104	22,960
15:00:00	721.60	17.50	8,757	28.5	14,261	31,440	23,018	16,240	8,832	16,928	14,112	33,168	22,944
15:05:00								16,252	8,880	16,896	14,112	33,148	22,992
TOTALS	718.08	17.50	8,757	28.50	14,261	31,287	23,018	16,212	9,077	16,948	15,163	33,156	24,241

DATE: 08/12/1991
TEST: Particulate Test
UNIT: Gas Turbine #1
LOAD: 100% (54 MW)

RUN: #3
START TIME: 15:30:00
STOP TIME: 17:40:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter							Engine "A"		Engine "B"			
TIME	Gas Flow	Engine "A" Water Flow		Engine "B" Water Flow		Total Gas Flow	Total Water Flow	Gas Flow	Water Flow	Gas Flow	Water Flow	Total Gas Flow	Total Water Flow
(24 hr)	(Mcf/hr)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
15:25:00								15,760	9,040	16,672	14,016	32,432	23,056
15:30:00	723.50	17.8	8,907	28.5	14,261	31,523	23,169	15,936	8,992	16,832	14,128	32,768	23,120
15:35:00								16,096	8,976	16,928	14,048	33,024	23,024
15:40:00		17.5	8,757	28.5	14,261		23,018	16,000	8,928	16,800	14,208	32,800	23,136
15:45:00	724.80					31,580		15,792	8,944	16,640	14,160	32,432	23,104
15:50:00		17.5	8,757	28.5	14,261		23,018	15,744	8,992	16,480	14,080	32,224	23,072
15:55:00								15,824	8,992	16,640	14,112	32,464	23,104
16:00:00	703.00	17.5	8,757	28.5	14,261	30,630	23,018	15,856	8,944	16,704	14,096	32,560	23,040
16:05:00								15,984	9,104	16,800	14,176	32,784	23,280
16:10:00		17.5	8,757	28.5	14,261		23,018	16,016	8,848	16,800	14,064	32,816	22,912
16:15:00	727.00					31,675		16,048	8,912	16,832	14,032	32,880	22,944
16:20:00		17.5	8,757	28.5	14,261		23,018	16,000	8,864	16,832	14,144	32,832	23,008
16:25:00								15,952	8,960	16,768	14,240	32,720	23,200
16:30:00	728.90	17.5	8,757	28.5	14,261	31,758	23,018	15,904	8,832	16,800	14,096	32,704	22,928
16:35:00								15,968	8,912	16,832	14,160	32,800	23,072
16:40:00		17.5	8,757	28.5	14,261		23,018	15,920	8,864	16,864	14,128	32,784	22,992
16:45:00	706.40					30,778		16,000	8,944	16,960	14,224	32,960	23,168
16:50:00		17.5	8,757	28.5	14,261		23,018	16,048	8,880	16,768	14,176	32,816	23,056
16:55:00								16,016	8,896	16,864	14,096	32,880	22,992
17:00:00		17.5	8,757	28.5	14,261		23,018	16,032	8,848	16,832	14,064	32,864	22,912
17:05:00								16,032	9,040	16,832	14,112	32,864	23,152
17:10:00		17.6	8,807	28.5	14,261		23,068	16,016	8,816	16,896	14,144	32,912	22,960
17:15:00	707.40					30,821		16,000	8,896	16,800	14,160	32,800	23,056
17:20:00		17.6	8,807	28.5	14,261		23,068	16,064	8,896	16,864	14,144	32,928	23,040
17:25:00								16,048	8,816	16,800	14,080	32,848	22,896
17:30:00	707.30	17.5	8,757	28.5	14,261	30,817	23,018	15,968	8,864	16,800	14,208	32,768	23,072
17:35:00								15,776	8,720	16,576	14,160	32,352	22,880
17:40:00		17.5	8,757	28.5	14,261		23,018	15,648	8,864	16,576	14,048	32,224	22,912
TOTALS	716.04	17.5	8,775	28.5	14,261	31,198	23,036	15,945	8,914	16,778	14,125	32,723	23,039

DATE: 08/13/1991
TEST: Particulate Test
UNIT: Gas Turbine #1
LOAD: 100% (57 MW)

RUN: #1
START TIME: 08:05:00
STOP TIME: 10:10:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter					Total	Total	Engine "A"		Engine "B"		Total	Total
	Oil	Engine "A"		Engine "B"		Oil	Water	Oil	Water	Oil	Water	Oil	Water
TIME	Flow	Water Flow		Water Flow		Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
(24 hr)	(s/20 gal)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
08:05:00	13.69	16.5	8,257	25.0	12,510	36,831	20,767	19,392	8,240	17,888	12,368	37,280	20,608
08:10:00								19,424	8,352	17,952	12,416	37,376	20,768
08:15:00	13.80	16.3	8,157	24.8	12,410	36,537	20,566	19,424	8,136	17,920	12,320	37,344	20,456
08:20:00								19,456	8,368	17,920	12,448	37,376	20,816
08:25:00	13.86	16.0	8,006	24.8	12,410	36,379	20,416	19,456	8,256	17,920	12,448	37,376	20,704
08:30:00								19,488	8,096	17,952	12,416	37,440	20,512
08:35:00	13.85	16.3	8,157	25.0	12,510	36,405	20,667	19,456	8,152	17,952	12,432	37,408	20,584
08:40:00								19,456	8,080	18,016	12,480	37,472	20,560
08:45:00	13.74	15.8	7,906	24.8	12,410	36,697	20,316	19,488	8,224	18,016	12,432	37,504	20,656
08:50:00								19,488	8,368	17,984	12,304	37,472	20,672
08:55:00	13.70	15.8	7,906	25.0	12,510	36,804	20,416	19,488	8,152	17,984	12,288	37,472	20,440
09:00:00								19,488	8,304	17,920	12,368	37,408	20,672
09:05:00	13.72	15.8	7,906	24.8	12,410	36,750	20,316	19,456	8,288	17,856	12,464	37,312	20,752
09:10:00								19,392	8,024	17,856	12,432	37,248	20,456
09:15:00	13.90	15.8	7,906	24.8	12,410	36,274	20,316	19,424	8,048	17,856	12,384	37,280	20,432
09:20:00								19,392	8,128	17,856	12,400	37,248	20,528
09:25:00	13.83	15.9	7,956	25.0	12,510	36,458	20,466	19,392	8,000	17,856	12,320	37,248	20,320
09:30:00								19,392	8,208	17,888	12,320	37,280	20,528
09:35:00	13.86	15.6	7,806	24.8	12,410	36,379	20,216	19,392	8,368	17,856	12,304	37,248	20,672
09:40:00								19,360	8,256	17,856	12,320	37,216	20,576
09:45:00	13.87	15.5	7,756	24.7	12,360	36,353	20,116	19,328	7,936	17,792	12,400	37,120	20,336
09:50:00								19,296	8,168	17,760	12,320	37,056	20,488
09:55:00	13.88	15.8	7,906	24.8	12,410	36,327	20,316	19,296	8,064	17,696	12,448	36,992	20,512
10:00:00								19,264	7,896	17,728	12,352	36,992	20,248
10:05:00	13.85	15.8	7,906	24.8	12,410	36,405	20,316	19,232	8,024	17,728	12,320	36,960	20,344
10:10:00	13.86	15.8	7,906	25.0	12,510	36,379	20,416	19,232	8,024	17,696	12,448	36,928	20,472
AVERAGES	13.82	15.9	7,960	24.9	12,442	36,499	20,402	19,398	8,160	17,873	12,383	37,271	20,543

DATE: 08/13/1991
TEST: Particulate Test
UNIT: Gas Turbine #1
LOAD: 100% (57 MW)

RUN: #2
START TIME: 10:45:00
STOP TIME: 12:45:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							Engine "A"		Engine "B"			
TIME (24 hr)	Meter Oil Flow (s/20 gal)	Engine "A" Water Flow (gpm)	Engine "A" Water Flow (lb/hr)	Engine "B" Water Flow (gpm)	Engine "B" Water Flow (lb/hr)	Total Oil Flow (lb/hr)	Total Water Flow (lb/hr)	Oil Flow (lb/hr)	Water Flow (lb/hr)	Oil Flow (lb/hr)	Water Flow (lb/hr)	Total Oil Flow (lb/hr)	Total Water Flow (lb/hr)
10:45:00	14.20	15.8	7,906	24.8	12,410	35,508	20,316	19,168	8,104	17,344	12,240	36,512	20,344
10:50:00								19,104	7,920	17,312	12,320	36,416	20,240
10:55:00	13.98	15.8	7,906	24.8	12,410	36,067	20,316	19,104	7,960	17,280	12,272	36,384	20,232
11:00:00								19,136	8,024	17,440	12,320	36,576	20,344
11:05:00	13.94	15.8	7,906	24.8	12,410	36,170	20,316	19,104	7,960	17,440	12,384	36,544	20,344
11:10:00								19,136	8,024	17,440	12,320	36,576	20,344
11:15:00	14.24	15.8	7,906	24.8	12,410	35,408	20,316	19,104	8,040	17,184	12,288	36,288	20,328
11:20:00								19,072	7,984	17,280	12,400	36,352	20,384
11:25:00	14.35	15.8	7,906	24.8	12,410	35,137	20,316	19,072	7,952	17,344	12,400	36,416	20,352
11:30:00								19,040	7,968	17,312	12,320	36,352	20,288
11:35:00	13.89	15.7	7,856	24.6	12,310	36,301	20,166	18,976	8,032	17,280	12,400	36,256	20,432
11:40:00								18,848	8,000	17,184	12,384	36,032	20,384
11:45:00	13.96	15.8	7,906	24.0	12,010	36,119	19,916	18,816	8,064	17,184	12,416	36,000	20,480
11:50:00								18,976	8,072	17,120	12,416	36,096	20,488
11:55:00	14.00	15.8	7,906	24.5	12,260	36,015	20,166	18,944	8,000	17,152	12,288	36,096	20,288
12:00:00								18,880	8,048	17,120	12,335	36,000	20,383
12:05:00	13.90	15.8	7,906	24.5	12,260	36,274	20,166	18,880	8,024	17,184	12,208	36,064	20,232
12:10:00								18,848	8,008	17,280	12,160	36,128	20,168
12:15:00	14.00	15.8	7,906	24.5	12,260	36,015	20,166	18,880	7,984	17,344	12,176	36,224	20,160
12:20:00								18,976	8,000	17,344	12,432	36,320	20,432
12:25:00	13.80	15.8	7,906	24.5	12,260	36,537	20,166	18,944	8,024	17,344	12,304	36,288	20,328
12:30:00								18,944	7,944	17,408	12,320	36,352	20,264
12:35:00	13.90	15.5	7,756	24.5	12,260	36,274	20,016	18,976	8,056	17,408	12,144	36,384	20,200
12:40:00								18,848	8,000	17,184	12,240	36,032	20,240
12:45:00	14.13	15.8	7,906	23.8	11,910	35,684	19,816	18,848	7,960	17,312	12,256	36,160	20,216
AVERAGES	14.02	15.8	7,891	24.5	12,275	35,962	20,166	18,985	8,006	17,289	12,310	36,274	20,316

DATE: 08/13/1991
TEST: Particulate Test
UNIT: Gas Turbine #1
LOAD: 100% (54 MW)

RUN: #3
START TIME: 13:30:00
STOP TIME: 15:35:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter Oil Flow	Engine "A" Water Flow		Engine "B" Water Flow		Total Oil Flow	Total Water Flow	Engine "A" Oil Flow	Engine "A" Water Flow	Engine "B" Oil Flow	Engine "B" Water Flow	Total Oil Flow	Total Water Flow
TIME (24 hr)	(s/20 gal)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
13:30:00	14.22	15.8	7,906	24.8	12,410	35,458	20,316	18,720	7,936	17,184	12,112	35,904	20,048
13:35:00								18,688	8,024	17,152	12,064	35,840	20,088
13:40:00	14.26	15.8	7,906	24.0	12,010	35,359	19,916	18,560	7,952	17,152	12,160	35,712	20,112
13:45:00								18,688	7,984	17,216	12,128	35,904	20,112
13:50:00	14.28	15.8	7,906	24.3	12,160	35,309	20,066	18,752	8,120	17,248	11,952	36,000	20,072
13:55:00								18,592	7,928	17,056	12,192	35,648	20,120
14:00:00	14.37	15.8	7,906	24.8	12,410	35,088	20,316	18,656	7,952	16,992	12,208	35,648	20,160
14:05:00								18,624	7,904	17,088	12,208	35,712	20,112
14:10:00	14.32	15.8	7,906	24.8	12,410	35,211	20,316	18,624	7,864	17,120	12,160	35,744	20,024
14:15:00								18,560	7,984	17,088	12,320	35,648	20,304
14:20:00	14.38	15.8	7,906	24.6	12,310	35,064	20,216	18,464	7,912	16,992	12,160	35,456	20,072
14:25:00								18,592	7,968	16,992	12,304	35,584	20,272
14:30:00	14.50	15.8	7,906	23.0	11,509	34,773	19,416	18,592	7,960	17,056	12,224	35,648	20,184
14:35:00								18,592	7,960	16,992	12,304	35,584	20,264
14:40:00	14.35	15.8	7,906	24.8	12,410	35,137	20,316	18,656	8,016	17,120	12,000	35,776	20,016
14:45:00								18,624	8,016	17,056	12,048	35,680	20,064
14:50:00	14.38	15.8	7,906	24.8	12,410	35,064	20,316	18,592	7,992	17,184	12,032	35,776	20,024
14:55:00								18,656	7,952	17,088	12,224	35,744	20,176
15:00:00	14.36	15.8	7,906	23.6	11,809	35,112	19,718	18,560	7,992	16,992	12,048	35,552	20,040
15:05:00								18,560	7,952	17,120	12,048	35,680	20,000
15:10:00	14.40	15.8	7,906	23.9	11,960	35,015	19,866	18,496	7,920	17,088	12,128	35,584	20,048
15:15:00								18,592	8,048	17,152	11,936	35,744	19,984
15:20:00	14.44	15.8	7,906	23.5	11,759	34,918	19,666	18,592	8,000	17,088	11,968	35,680	19,968
15:25:00								18,592	7,976	17,152	12,016	35,744	19,992
15:30:00	14.49	15.8	7,906	23.5	11,759	34,797	19,666	18,496	8,016	17,024	11,920	35,520	19,936
15:35:00	14.43	15.8	7,906	23.5	11,759	34,942	19,666	18,496	8,056	16,992	12,064	35,488	20,120
AVERAGES	14.37	15.8	7,906	24.1	12,078	35,089	19,984	18,601	7,976	17,092	12,113	35,692	20,089

DATE: 08/14/1991
TEST: 02 Traverse
UNIT: Gas Turbine #1
LOAD: 50% (28 MW)

RUN: #1
START TIME: 08:05:00
STOP TIME: 11:20:00
INTERVAL: 00:05:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
		Engine "A"		Engine "B"				Engine "A"		Engine "B"			
TIME (24 hr)	Meter Gas Flow (Mcf/hr)	Water Flow (gpm)	Water Flow (lb/hr)	Water Flow (gpm)	Water Flow (lb/hr)	Total Gas Flow (lb/hr)	Total Water Flow (lb/hr)	Gas Flow (lb/hr)	Water Flow (lb/hr)	Gas Flow (lb/hr)	Water Flow (lb/hr)	Total Gas Flow (lb/hr)	Total Water Flow (lb/hr)
08:05:00		6.0	3,002	7.8	3,903		6,906	10,144	3,896	10,880	4,072	21,024	7,968
08:10:00								10,112	3,512	10,896	4,648	21,008	8,160
08:15:00		6.0	3,002	7.8	3,903		6,906	10,080	3,344	10,880	4,240	20,960	7,584
08:20:00								10,080	3,356	10,864	4,168	20,944	7,524
08:25:00		6.0	3,002	7.8	3,903		6,906	10,080	3,380	10,880	4,084	20,960	7,464
08:30:00								10,096	3,444	10,880	4,040	20,976	7,484
08:35:00		5.8	2,902	8.0	4,003		6,906	10,064	3,332	10,864	4,004	20,928	7,336
08:40:00								10,080	2,784	10,880	4,096	20,960	6,880
08:45:00	442.90	5.8	2,902	8.0	4,003	19,297	6,906	10,080	3,288	10,864	4,020	20,944	7,308
08:50:00								10,096	3,260	10,896	4,104	20,992	7,364
08:55:00		6.0	3,002	7.8	3,903		6,906	10,080	3,272	10,896	4,000	20,976	7,272
09:00:00	463.20					20,182		10,080	3,232	10,896	4,052	20,976	7,284
09:05:00		5.8	2,902	7.8	3,903		6,805	10,096	3,248	10,896	4,040	20,992	7,288
09:10:00								10,128	3,236	10,928	4,152	21,056	7,388
09:15:00	441.10	5.8	2,902	7.8	3,903	19,219	6,805	10,112	3,252	10,912	4,024	21,024	7,276
09:20:00								10,112	3,148	10,912	4,012	21,024	7,160
09:25:00		5.8	2,902	7.8	3,903		6,805	10,128	3,240	10,928	3,992	21,056	7,232
09:30:00	460.70					20,073		10,096	3,156	10,912	3,980	21,008	7,136
09:35:00		5.8	2,902	7.8	3,903		6,805	10,112	3,160	10,912	3,980	21,024	7,140
09:40:00								10,112	3,256	10,928	3,924	21,040	7,180
09:45:00	437.60	5.8	2,902	7.8	3,903	19,066	6,805	10,144	3,212	10,960	3,932	21,104	7,144
09:50:00								10,160	3,276	10,960	3,944	21,120	7,220
09:55:00		5.8	2,902	7.8	3,903		6,805	10,144	3,172	10,944	4,000	21,088	7,172
10:00:00								10,128	3,264	10,912	3,940	21,040	7,204
10:05:00		5.8	2,902	7.8	3,903		6,805	10,128	3,196	10,928	3,844	21,056	7,040
10:10:00								10,144	3,176	10,960	4,004	21,104	7,180
10:15:00	458.00	5.8	2,902	7.8	3,903	19,955	6,805	10,112	3,208	10,944	3,964	21,056	7,172
10:20:00								10,128	3,160	10,928	3,948	21,056	7,108
10:25:00		5.8	2,902	7.8	3,903		6,805	10,144	3,232	10,928	3,924	21,072	7,156
10:30:00	433.70					18,896		10,112	3,112	10,880	3,872	20,992	6,984
10:35:00		5.8	2,902	7.8	3,903		6,805	10,064	3,144	10,880	3,804	20,944	6,948
10:40:00								10,112	3,164	10,944	3,848	21,056	7,012
10:45:00	430.90	5.8	2,902	7.8	3,903	18,774	6,805	10,144	3,260	10,912	3,880	21,056	7,140
10:50:00								10,112	3,076	10,944	3,948	21,056	7,024
10:55:00		5.8	2,902	7.8	3,903		6,805	10,096	3,128	10,944	3,948	21,040	7,076
11:00:00	449.40					19,580		10,080	3,216	10,912	3,792	20,992	7,008
11:05:00		5.8	2,902	7.8	3,903		6,805	10,096	3,132	10,912	3,880	21,008	7,012
11:10:00								10,112	3,124	10,928	3,884	21,040	7,008
11:15:00	447.40	5.8	2,902	7.8	3,903	19,493	6,805	10,128	3,172	10,960	3,940	21,088	7,112
11:20:00								10,112	2,976	10,928	3,900	21,040	6,876
AVERAGES	446.49	5.8	2,922	7.8	3,913	19,454	6,835	10,109	3,230	10,913	3,996	21,022	7,226

DATE: 08/14/1991
TEST: NOx - 8 pts
UNIT: Gas Turbine #1
LOAD: 50% (27 MW)

RUN: #2
START TIME: 11:50:00
STOP TIME: 12:50:00
INTERVAL: 00:05:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
		Engine "A"		Engine "B"				Engine "A"		Engine "B"			
TIME (24 hr)	Meter Gas Flow (Mcf/hr)	Water Flow (gpm)	Water Flow (lb/hr)	Water Flow (gpm)	Water Flow (lb/hr)	Total Gas Flow (lb/hr)	Total Water Flow (lb/hr)	Gas Flow (lb/hr)	Water Flow (lb/hr)	Gas Flow (lb/hr)	Water Flow (lb/hr)	Total Gas Flow (lb/hr)	Total Water Flow (lb/hr)
11:50:00		5.50	2,752	9.00	4,504		7,256	10,128	3,288	10,960	4,576	21,088	7,864
11:55:00								10,096	3,120	10,960	4,544	21,056	7,664
12:00:00	422.50	5.50	2,752	9.00	4,504	18,408	7,256	10,048	3,020	10,944	4,464	20,992	7,484
12:05:00								10,128	2,988	10,960	4,520	21,088	7,508
12:10:00		5.50	2,752	9.00	4,504		7,256	10,160	3,160	11,008	4,624	21,168	7,784
12:15:00	423.60					18,456		10,112	3,228	10,992	4,536	21,104	7,764
12:20:00		5.50	2,752	9.00	4,504		7,256	10,080	3,152	10,944	4,496	21,024	7,648
12:25:00								10,096	3,156	10,928	4,440	21,024	7,596
12:30:00	423.40	5.50	2,752	9.00	4,504	18,448	7,256	10,096	3,028	10,944	4,520	21,040	7,548
12:35:00								10,080	2,956	10,928	4,408	21,008	7,364
12:40:00		5.50	2,752	9.00	4,504		7,256	10,080	3,124	10,912	4,456	20,992	7,580
12:45:00	421.50					18,365		10,032	2,992	10,896	4,512	20,928	7,504
AVERAGES	422.75	5.5	2,752	9.0	4,504	18,419	7,256	10,095	3,101	10,948	4,508	21,043	7,609

ENGINE "A"
LOAD 50%

TOTAL AVERAGES
NOx 28.49
O2 16.79
Adj NOx 40.86

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
23.20	16.90	34.22	29.20	16.80	42.02	29.40	16.70	41.30
25.10	16.90	37.02	30.10	16.70	42.28	29.00	16.70	40.74
26.20	16.90	38.65	29.70	16.60	40.75	28.20	16.80	40.58
28.60	16.90	42.19	30.50	16.70	42.85	27.40	16.90	40.42
29.10	16.90	42.92	30.20	16.60	41.44	29.10	16.70	40.88
28.70	16.90	42.33	29.80	16.70	41.86	29.70	16.70	41.72
27.90	16.90	41.15	28.90	16.80	41.59	28.30	16.70	39.75
27.90	16.90	41.15	28.30	16.90	41.74	29.30	16.70	41.16

ENGINE "B"
LOAD 50%

TOTAL AVERAGES
NOx 24.78
O2 17.28
Adj NOx 40.32

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
22.20	17.30	36.38	22.90	17.50	39.74	24.30	17.50	42.17
24.30	17.30	39.83	24.60	17.30	40.32	26.00	17.30	42.61
25.50	17.20	40.66	26.00	17.20	41.46	26.90	17.20	42.89
25.20	17.10	39.13	26.20	17.20	41.78	26.40	17.20	42.10
25.20	17.20	40.18	25.60	17.20	40.82	26.10	17.20	41.62
24.90	17.30	40.81	24.80	17.20	39.55	25.50	17.20	40.66
23.60	17.30	38.68	24.40	17.30	39.99	24.50	17.30	40.15
23.60	17.40	39.78	23.00	17.40	38.77	23.00	17.30	37.69

DATE: 08/14/1991
TEST: NOx - 8 pts
UNIT: Gas Turbine #1
LOAD: 65% (35 MW)

RUN: #3
START TIME: 13:00:00
STOP TIME: 14:20:00
INTERVAL: 00:05:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
		Engine "A"		Engine "B"				Engine "A"		Engine "B"			
TIME (24 hr)	Meter Gas Flow (Mcf/hr)	Water Flow (gpm)	Water Flow (lb/hr)	Water Flow (gpm)	Water Flow (lb/hr)	Total Gas Flow (lb/hr)	Total Water Flow (lb/hr)	Gas Flow (lb/hr)	Water Flow (lb/hr)	Gas Flow (lb/hr)	Water Flow (lb/hr)	Total Gas Flow (lb/hr)	Total Water Flow (lb/hr)
13:00:00	481.90	9.5	4,754	11.0	5,504	20,996	10,258	11,264	5,144	12,112	5,864	23,376	11,008
13:05:00								11,248	5,096	12,112	5,392	23,360	10,488
13:10:00		9.5	4,754	11.0	5,504		10,258	11,280	5,296	12,096	5,488	23,376	10,784
13:15:00	502.10					21,876		11,248	5,168	12,096	5,512	23,344	10,680
13:20:00		9.5	4,754	11.0	5,504		10,258	11,232	5,088	12,128	5,528	23,360	10,616
13:25:00								11,264	5,064	12,112	5,392	23,376	10,456
13:30:00	501.00	9.5	4,754	11.0	5,504	21,829	10,258	11,248	5,304	12,080	5,424	23,328	10,728
13:35:00								11,248	5,128	12,112	5,408	23,360	10,536
13:40:00		9.5	4,754	11.0	5,504		10,258	11,264	5,176	12,112	5,376	23,376	10,552
13:45:00	500.00					21,785		11,248	5,096	12,080	5,432	23,328	10,528
13:50:00		9.5	4,754	11.0	5,504		10,258	11,248	5,104	12,096	5,224	23,344	10,328
13:55:00								11,280	5,240	12,112	5,352	23,392	10,592
14:00:00	497.60	9.5	4,754	11.0	5,504	21,680	10,258	11,312	5,232	12,128	5,360	23,440	10,592
14:05:00								11,312	5,120	12,192	5,472	23,504	10,592
14:10:00		9.5	4,754	11.0	5,504		10,258	11,312	5,232	12,176	5,392	23,488	10,624
14:15:00	498.10					21,702		11,232	5,048	12,112	5,456	23,344	10,504
14:20:00		9.5	4,754	11.0	5,504		10,258	11,248	5,216	12,080	5,280	23,328	10,496
AVERAGES	496.78	9.5	4,754	11.0	5,504	21,645	10,258	11,264	5,162	12,114	5,432	23,378	10,594

ENGINE "A"
LOAD 65%

TOTAL AVERAGES
NOx 29.45
O2 16.40
Adj NOx 38.62

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
29.50	16.40	38.68	28.50	16.50	38.22	29.10	16.50	39.02
29.30	16.30	37.58	29.70	16.30	38.09	30.20	16.30	38.73
28.80	16.30	36.94	29.60	16.40	38.81	30.40	16.30	38.99
29.70	16.40	38.94	28.80	16.50	38.62	30.30	16.40	39.73
30.40	16.30	38.99	28.30	16.60	38.83	30.70	16.30	39.38
30.00	16.30	38.48	28.80	16.50	38.62	30.00	16.40	39.33
29.30	16.40	38.42	29.40	16.40	38.55	29.10	16.50	39.02
28.90	16.40	37.89	29.40	16.30	37.71	28.60	16.60	39.24

ENGINE "B"
LOAD 65%

TOTAL AVERAGES
NOx 26.75
O2 16.89
Adj NOx 39.37

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
25.90	17.20	41.30	23.20	17.20	36.99	24.90	17.20	39.71
27.00	17.00	40.85	22.60	17.00	34.19	27.50	16.80	39.57
26.80	16.90	39.53	27.50	16.90	40.56	28.20	16.70	39.61
27.90	16.80	40.15	27.10	16.80	39.00	28.50	16.60	39.10
27.70	16.80	39.86	28.10	16.80	40.44	28.10	16.60	38.56
30.60	16.90	45.14	27.90	16.90	41.15	26.40	16.70	37.09
26.50	17.00	40.09	26.80	16.90	39.53	25.40	16.80	36.55
25.60	17.00	38.73	26.20	17.00	39.64	25.50	16.90	37.61

DATE: 08/14/1991
TEST: NOx - 8 pts
UNIT: Gas Turbine #1
LOAD: 80% (43 MW)

RUN: #4
START TIME: 14:30:00
STOP TIME: 15:45:00
INTERVAL: 00:05:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter					Total	Total	Engine "A"		Engine "B"		Total	Total
	Gas	Engine "A"		Engine "B"		Gas	Water	Gas	Water	Gas	Water	Gas	Water
TIME	Flow	Water Flow		Water Flow		Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
(24 hr)	(Mcf/hr)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
14:30:00	559.10	14.2	7,106	15.5	7,756	24,360	14,862	12,688	6,600	13,440	7,104	26,128	13,704
14:35:00								12,688	7,992	13,424	7,184	26,112	15,176
14:40:00		14.2	7,106	15.5	7,756		14,862	12,880	7,936	13,632	7,128	26,512	15,064
14:45:00	577.30					25,153		12,880	7,640	13,712	7,048	26,592	14,688
14:50:00		14.5	7,256	15.5	7,756		15,012	13,056	7,960	13,920	7,080	26,976	15,040
14:55:00								13,056	7,832	13,856	7,016	26,912	14,848
15:00:00	599.60	14.5	7,256	15.5	7,756	26,125	15,012	13,056	8,016	13,808	7,080	26,864	15,096
15:05:00								13,040	8,016	13,792	7,104	26,832	15,120
15:10:00		14.5	7,256	15.5	7,756		15,012	13,024	8,040	13,760	7,000	26,784	15,040
15:15:00	598.90					26,094		12,992	7,960	13,712	7,120	26,704	15,080
15:20:00		14.5	7,256	15.5	7,756		15,012	12,848	7,896	13,584	7,016	26,432	14,912
15:25:00								12,816	8,088	13,584	7,072	26,400	15,160
15:30:00	578.20	14.5	7,256	15.5	7,756	25,192	15,012	12,832	8,008	13,568	7,024	26,400	15,032
15:35:00								13,040	7,944	13,776	7,072	26,816	15,016
15:40:00		14.5	7,256	15.5	7,756		15,012	13,040	8,088	13,808	7,032	26,848	15,120
15:45:00	599.90					26,138		13,040	8,040	13,808	7,056	26,848	15,096
AVERAGES	585.50	14.4	7,218	15.5	7,756	25,510	14,974	12,936	7,879	13,699	7,071	26,635	14,950

		Run #1			Run #2			Run #3		
		NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
ENGINE	"A"	30.30	16.10	37.24	31.90	15.90	37.64	31.10	15.90	36.70
LOAD	80%	30.50	16.10	37.49	31.60	15.90	37.29	30.60	15.90	36.11
		30.80	15.90	36.34	31.80	15.90	37.52	31.00	16.00	37.33
TOTAL AVERAGES		31.40	16.00	37.81	31.90	16.00	38.41	31.40	15.90	37.05
NOx	31.31	30.90	16.00	37.21	32.00	16.00	38.53	31.20	16.00	37.57
O2	15.98	31.00	16.10	38.10	32.10	16.00	38.65	30.50	16.10	37.49
Adj NOx	37.54	30.30	16.10	37.24	31.80	16.00	38.29	31.80	16.00	38.29
		31.50	15.90	37.17	31.50	15.90	37.17	32.50	15.90	36.35

		Run #1			Run #2			Run #3		
		NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
ENGINE	"B"	28.20	16.60	38.69	27.20	16.70	38.21	27.90	16.70	39.19
LOAD	80%	30.20	16.30	38.73	29.40	16.40	38.55	30.40	16.30	38.99
		30.80	16.30	39.50	31.20	16.30	40.02	31.00	16.20	38.91
TOTAL AVERAGES		30.80	16.20	38.66	32.00	16.20	40.17	31.10	16.20	39.04
NOx	30.17	31.50	16.20	39.54	32.10	16.20	40.30	32.10	16.20	40.30
O2	16.33	30.40	16.30	38.39	30.40	16.30	38.99	30.70	16.20	38.54
Adj NOx	38.93	29.80	16.30	38.22	28.30	16.40	37.10	30.40	16.30	38.99
		29.20	16.40	38.28	29.00	16.40	38.02	29.90	16.30	38.35

DATE: 08/14/1991
TEST: NOx - 8 pts
UNIT: Gas Turbine #1
LOAD: 100% (55 MW)

RUN: #5
START TIME: 16:00:00
STOP TIME: 17:20:00
INTERVAL: 00:05:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
		Engine "A"		Engine "B"				Engine "A"		Engine "B"			
TIME (24 hr)	Meter Gas Flow (Mcf/hr)	Water Flow (gpm)	Water Flow (lb/hr)	Water Flow (gpm)	Water Flow (lb/hr)	Total Gas Flow (lb/hr)	Total Water Flow (lb/hr)	Gas Flow (lb/hr)	Water Flow (lb/hr)	Gas Flow (lb/hr)	Water Flow (lb/hr)	Total Gas Flow (lb/hr)	Total Water Flow (lb/hr)
16:00:00	678.30	18.5	9,257	18.5	9,257	29,554	18,515	16,128	9,168	16,480	8,944	32,608	18,112
16:05:00								16,256	9,312	16,640	8,944	32,896	18,256
16:10:00		18.1	9,057	18.3	9,157		18,215	16,224	9,536	16,448	9,056	32,672	18,592
16:15:00	681.10					29,676		16,000	9,248	16,240	8,928	32,240	18,176
16:20:00		18.4	9,207	18.5	9,257		18,465	15,952	9,616	16,240	8,912	32,192	18,528
16:25:00								15,952	9,552	16,272	8,880	32,224	18,432
16:30:00	679.70	18.3	9,157	18.7	9,357	29,615	18,515	15,968	9,504	16,336	8,944	32,304	18,448
16:35:00								16,144	9,488	16,512	8,928	32,656	18,416
16:40:00		18.4	9,207	18.5	9,257		18,465	16,096	9,328	16,368	8,992	32,464	18,320
16:45:00	701.80					30,569		15,968	9,488	16,368	8,992	32,336	18,480
16:50:00		18.5	9,257	18.5	9,257		18,515	16,048	9,440	16,352	9,056	32,400	18,496
16:55:00								16,032	9,360	16,384	9,024	32,416	18,384
17:00:00	702.40	18.5	9,257	18.6	9,307	30,604	18,565	16,000	9,264	16,336	9,056	32,336	18,320
17:05:00								15,856	9,504	16,304	8,960	32,160	18,464
17:10:00		18.5	9,257	18.7	9,357		18,615	15,872	9,440	16,336	8,896	32,208	18,336
17:15:00	702.90					30,625		15,952	9,600	16,352	8,848	32,304	18,448
17:20:00		18.6	9,307	18.7	9,357		18,665	15,920	9,552	16,224	8,720	32,144	18,272
AVERAGES	691.00	18.4	9,207	18.5	9,276	30,107	18,484	16,028	9,428	16,373	8,960	32,401	18,388

ENGINE "A"
LOAD 100%

TOTAL AVERAGES
NOx 32.73
O2 15.59
Adj NOx 36.33

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
35.60	15.50	38.90	34.80	15.50	38.02	30.90	15.50	33.76
35.60	15.40	38.19	35.10	15.40	37.65	28.90	15.60	32.17
33.00	15.60	36.74	34.90	15.40	37.44	29.50	15.70	33.47
34.60	15.50	37.80	35.10	15.40	37.65	32.90	15.50	35.95
33.30	15.50	36.38	33.70	15.50	36.82	29.90	15.80	34.59
36.50	15.60	40.63	34.70	15.50	37.91	29.20	15.90	34.46
32.60	15.70	36.99	34.90	15.50	38.13	25.80	15.90	30.44
32.00	15.80	37.02	33.00	15.60	36.74	28.90	15.90	34.10

ENGINE "B"
LOAD 100%

TOTAL AVERAGES
NOx 32.71
O2 15.87
Adj NOx 38.40

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
34.70	16.30	44.51	31.40	16.10	38.60	31.80	15.90	37.52
32.90	16.00	39.61	31.70	16.00	38.17	31.40	15.90	37.05
33.50	15.90	39.53	32.60	15.80	37.71	31.60	16.00	38.05
34.00	15.80	39.33	32.70	15.80	37.83	33.20	15.70	37.67
34.30	15.70	39.60	33.20	15.70	37.67	32.30	15.70	36.65
33.40	15.80	38.64	33.50	15.70	38.01	33.70	15.80	38.99
32.00	15.90	37.76	33.60	15.80	38.87	32.30	15.80	37.37
30.90	16.00	37.21	32.90	15.80	38.06	30.90	16.00	37.21

DATE: 08/15/1991
TEST: 02 Traverse
UNIT: Gas Turbine #1
LOAD: 50% (27 MW)

RUN: #1
START TIME: 08:00:00
STOP TIME: 10:28:00
INTERVAL: 00:05:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
		Engine "A"		Engine "B"				Engine "A"		Engine "B"			
TIME (24 hr)	Meter Oil Flow (s/20 gal)	Water Flow (gpm)	Water Flow (lb/hr)	Water Flow (gpm)	Water Flow (lb/hr)	Total Oil Flow (lb/hr)	Total Water Flow (lb/hr)	Oil Flow (lb/hr)	Water Flow (lb/hr)	Oil Flow (lb/hr)	Water Flow (lb/hr)	Total Oil Flow (lb/hr)	Total Water Flow (lb/hr)
08:00:00	24.49	12.5	6,255	12.3	6,155	20,589	12,410						
08:05:00								10,912	6,640	9,248	6,248	20,160	12,888
08:10:00	24.55	12.5	6,255	12.3	6,155	20,538	12,410	10,960	6,672	9,280	6,216	20,240	12,888
08:15:00								11,008	6,528	9,323	6,384	20,331	12,912
08:20:00	24.78	12.5	6,255	11.0	5,504	20,348	11,759	10,864	6,688	9,280	6,136	20,144	12,824
08:25:00								10,832	6,560	9,184	5,664	20,016	12,224
08:30:00	24.75	11.0	5,504	13.0	6,505	20,372	12,010	10,816	6,528	9,280	5,560	20,096	12,088
08:35:00								10,752	5,936	9,232	6,040	19,984	11,976
08:40:00	24.65	12.3	6,155	14.0	7,006	20,455	13,161	10,800	5,792	9,360	7,024	20,160	12,816
08:45:00								10,880	6,360	9,392	7,136	20,272	13,496
08:50:00	24.58	12.5	6,255	18.0	9,007	20,513	15,262	10,912	6,632	9,568	7,840	20,480	14,472
08:55:00								10,880	6,568	9,632	8,880	20,512	15,448
09:00:00	24.73	10.0	5,004	10.0	5,004	20,389	10,008	10,816	5,776	9,440	6,928	20,256	12,704
09:05:00								10,784	5,312	9,232	5,200	20,016	10,512
09:10:00	24.78	13.2	6,605	11.0	5,504	20,348	12,110	10,672	4,656	9,376	6,096	20,048	10,752
09:15:00								10,624	4,536	9,360	5,536	19,984	10,072
09:20:00	24.88	8.5	4,253	11.0	5,504	20,430	9,758	10,608	4,456	9,216	5,320	19,824	9,776
09:25:00								10,608	4,528	9,264	5,448	19,872	9,976
09:30:00	24.79	8.3	4,153	11.0	5,504	20,339	9,658	10,640	4,504	9,344	6,200	19,984	10,704
09:35:00								10,592	4,488	9,344	6,296	19,936	10,784
09:40:00	24.81	8.0	4,003	11.0	5,504	20,323	9,508	10,544	4,472	9,296	6,016	19,840	10,488
09:45:00								10,528	4,456	9,296	5,760	19,824	10,216
09:50:00	24.80	8.8	4,404	11.0	5,504	20,331	9,908	10,592	4,480	9,104	4,536	19,696	9,016
09:55:00								10,624	4,504	9,264	5,432	19,888	9,936
10:00:00	24.88	8.2	4,103	11.0	5,504	20,266	9,608	10,560	4,616	9,264	5,432	19,824	10,048
10:05:00								10,656	4,504	9,280	5,408	19,936	9,912
10:10:00	24.88	8.20	4,103	11.00	5,504	20,266	9,608	10,624	4,616	9,296	5,376	19,920	9,992
10:15:00								10,560	4,608	9,248	5,360	19,808	9,968
10:20:00	25.00	8.50	4,253	11.00	5,504	20,169	9,758	10,576	4,736	9,424	6,712	20,000	11,448
AVERAGES	24.74	10.3	5,171	11.9	5,958	20,378	11,129	10,722	5,363	9,315	6,078	20,038	11,441

DATE: 08/15/1991
TEST: NOx - 8 pts
UNIT: Gas Turbine #1
LOAD: 50% (27 MW)

RUN: #2
START TIME: 10:30:00
STOP TIME: 12:09:00
INTERVAL: 00:05:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter							Engine "A"		Engine "B"			
TIME	Oil Flow	Engine "A" Water Flow		Engine "B" Water Flow		Total Oil Flow	Total Water Flow	Oil Flow	Water Flow	Oil Flow	Water Flow	Total Oil Flow	Total Water Flow
(24 hr)	(s/20 gal)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
10:30:00	24.86	8.8	4,404	11.0	5,504	20,282	9,908	10,592	4,832	9,200	5,392	19,792	10,224
10:35:00								10,592	4,800	9,200	5,376	19,792	10,176
10:40:00	24.89	8.8	4,404	11.0	5,504	20,258	9,908	10,656	4,832	9,248	5,344	19,904	10,176
10:45:00								10,576	4,752	9,216	5,448	19,792	10,200
10:50:00	24.90	9.0	4,504	13.0	6,505	20,250	11,009	10,512	4,664	9,360	6,480	19,872	11,144
10:55:00								10,528	4,728	9,328	6,575	19,856	11,303
11:00:00	24.83	9.0	4,504	13.0	6,505	20,307	11,009	10,480	4,592	9,232	6,424	19,712	11,016
11:05:00								10,464	4,640	9,312	6,472	19,776	11,112
11:10:00	24.95	9.0	4,504	13.0	6,505	20,209	11,009	10,512	4,664	9,312	6,568	19,824	11,232
11:15:00								10,496	4,744	9,312	6,584	19,808	11,328
11:20:00	24.87	10.0	5,004	13.0	6,505	20,274	11,509	10,496	4,616	9,344	6,520	19,840	11,136
11:25:00								10,560	5,288	9,360	6,448	19,920	11,736
11:30:00	24.82	10.0	5,004	12.5	6,255	20,315	11,259	10,624	5,520	9,312	6,304	19,936	11,824
11:35:00								10,592	5,208	9,312	6,256	19,904	11,464
11:40:00	24.77	10.0	5,004	12.5	6,255	20,356	11,259	10,560	5,376	9,328	6,216	19,888	11,592
11:45:00								10,608	5,240	9,296	6,296	19,904	11,536
11:50:00	24.79	10.0	5,004	12.5	6,255	20,339	11,259	10,576	5,160	9,296	6,184	19,872	11,344
11:55:00								10,544	5,200	9,296	6,160	19,840	11,360
12:00:00	24.85	9.8	4,904	12.5	6,255	20,290	11,159	10,576	5,200	9,248	6,208	19,824	11,408
AVERAGES	24.85	9.4	4,724	12.4	6,205	20,288	10,929	10,555	4,950	9,290	6,171	19,845	11,122

ENGINE "A"
LOAD 50%

TOTAL AVERAGES
NOx 44.09
O2 17.11
Adj NOx 68.56

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
48.80	17.00	73.83	48.60	17.00	73.52	40.30	17.30	66.05
48.10	17.00	72.77	48.60	17.00	73.52	40.00	17.30	65.56
48.00	17.00	72.62	46.40	17.00	70.19	40.00	17.30	65.56
46.00	17.10	71.42	42.20	17.00	63.84	39.70	17.30	65.06
45.50	17.10	70.64	41.50	17.00	62.78	44.10	17.10	68.47
44.60	17.20	71.12	40.50	17.10	62.88	44.40	17.00	67.17
43.30	17.30	70.96	40.10	17.20	63.94	44.40	17.00	67.17
48.30	17.00	73.07	40.90	17.20	65.22	43.90	17.10	68.16

ENGINE "B"
LOAD 50%

TOTAL AVERAGES
NOx 36.55
O2 17.39
Adj NOx 61.40

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
37.40	17.30	61.29	33.60	17.60	60.07	38.40	17.40	64.73
37.30	17.30	61.13	35.90	17.50	62.30	38.00	17.30	62.28
37.20	17.30	60.97	36.70	17.30	60.15	37.80	17.30	61.95
34.40	17.50	59.69	36.50	17.30	59.82	37.30	17.40	62.88
33.20	17.60	59.36	38.20	17.30	62.61	37.50	17.40	63.21
35.40	17.40	59.67	37.40	17.30	61.29	35.70	17.60	63.83
36.40	17.40	61.38	37.40	17.20	59.64	36.30	17.40	61.19
36.80	17.30	60.31	35.30	17.50	61.26	37.10	17.40	62.54

DATE: 08/15/1991
TEST: NOx - 8 pts
UNIT: Gas Turbine #1
LOAD: 65% (34 MW)

RUN: #3
START TIME: 12:34:00
STOP TIME: 14:05:00
INTERVAL: 00:05:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
		Engine "A"		Engine "B"		Total	Total	Engine "A"		Engine "B"		Total	Total
TIME	Meter Oil Flow	Water Flow		Water Flow		Oil Flow	Water Flow	Oil Flow	Water Flow	Oil Flow	Water Flow	Oil Flow	Water Flow
(24 hr)	(s/20 gal)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
12:35:00	20.44	14.3	7,156	16.2	8,106	24,868	15,262	13,040	7,584	11,488	7,640	24,528	15,224
12:40:00								13,136	7,744	11,536	8,072	24,672	15,816
12:45:00	21.00	14.0	7,006	16.0	8,006	24,010	15,012	13,008	7,648	11,568	8,288	24,576	15,936
12:50:00								13,056	7,824	11,632	8,184	24,688	16,008
12:55:00	20.70	14.0	7,006	16.0	8,006	24,358	15,012	12,960	7,968	11,616	8,136	24,576	16,104
13:00:00								12,928	7,688	11,504	8,104	24,432	15,792
13:05:00	20.20	14.0	7,006	16.0	8,006	24,961	15,012	12,928	7,416	11,456	8,088	24,384	15,504
13:10:00								12,992	7,360	11,552	8,120	24,544	15,480
13:15:00	20.00	14.0	7,006	16.0	8,006	25,211	15,012	12,928	7,528	11,472	8,080	24,400	15,608
13:20:00								12,928	7,344	11,536	8,072	24,464	15,416
13:25:00	20.20	14.0	7,006	16.0	8,006	24,961	15,012	12,880	6,888	11,488	8,208	24,368	15,096
13:30:00								12,864	7,472	11,488	8,112	24,352	15,584
13:35:00	20.76	14.2	7,106	16.0	8,006	24,288	15,112	12,896	7,384	11,472	8,104	24,368	15,488
13:40:00								12,880	7,240	11,488	8,080	24,368	15,320
13:45:00	20.53	14.2	7,106	16.2	8,106	24,560	15,212	12,864	7,688	11,408	8,240	24,272	15,928
13:50:00								12,896	7,336	11,504	8,064	24,400	15,400
13:55:00	20.47	14.0	7,006	16.2	8,106	24,632	15,112	12,944	7,376	11,424	8,080	24,368	15,456
14:00:00								12,912	7,352	11,440	8,008	24,352	15,360
14:05:00	20.45	13.9	6,956	16.0	8,006	24,656	14,962	12,848	7,496	11,344	7,960	24,192	15,456
AVERAGES	20.48	14.1	7,036	16.1	8,036	24,631	15,072	12,941	7,491	11,496	8,086	24,437	15,578

ENGINE "A"
LOAD 65%

TOTAL AVERAGES
NOx 48.81
O2 16.76
Adj NOx 69.61

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
51.00	16.60	69.98	50.40	16.60	69.15	50.40	16.70	70.80
51.00	16.60	69.98	49.80	16.70	69.96	50.00	16.80	71.95
50.60	16.60	69.43	49.40	16.70	69.40	50.90	16.70	71.50
48.80	16.70	68.55	48.30	16.70	67.85	50.40	16.70	70.80
47.90	16.80	68.93	48.00	16.80	69.07	51.20	16.70	71.92
47.20	16.80	67.92	47.50	16.90	70.06	49.50	16.90	73.01
46.80	16.90	69.03	46.00	17.10	71.42	48.30	16.60	68.27
46.30	17.00	70.04	44.50	16.90	65.64	47.30	16.80	68.07

ENGINE "B"
LOAD 65%

TOTAL AVERAGES
NOx 43.78
O2 17.03
Adj NOx 66.87

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
48.90	17.40	82.43	44.30	16.90	65.34	39.10	17.40	65.91
42.60	17.10	66.14	42.90	16.90	63.28	41.20	17.10	63.97
42.50	16.90	62.69	48.10	17.00	72.77	44.90	17.00	67.93
43.20	16.80	62.17	39.30	17.20	62.67	45.60	16.90	67.26
43.10	16.90	63.57	39.60	17.30	64.90	46.90	16.90	69.18
45.20	16.90	66.67	43.30	17.10	67.23	46.80	17.00	70.80
43.20	17.00	65.35	44.00	17.00	66.56	45.80	16.90	67.56
41.80	17.10	64.90	44.50	17.10	69.09	43.90	17.00	66.41

DATE: 08/15/1991
TEST: NOx - 8 pts
UNIT: Gas Turbine #1
LOAD: 80% (43 MW)

RUN: #4
START TIME: 14:38:00
STOP TIME: 15:48:00
INTERVAL: 00:05:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter	Engine "A"		Engine "B"		Total	Total	Engine "A"		Engine "B"		Total	Total
TIME	Oil Flow	Water Flow		Water Flow		Oil Flow	Water Flow	Oil Flow	Water Flow	Oil Flow	Water Flow	Oil Flow	Water Flow
(24 hr)	(s/20 gal)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
14:40:00	17.15	19.2	9,608	20.0	10,008	29,400	19,616	15,824	9,648	13,808	9,808	29,632	19,456
14:45:00								15,824	9,760	13,840	10,208	29,664	19,968
14:50:00	17.06	19.0	9,508	20.0	10,008	29,555	19,516	15,728	9,952	13,888	10,112	29,616	20,064
14:55:00								15,808	9,856	13,952	10,224	29,760	20,080
15:00:00	17.18	19.0	9,508	19.8	9,908	29,349	19,416	15,824	9,872	13,952	9,968	29,776	19,840
15:05:00								15,744	9,872	13,968	10,080	29,712	19,952
15:10:00	17.16	19.0	9,508	20.0	10,008	29,383	19,516	15,808	9,760	13,968	10,128	29,776	19,888
15:15:00								15,856	9,664	14,016	10,192	29,872	19,856
15:20:00	17.20	19.0	9,508	20.0	10,008	29,315	19,516	15,888	9,808	13,952	10,128	29,840	19,936
15:25:00								15,808	9,792	13,984	10,160	29,792	19,952
15:30:00	17.22	18.8	9,408	20.0	10,008	29,281	19,416	15,824	9,968	13,984	10,144	29,808	20,112
15:35:00								15,760	9,584	13,936	10,096	29,696	19,680
15:40:00	17.19	19.0	9,508	20.0	10,008	29,332	19,516	15,840	9,728	13,920	10,064	29,760	19,792
15:45:00								15,872	9,920	13,920	10,096	29,792	20,016
15:50:00	17.13	19.2	9,608	20.2	10,108	29,435	19,716	15,856	9,760	13,952	10,128	29,808	19,888
AVERAGES	17.16	19.0	9,520	20.0	10,008	29,381	19,528	15,818	9,796	13,936	10,102	29,754	19,899

ENGINE "A"
LOAD 80%

TOTAL AVERAGES
NOx 49.82
O2 16.37
Adj NOx 64.86

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
51.60	16.30	66.18	49.60	16.30	63.62	49.20	16.50	65.97
51.80	16.30	66.44	49.60	16.50	66.51	47.90	16.60	65.72
51.80	16.20	65.03	49.70	16.50	66.64	47.40	16.50	63.56
51.30	16.30	65.80	46.60	16.40	61.10	47.90	16.70	67.29
50.40	16.20	63.27	48.50	16.30	62.21	51.80	16.20	65.03
50.80	16.30	65.16	50.20	16.20	63.02	50.70	16.20	63.64
49.80	16.50	66.78	50.10	16.30	64.26	51.00	16.40	66.87
49.30	16.40	64.64	48.80	16.40	63.98	49.80	16.30	63.87

ENGINE "B"
LOAD 80%

TOTAL AVERAGES
NOx 49.32
O2 16.46
Adj NOx 65.57

Run #1			Run #2			Run #3		
NOx	O2	Adj NOx	NOx	O2	Adj NOx	NOx	O2	Adj NOx
50.90	15.80	58.88	44.90	16.80	64.61	51.00	16.40	66.87
51.20	16.20	64.27	46.90	16.60	64.35	52.20	16.30	66.95
48.70	16.40	63.85	49.70	16.50	66.64	50.00	16.40	65.56
47.70	16.50	63.96	48.80	16.30	62.59	47.60	16.60	65.31
49.80	16.80	71.66	50.60	16.30	64.90	46.90	16.70	65.88
47.10	16.60	64.63	52.30	16.40	68.57	48.20	16.60	66.13
49.80	16.50	66.78	50.70	16.40	66.47	48.70	16.60	66.82
49.80	16.40	65.29	49.90	16.40	65.42	50.20	16.50	67.31

DATE: 08/15/1991
TEST: NOx - 8 pts
UNIT: Gas Turbine #1
LOAD: 100% (53 MW)

RUN: #5
START TIME: 16:15:00
STOP TIME: 17:51:00
INTERVAL: 00:05:00

Note: Gas density -- 0.04357 lb/cu ft
Water weight -- 8.34 lb/gal
Oil Specific Gravity -- 0.8498
Oil temp correction -- 0.9881 @ 84 F

	Manual Meter Readings							On-line Performance Monitoring Readings					
	Meter	Engine "A"		Engine "B"		Total	Total	Engine "A"		Engine "B"		Total	Total
TIME	Oil Flow	Water Flow		Water Flow		Oil Flow	Water Flow	Oil Flow	Water Flow	Oil Flow	Water Flow	Oil Flow	Water Flow
(24 hr)	(s/20 gal)	(gpm)	(lb/hr)	(gpm)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
16:15:00	14.91	28.0	14,011	24.0	12,010	33,817	26,021	18,816	12,128	17,024	14,080	35,840	26,208
16:20:00								18,944	12,176	16,896	13,680	35,840	25,856
16:25:00	14.64	24.0	12,010	25.0	12,510	34,441	24,520	18,912	12,400	16,864	12,624	35,776	25,024
16:30:00								19,008	12,384	16,800	12,224	35,808	24,608
16:35:00	14.68	24.5	12,260	24.5	12,260	34,347	24,520	18,976	12,304	16,736	12,144	35,712	24,448
16:40:00								18,976	12,352	16,704	12,192	35,680	24,544
16:45:00	14.55	24.0	12,010	24.5	12,260	34,654	24,269	19,008	12,416	16,800	12,224	35,808	24,640
16:50:00								19,008	12,400	16,768	12,176	35,776	24,576
16:55:00	14.66	24.0	12,010	24.5	12,260	34,394	24,269	19,008	12,256	16,736	12,160	35,744	24,416
17:00:00								18,944	12,272	16,832	12,128	35,776	24,400
17:05:00	14.58	24.2	12,110	24.5	12,260	34,583	24,369	18,976	12,224	16,768	12,208	35,744	24,432
17:10:00								18,912	12,400	16,736	12,112	35,648	24,512
17:15:00	14.50	24.0	12,010	24.5	12,260	34,773	24,269	18,944	12,240	16,832	12,128	35,776	24,368
17:20:00								18,944	12,240	16,832	12,112	35,776	24,352
17:25:00	14.60	24.0	12,010	24.5	12,260	34,535	24,269	18,944	12,496	16,768	12,160	35,712	24,656
17:30:00								18,976	12,208	16,800	12,192	35,776	24,400
17:35:00	14.50	24.0	12,010	24.5	12,260	34,773	24,269	18,976	12,224	16,736	12,144	35,712	24,368
17:40:00								18,944	12,288	16,704	12,176	35,648	24,464
17:45:00	14.60	24.5	12,260	24.5	12,260	34,535	24,520	18,976	12,416	16,800	12,256	35,776	24,672
AVERAGES	14.64	24.6	12,304	24.5	12,260	34,443	24,563	18,955	12,313	16,806	12,423	35,761	24,736

ENGINE "A"
LOAD 100%

TOTAL AVERAGES
NOx 55.23
02 15.97
Adj NOx 66.09

Run #1			Run #2			Run #3		
NOx	02	Adj NOx	NOx	02	Adj NOx	NOx	02	Adj NOx
60.00	15.90	70.80	56.70	15.80	65.59	56.90	15.80	65.83
59.30	15.90	69.97	56.30	15.80	65.13	56.40	15.90	66.55
57.80	16.00	69.36	57.80	15.70	65.58	55.00	15.90	64.90
56.00	16.10	68.83	55.30	15.80	63.97	54.10	16.20	67.91
54.10	16.30	69.39	55.60	15.80	64.32	53.80	16.10	66.13
52.70	16.30	67.59	51.50	15.80	59.58	53.40	16.00	64.30
58.20	15.80	67.33	52.60	16.30	67.47	51.50	16.00	62.01
55.80	15.80	64.55	51.80	16.10	63.67	53.20	16.10	65.39

ENGINE "B"
LOAD 100%

TOTAL AVERAGES
NOx 58.13
02 15.97
Adj NOx 69.60

Run #1			Run #2			Run #3		
NOx	02	Adj NOx	NOx	02	Adj NOx	NOx	02	Adj NOx
54.70	16.40	71.72	59.60	15.80	68.95	55.10	16.30	70.67
54.90	16.20	68.92	58.90	15.80	68.14	56.20	16.00	67.67
56.40	16.10	69.33	58.50	15.80	67.68	58.80	15.90	69.38
58.40	16.00	70.32	57.90	15.80	66.98	60.00	15.80	69.41
60.20	15.90	71.04	57.60	15.80	66.64	59.20	15.80	68.49
59.50	15.90	70.21	55.00	16.20	69.04	59.80	15.80	69.18
61.30	15.90	72.33	54.80	16.20	68.79	62.00	15.90	73.16
61.40	16.00	73.93	58.50	16.10	71.91	56.30	15.90	66.43

Print out OPM [illegible]
form: Calib Gas Print

8-6-91

GT 2 Particulate #3 Run

Test start time: 17:35
Test stop time: 19:35

Gas Integrator Uncorr:
Start: 00196734
Stop: 00196971

15 min Time:	scf (ref (1 inc))	Press:	Temp:	water flow A	water flow B	check check
17:35	10:17	292	72	19	24	✓
:45	11:44	292	72	18.8	24	✓
:55	12:87	292	72	20	23.5	✓
18:05	11:11	291	72	19	24	✓
:15	10:28	292	72	20	24	✓
:25	12:48	292	72	20.5	24	✓
:35	12:63	292	72	18.8	24	✓
:45	10:91	292	72	19	24	✓
:55	11:95	292	72	19	24	✓
19:05	11:48	292	72	19.8	24	✓
:15	12:96	292	72	20.5	24	✓
:25	12,38	292	72	18.4	24	✓
:35	11.61	292	72			

Print out OPM ✓
Print Gas Print

8-6-91

GT 2 Particulate #2 RUN

Test start time: ~~14~~ 14:06
Test stop time: 16:30

Gas Integrator Readout
Start: 00195244
Stop: 00195995

15 min Time	scf @ 60° (1 inc)	Press	Temp	water flow A	water flow B	check clock
14:06	11.97	291	72	18.5	24	✓
14:16	10.71	291	72	20.5	24	✓
14:26	10.45	292	72	19	24	✓
36	12.62	293	72	21	24	✓
46	11.42	291	72	21	24	✓
56	11.10	291	72	18.8	24	✓
15:06	11.97	291	72	19	24	✓
:16	11.46	292	72	19	24	✓
26	11.44	292	72	20	24	✓
36	10.73	292	72	20	24	✓
46	10.60	292	72	19.3	24	✓
56	11.99	291	72	21	23.8	✓
16:06	11.64	291	72	19	24	✓
:16	12.87	291	72	19	24	✓
:26	11.03	291	72	19	24	✓
:36	Test stop 16:30					
:46						

14:06
2:20
16:24

15:07
14:06
1:03

Print out OPM ...
Call Gas Print

8-6-91

GT 2 Particulate #1 Run

Test Start time: 10:11 AM
Test Stop time: 12:30 PM

Gas Integrator Unboard
Start: 00194020
Stop: 00194741

15 min Time:	scf (1 INC):	Press:	Temp:	water flow A	water flow B	check check
10:11	10.42 sec	292	72	21	24	✓
10:21	10.51	292	72	19.5	24	✓
10:31	11.47	292	72	19.5	24	✓
10:41	12.31	292	72	18.8	24	✓
10:51	10.66	291	72	21	24	✓
11:01	10.79	291	72	19	24.5	✓
11:11	10.58	291	72	18.8	24	✓
11:21	11.90	291	72	19.5	24	✓
11:31	11.59	291	72	20.5	24	✓
11:41	10.57	291	72	19.5	24	✓
11:51	11.29	291	72	18.5	24	✓
12:01	11.82	291	72	20.0	24	✓
12:11	12.69	291	72	20.2	24	✓
12:21	11.07	291	72	20.8	24	✓
12:31	10.25	291	72	20.2	24	✓
12:41						

12:31
10:11
2:20

GAS #2 TURBINE TEST #1 RUN DATE: 8-7-11

TEST START: 8:16 AM
TEST STOP : 10:36 AM

0:1 Particulate #1 RUN

OIL
START: 01708800
STOP: 01817 69

INTEGRATOR UNCORR:

TIME (10 min)	~~sec/100 cf~~ 2 REV sec / 20 GAL	PRESSURE 68	TEMPERATURE	WATER FLOW A	B	CHECK CHART
8:16	15.43	67		18.5	20.5	✓
:26	15.49	68		19	20.5	✓
:36	15.44	67		19	20.5	✓
:46	15.41	66		18.5	20	✓
:56 ~~INTEGRATOR~~	15.33	66		18.3	20.3	✓
9:06	15.37	66		18	20.8	✓
:16	15.49	66		18	20.5	✓
26	15.47	66		18.8	20	✓
36	15.40	66		18	19	✓
46	15.35	66		~~18~~	20.5	✓
56 INTEGRATOR	15.42	66		18.3	20	✓
10:06	15.60	66		17	20.5	✓
:16	15.46	66		18	21	✓
:26	15.51	66		17	20.5	✓
:36	15.58	66		18	20.5	✓
:46						

~~9:56~~ 10:00
8:16
1:44
60
3 | 104 | 34
9
14
12

10:36
8:16
2:20

GAS #2 TURBINE TEST #2 RUN DATE: 8-[illegible]

TEST START: 11:41 AM
TEST STOP : 14:02 PM

0.1 Particulate #2 RUN

DIC
START: 0188850
STOP: 0197768

INTEGRATOR UNCORR:

TIME (10 min)	~~sec/100 cf~~ Sec/20 GAL 2 RUN	PRESSURE CC	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART
11:41	15.70	64		17.5	21	✓
:51	15.58	64		18.5	20.2	✓
12:01	15.47	64		18.0	20	✓
:11	15.52	64		18.5	20	✓
:21	15.51	64		17.5	20.2	✓
:31	15.49	64		18.5	20.5	✓
:41	15.59	64		17.5	20.8	✓
:51	15.40	64		18	20	✓
13:01	15.43	64		18	20	✓
13:11	15.38	64		18.5	20	✓
:21	15.45	64		18.5	20	✓
:31	15.48	64		17.5	20	✓
:41	15.50	64		17	20.5	✓
:51	15.62	64		17.5	20	✓
14:02	15.51	64		17.3	20	✓

12:90
11:41
1:01

3
14:62
11:41
2:21

GAS #3 TURBINE TEST #3 RUN DATE: 8-7-91

TEST START: 15:54
TEST STOP: 18:07

0.1 Particulate #3 Run

0.1 INTEGRATOR UNCORR:
START: 020 63 80
STOP: 021 66 40

TIME (10 min)	~~sec/100 cf~~ Sec/10 GAL 2REV	PRESSURE	TEMPERATURE	WATER FLOW A	B	CHECK CHART
15:54	15.50	63		18.2	20.2	✓
16:04	15.60	63		18.8	20.5	✓
:14	15.57	63		18.2	20.2	✓
:24	15.69	63		19.0	20.2	✓
:34	15.63	63		18.0	20.5	✓
:44	15.59	63		17.5	21.0	✓
:54	15.49	63		18.3	20.5	✓
17:04	15.52	63		18.0	20.8	✓
:14	15.70	62		18.2	20.5	✓
:24	15.44	62		17.8	20.8	✓
:34	15.64	62		18.0	20.5	✓
:44	15.48	62		18.2	20.3	✓
:54	15.57	62		17.5	21.0	✓
18:04	15.63	62		18.5	20.5	✓
Test complete						

GAS # 2 TURBINE TEST #1 RUN DATE: 8-8-11

TEST START: 10:09
TEST STOP : 12:53

~~N_2~~ O_2 TRAVERSE 1 PT. GAS

INTEGRATOR UNCORR:
START: 00198055
STOP: 00198603

TIME (10 min)	38% LOAD	sec/100 cf 1 INCREMENT	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART ABS	CHECK CHART DIFF	
10:09	27	17.60	295	72	6.5	6	180	124	✓
19	27	17.79	294	72	6.5	6.2	175	125	✓
29	27	19.91	294	72	5.8	6.7	180	122	✓
39	27	18.55	294	72	5.3	6.5	170	123	✓
Changed A Flow → 49	27	19.79	294	72	8.5	5.5	190	123	✓
59	27	18.70	294	72	9.0	5.2	180	122	—
11 09	27	18.83	294	72	9.2	6.0	180	124	✓
Changed A Flow → 19	27	19.86	295	72	10.8	6.0	240	124	✓
29	28	19.72	293	72	11.3	6.5	205	124	✓
39	28	16.10	293	72	11.5	6.3	240	124	✓
49	28	15.82	293	72	11.5	6.5	240	125	✓
59	28	16.72	293	72	11.0	6.2	240	124	✓
12:09	27	18.79	294	73	11.0	6.2	240	124	✓
Changed A Flow → 19	27	19.95	293	72	9.0 39	9.2 39	190	124	✓
29	27	20.42	294	72	8.8	9.5	190	124	✓
39	27	18.41	294	72	8.5	9.0	190	124	✓
49	27	18.22	294	72	8.3	9.3	180	124	✓
53	27	18.05	294	72	8.8	9.8	190	125	✓

4/8
2.5
24 0 20
9 1/2
120 0

2 1/2 | 35
88
19.72
16 5 3

GAS #1 TURBINE TEST DATE: 10-8-91

TEST START: 13:02
TEST STOP : 14:30

NOx - Bpts GAS
50% Load

INTEGRATOR UNCORR:
START: 00198 632
STOP: 00198 928

TIME (10 min)	LOAD	sec/100 cf 1 Increment	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART (A) PSI	CHECK CHART (B) PSI
13:02	27	19.32	294	72	8.8	10.0	110	125
:12	28	16.80	294	72	8.8	10	110	125
:22	28	16.69	294	72	8.3	9.2	110	124
32	28	17.34	294	72	8.5	9.5	110	125
42	28	17.00	294	72	8.5	9.5	112	125
52	28	16.69	294	73	8.3	9.5	110	125
14:02	28	18.24	294	73	8.3	10.0	110	124
12	28	16.72	294	73	8.5	9.4	110	122
22	28	17.96	295	73	8.5	9.2	110	120
30 *		16.85	295	73	8.6	9.5	110	120
42								
52								
15:02								

This is 3 runs, 8 points each, non-stop (Total of 24 points)

14:30
13:02
1:28

GAS #2 TURBINE TEST DATE: [redacted]

TEST START: 14:49 NOx - 8 pts GAS INTEGRATOR UNCOR
TEST STOP : 16:25 (5% Load) START: 00199 00[redacted]
STOP: 00199 373[redacted]

TIME (10 min)	LOAD	sec/100 cf 1 increment	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART (A) Rst	CHECK CHART (B) Rst	
14:49	33	16.15	293	73	10	15	123	134	↵
:59	33	15.91	294	73	10	15	122	134	↵
15:09	32	16.38	293	73	9.6	15.4	[illegible]	134	↵
:19	32	17.27	294	73	9.2	14.2	122	134	↵
29	32	14.15	294	73	9.3	13.8	122	134	↵
39	32	15.66	294	73	9.8	14.8	122	134	↵
49	32	15.22	294	73	9.2	15	121	133	↵
59	32	15.87	294	73	9.2	15	122	133	↵
16:09	32	15.86	294	73	9.0	14.8	122	133	↵
* 19	32	16.59	294	73	9.2	13.8	120	132	
29									
39									
49									
59									
17:09									

This is 3 runs, 8 pt each, non-stop (Total of 24 points).

2

GAS #2 TURBINE TEST DATE: 8-8-91

TEST START: 16:48
TEST STOP : 18:10

NO_x - 8 pts
80% Load

Gas
START: 00199 475
STOP: 00199 846

INTEGRATOR UNCORR:

TIME (10 min)	Load	sec/100 cf 1 increment	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART A PSI	CHECK CHART B PSI	
16:48	40	11.92	293	73	11.5	24.5	127	157	✓
:58	40	12.92	293	73	12.0	25.0	135	157	✓
17:08	40	14.15	293	73	13.0	25.0	133	158	✓
:18	40	11.56	293	73	12.5	25.0	132	157	✓
:28	40	14.33	294	73	12.5	24.5	132	157	✓
:38	40	11.99	293	73	12.5	24.5	132	157	✓
:48	40	14.50	293	73	12.0	25.0	132	157	✓
:58	40	11.96	293	73	12.0	25.0	132	157	✓
18:08	40	14.17	293	72	13.0	25.0	132	158	✓
		Run complete	18:10						

GAS # TURBINE TEST DATE: 8-8-91

TEST START: 18:47
TEST STOP : 20:11

NOx - 8 pts
3 runs
100% Load

Gas
START: 00200034
STOP: 00 200470

INTEGRATOR UNCORR:

TIME (10 min)	Load	sec/100 cf 1 increment	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART @ 854	CHECK CHART @ 854
18:47	50	11.57	292	72	16.5	25	160	166
:57	50	12.09	293	72	16.5	24.5	159	166
19:07	50	12.10	293	72	17.5	24.0	158	166
:17	50	11.42	293	72	16.5	24.0	157	166
:27	50	11.68	293	72	17.0	24.0	158	166
:37	50	10.49	294	72	16.2	24.5	157	164
:47	50	12.73	294	73	17.0	24.0	158	168
:57	50	11.50	294	72	17.0	24.0	158	165
20:07	49	12.38	294	72	16.0	24.5	158	169
:17		Test Complete @ 20:11						

GAS #2 TURBINE TEST — DATE: 5-2-91

TEST START: 08:33 — O2 / NOX
TEST STOP: 11:17 — #1 RUN @ 50% LOAD

OIL
START: 0220100
STOP: 0228600

INTEGRATOR UNCORR:

TIME (10 min)	LOAD	~~sec/100 CT~~ sec/2 REV = 20GAL	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART A PSI	CHECK CHART B PSI	
8:33	28	23.21	74		9	10	120	124	✓
43	28	23.27	72		9.2	10	120	124	✓
53	29	22.88	71		9.0	11	122	126	✓
9:03	28	23.14	71		8	11.5	121	125	✓
13	28	23.23	70		7.8	11	120	124	✓
23	28	23.32	70		8.0	11.8	121	125	✓
33	28	23.16	70		8.8	12	121	125	✓
43	28	23.18	70		8.0	12.2	121	125	✓
53	29	22.93	70		8.2	11.8	121	125	✓
10:03	29	23.13	70		8.0	12	121	125	✓
13	29	23.02	70		8	11	121	125	✓
23	29	22.85	70		8	13	121	126	✓
33	29	22.74	69		8	12.5	122	126	✓
43	29	22.95	69		8	12	122	126	✓
53	29	22.77	70		8.2	13	121	126	✓
11:03	29	22.91	69		8	13	121	126	✓
:13	29	23.06	69		7.8	12	121	126	✓
:17	29	23:24	69		7.5	12	121	126	

10:32
5.0
11.12

A = 50 = 11 → 9
B = 80 = 9 → 10

R/S = ppm NOx

ppm, R/S, O2

1	32.1		
2	17.5		
3	3 7		
4	17.1		

CLx

29.5	33.5	26.8
17.7	17.5	17.9
33 9	45	32.4
17.3	16	17.1

227526
220100
7426

GAS # 2 TURBINE TEST — DATE: 6/1/11

TEST START: 11:25 AM
TEST STOP: 12:18 PM
NOX
#2/#3 RUN
50% LOAD
OIL
INTEGRATOR UNCORR:
START: 02290 60
STOP: 02317 80

TIME (10 min)	LOAD	~~sec/100 CF~~ sec/2 REV = 20 GAL	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART A PSI	CHECK CHART B PSI
11:25	29	22.95	69		8	12.5	121	126
35	29	22.87	69		8	12.5	124	126
45	29	23.05	69		8.3	11.8	124	126
55	29	23.13	69		8.0	12.5	124	126
12:05	29	23.11	69		7.5	11.0	121	125
15	29	22.93	69		8.0	12.0	122	126
25								
35								
45								
55								
13:05								

11:25
3.8 = 24
11:49 — #2 RUN END

24
12:13 — #3 RUN END

GHS #2 TURBINE TEST — DATE: 8-4-87

TEST START: 16:52 — NOx — OIL — INTEGRATOR UNCORR: ? 0250836
TEST STOP: 18:06 — 65% LOAD 36MW — START: — STOP: — 77290

TIME (10 min)	LOAD	sec/100 cf SEC/2 REV = 20GAL	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART A	CHECK CHART B	
16:52	34	20.62	66		8.8	14.2	126	142	✓
17:02	34	20.82	67		8.5	13.0	127	140	✓
:12	34	20.98	67		8.0	13.0	127	138	✓
:22	33	21.08	67		8.2	13.0	126	139	✓
32	33	20.21	67		8.2	14.0	126	139	✓
42	33	21.22	67		8.0	12.0	126	139	✓
52	33	21.00	67		8.0	14.0	126	139	✓
18:02	33	21.36	67		8.4	13.3	126	138	✓
12		Test Stop @ 18:06							
22									
32									
42									
52									
19:02									
12									

3 runs @ 8 pnts each

B = 54 (15-11) — 7.8 — 8.0 — 15.5 — 54 — 53 = 14 — B = 54/5.9 = 54

A = 59.57 (8.5 — 8.3 — 8.3 — 8.3

GAS #2 TURBINE TEST DATE: 8-7-11

TEST START: 18:29
TEST STOP : 19:39

NOx #3 RUN @ 80% LOAD

OIL START: 78,826
STOP: 83,480

INTEGRATOR UNCORR:

TIME (10 min)	LOAD	sec/100 cf	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART Psig	CHECK CHART Psig
18:29	42	17.99	64		11.5	16.5	145	150 ✓
:39	42	17.93	64		12.0	17.0	146	157 ✓
:49	42	17.98	64		12.0	16.0	146	150 ✓
:59	42	17.94	64		12.0	16.0	146	157 ✓
19:09	42	18.18	64		12.0	16.0	144	150 ✓
:19	42	18.19	64		11.8	16.0	144	150 ✓
:29	41	18:15	64		11.3	16.0	144	150 ✓
:39	42	18.18	64		12.0	16.0	145	150 ✓
		Test complt. @ 19:39						

GAS #2 TURBINE TEST — DATE: 8-7-11

TEST START: 19:54
TEST STOP: 21:08

NOX #4 RUN @ 100% LOAD

OIL START: 84,630
OIL STOP: 90,330

TIME (10 min)	LOAD	sec/100 cf Sec/2REV = 20 GAL	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART A	CHECK CHART B
19:54	50	15.43	61		13.0	20.5	156	169
20:04	50	15.61	60		13.0	20.5	155	169
:14	50	15.55	60		13.8	20.5	156	169
:24	50	15.47	60		12.5	20.5	155	169
:34	50	15.52	60		13.5	20.5	156	169
:44	50	15.53	60		13.2	20.8	156	169
:54	50	15.51	60		13.0	20.5	156	169
21:04	50	15.55	60		13.5	20.5	156	169
:14		Test Complete @ 21:08						
:24								

GAS # TURBINE TEST . DATE: 6-12-71

TEST START: 9:35 AM Particulars GT-1 Gas INTEGRATOR UNCORR:
TEST STOP : 5:40 PM Run #1 START: 00269416
STOP: 00272242

TIME (10 min)	sec/100 cf	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART	
9:35	57	10.29	291	72	17.8	28.5	170 175
:45	56	10.00	291	72	17.5	28.2	169 170
:55	56	9.46	291	72	17.5	28.5	169 170
10:05	56	10.40	291	73	17.5	28.5	169 170
:15	56	10.55	291	73	17.5	28.5	169 170
:25	56	9.95	291	73	17.5	28.7	169 169
:35	55	10.5	291	73	17.5	28.5	170 171
:45	56	10.0	291	73	17.5	28.4	170 171
:55	55	10.5	291	73	17.5	28.4	170 170
11:05	55	9.5	291	73	17.5	28.4	170 171
11:15	55	10.0	291	73	17.5	28.4	170 170
:25	55	9.7	291	73	17.5	28.5	170 171
:35	55	10.0	291	73	17.5	28.5	170 170
:45	55	9.5	291	73	17.5	28.5	170 171
:55							
12:05							

GAS # TURBINE TEST DATE: 12/12/91

TEST START: 12:50pm — Anacostia GT 1 — GAS — INTEGRATOR UNCORR:
TEST STOP : — Run #2 — START: [redacted] 38.
STOP: [redacted]

TIME (10 min) Time - PM - Local		sec/100 cf	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART	
1:00	55	10	291	73	17.5	28.5	169	170
1:10	55	9.6	291	73	17.5	28.5	169	170
1:20	54	9.5	291	73	17.5	28.5	168	170
1:30	54	9.5	291	73	17.5	28.5	168	169
1:40	54.5	9.8	291	73	17.5	28.5	168	169
1:50	54	9.7	291	73	17.5	28.5	168	169
2:00	54	10.0	291	73	17.5	28.5	168	168
2:10	54	10.0	291	73	17.5	28.5	168	169
2:20	54	10.0	291	73	17.5	28.5	168	169
2:30	54	10	291	73	17.5	28.5	168	169
2:40	54	10.5	291	73	17.5	28.5	168	169
2:50	54	10.5	291	73	17.5	28.5	168	168
3:00	54	10	291	73	17.5	28.5	168	168

GAS ◆ TURBINE TEST DATE: ___/___/___

TEST START: 3:20 pm GT1 GAS INTEGRATOR UNCORR:
TEST STOP : _____ #3 Iron GAS START: 84825
PARTICULATE STOP: 85500

TIME (10 min) Time PM 1000		sec/100 cf	PRESSURE	TEMPERATURE	WATER FLOW A	B	CHECK CHART	B4
3:20	54	10.0	291	73	17.8	28.5	168	168
3:40	54	9.8	291	73	17.5	28.5	168	168
3:50	54	10.	291	73	17.5	28.5	168	168
4:00	54	10	291	73	17.5	28.5	168	168
4:10	54	10	291	73	17.5	28.5	168	169
4:20	54	9.9	291	73	17.5	28.5	168	169
4:20	54	9.9	291	73	17.5	28.5	168	169
4:40	54	9.8	291	73	17.5	28.5	168	168
4:50	54	9.9	291	73	17.5	28.5	168	169
5:00	54	9.8	291	73	17.5	28.5	168	168
5:10	54	10.	291	73	17.6	28.5	168	169
5:20	54	9.8	291	73	17.6	28.5	168	168
5:30	54	10	291	73	17.5	28.5	168	168
540	54	10	291	73	17.5	28.5	168	168

1177.88 36-39

GAS #1 TURBINE TEST DATE: 8-13-91

TEST START: 8:05
TEST STOP : 10:10

Particulate -0.1 #1 RUN

INTEGRATOR UNCORR:
START: 015 4150
STOP: 016 4980

TIME (10 min)	LOAD	~~sec/100 cf~~ sec/20 gal = 2 Rev	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART A GAS	CHECK CHART B DIST	
8:05	57	13.69	58		16.5	25	174	172	←
:15	58	13.80	58		16.3	24.8	174	172	←
:25	57	13.86	58		16	24.8	173	172	←
35	57	13.85	58		16.3	25	173	172	←
45	57	13.74	58		15.8	24.8	173	172	←
55	57	13.70	58		15.8	25	173	172	←
9:05	57	13.72	58		15.8	24.8	173	172	←
15	57	13.90	58		15.8	24.8	172	172	←
25	57	13.83	57		15.9	25	172	171	←
35	57	13.86	57		15.6	24.8	172	172	←
45	57	13.87	57		15.5	24.7	172	171	←
55	56	13.88	57		15.8	24.8	172	170	←
9:05	56	13.85	57		15.8	24.8	172	170	←
:10	56	13.86	57		15.8	25	172	170	←

71.83

414.72 / 2.183

2hr

10,830

GAS #1 TURBINE TEST DATE: 8-13-91

TEST START: 10:44
TEST STOP : ~~12:44~~ 12:44

Particulate 0:1 #2 12 N

OIL
INTEGRATOR UNCORR:
START: 016 7850
STOP: 017 8150

TIME (10 min)	LOAD	~~SEC/100 CF~~ Sec/20 GAL-2 REV	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK A CHART BSA	CHECK B CHART BSA	
10:44	56	14.20	57		~~15.0~~	24.8	172	170	—
54	57	13.98	57		15.8	24.8	171	170	←
11:04	56	13.94	57		15.8	24.8	172	170	←
14	56	14.24	56		15.8	24.8	172	170	←
24	56	14.35	56		15.8	24.8	172	170	←
34	56	13.89	56		15.7	24.6	170	169	—
44	56	13.96	56		15.8	24	170	168	←
54	55	14.00	56		15.8	24.5	170	168	
12:04	55	13.90	56		15.8	24.5	170	168	
14	55	14.0	56		15.8	24.5	170	168	
24	55	13.8	56		15.8	24.5	170	168	
34	55	13.9	56		15.5	24.5	170	169	
44	55	14.13	56		15.8	23.8	170	169	—
54									
13:04									

10,300

GAS # 1 TURBINE TEST DATE: 8-13-91

TEST START: 13:30 Particulate Out 0.1 INTEGRATOR UNCORR:
TEST STOP : 13:34 #3 RUN START: 018 2000
STOP: 019 2355

TIME (10 min)	LOAD	~~sec/100 CF~~ sec/20 GAL = 2 REV	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART A (PSA)	CHECK CHART B (PSA)	
13:30	55	14.22	55		15.8	24.8	169	168	←
40	55	14.26	55		15.8	24	170	168	←
50	55	14.28	55		15.8	24.3	170	168	←
14:00	54	14.37	55		15.8	24.8	169	168	←
10	54	14.32	55		15.8	24.8	168	167	←
20	54	14.38	55		15.8	24.8	168	167	←
30	54	14.50	55		15.8	23.0	169	168	←
40	54	14.35	55		15.8	24.8	169	168	←
50	54	14.38	55		15.8	24.8	167	168	→
15:00	54	14.36	55		15.8	23.6	167	168	←
10	54	14.40	55		15.8	23.9	167	168	←
20	54	14.44	55		15.8	23.5	167	168	←
30	54	14.49	55		15.8	23.5	167	169	←
~~13:32:40~~	5	14.43	55		15.8	23.5	167	167	←

10231

1:54 1:50 1:50 1:50

GAS # TURBINE TEST GT-1 DATE: 8-14-91

TEST START: 7:45 am
TEST STOP : 11:20 am

Gas NOx/O2 Traverse
50% Load

Gas

INTEGRATOR UNCORR:
START: 00272607
STOP: 00273340

TIME (10 min)	LOAD	sec/100 cf	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK A CHART	CHECK B CHART	
8:05	28	17.05	291	72	6.0	7.8	122	121	C
8:15	28	17.40	291	72	6.0	7.8	121	121	✓
:25	28	16.41	291	72	6.0	7.8	121	121	—
:35	28	18.36	291	72	5.8	8.0	121	121	—
:45	28	17.60	291	72	5.8	8.0	121	121	—
:55	28	17.28	291	72	6.0	7.8	121	221	—
9:05	28	17.53	291	72	5.8	7.8	121	121	✓
:15	28	17.04	291	72	5.8	7.8	121	12	✓
:25	28	18.15	291	72	5.8	7.8	121	121	—
:35	28	17.25	291	72	5.8	7.8	121	121	✓
:45	28	17.67	291	72	5.8	7.8	121	121	✓
:55	28	17.55	292	72	5.8	7.8	121	121	✓
10:05	28	17.29	291	72	5.8	7.8	121	121	✓
:15	28	17.71	291	72	5.8	7.8	121	121	—
10:25	28	17.83	291	72	5.8	7.8	121	121	✓
10:35	28	17.5	291	72	5.8	7.8	121	121	
10:45	28	17.5	291	72	5.8	7.8	121	121	
10:55	28	17.8	291	72	5.8	7.8	121	121	
11:05	28	17.6	291	72	5.8	7.8	121	121	
11:15	28	17.8	291	72	5.8	7.8	121	121	

GAS & TURBINE TEST GT-1 DATE: 8-14-91

TEST START: 11:50 AM
TEST STOP : 12:50 PM

GAS
NOX RUN 50% load

INTEGRATOR UNCORR: @11:58
START: 00273466
STOP: 223637

TIME (10 min)	LOAD	sec/100 cf	PRESSURE	TEMPERATURE	WATER FLOW A	B	CHECK CHART A	B	
11:50 AM	27	17.8	291	73	5.5	9	119	119	
12:00 N	27	17.5	291	73	5.5	9	119	119	
12:10 PM	27	17.6	291	73	5.5	9	119	119	
12:20	27	17.4	291	73	5.5	9	119	119	
12:30	27	17.6	291	73	5.5	9	119	119	
12:40	27	17.8	291	73	5.5	9	119	119	
		↓ (1ST RUN 65%)	GAS RUN	NOX 65% (35 min)	00273694		133	133	
1:00 PM	35	14.1	291	73	9.5	11	133	133	
1:10 PM	35	14.2	291	73	9.5	11	133	133	
1:20	35	14.5	291	73	9.5	11	133	133	
1:30	36	14.8	291	73	9.5	11	133	133	
1:40	35	14.6	291	73	9.5	11	133	133	
1:50	35	14.5	291	73	9.5	11	133	133	
2:00	35	14.6	291	73	9.5	11	133	133	
2:10	35	14.59	291	73	9.5	11	133	133	
2:20	35	14.6	291	73	9.5	11	133	133	
				00274010	End				

#1 G.T. GAS TURBINE TEST

DATE: 14TH Aug 1991

TEST START: 2:30 PM
TEST STOP : 3:45 PM

Gas 80%
Nox Run

INTEGRATOR UNCORR:
START: 00274070
STOP: 00274430

TIME (10 min)	LOAD	sec/100 cf	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART A	CHECK CHART B
2:30	43	13.0	291	73	14.2	15.5	147	147
2:40	42	13.2	291	73	14.2	15.5	147	147
2:50	43	11.5	291	73	14.5	15.5	148	148
3:00	43	11.0	291	73	14.5	15.5	148	148
3:10	43	11.1	291	73	14.5	15.5	148	148
3:20	43	11.4	291	73	14.5	15.5	148	148
3:30	43	12.0	291	73	14.5	15.5	148	148
3:40	43	11.6	291	73	14.5	15.5	148	148
~~START~~	#	GT 100%	Nox Run	(274493) START				
START 4:00 PM	55	9.3	291	73	18.5	18.5	167	165
4:10	55	9.5	291	73	18.1	18.3	167	165
4:20	55	9.5	291	73	18.4	18.5	167	165
4:30	55	9.5	291	73	18.3	18.7	167	165
4:40	55	10	291	73	18.4	18.5	167	165
4:50	55	10.4	291	73	18.5	18.5	167	165
5:00	55	10.3	291	73	18.5	18.6	167	165
5:10	55	9.9	291	73	18.5	18.7	166	165
STOP 5:20	55	10.0	291	[redacted] 73	18.6	18.7	166	165
				(274967) STOP				

GAS #1 TURBINE TEST DATE: 8-15-91

TEST START: 8:00 Trevace/~~Test~~ Q.1 INTEGRATOR UNCORR:
TEST STOP : 10:28 START: 0195 6166
STOP: 6202 8440

TIME (10 min)	LOAD	~~sec/100 cf~~ Sec/20 GAL =20#	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART A	CHECK CHART B	
8:00	27	24.49	66		12.5	12.3	118	117	—
10	27	24.55	67		12.5	12.3	118	117	—
20	27	24.78	67		12.5	11	118	117	—
30	27	24.75	66	N=8 S=53	11	13	118	117	—
40	27	24.65	66	25.8 18.2 = 56 30.0 17.6 = 54	12.3	14	118	117	—
50	27	24.58	67	22.5 18 65 32.5 17.2 48	12.5	18	117	116	—
7:00	27	24.73	66	45.8 17.8 78 40.6 17.9 593	10	16	118	117	—
10	27	24.78	66	47 17.6 74.6 46.8 17 71	13.2	11	118	117	—
20	27	24.68	66		8.5	[illegible]	118	117	—
30	27	24.77	66		8.3	11	118	117	—
40	27	24.81	65	34.9 17.7 65 41.1 17.4 65	8	11	117	116	—
50	27	24.80	65	34.4 18.4 74 38.3 17.7 71	8.8	11	118	118	—
10:00	27	24.86	65	35.1 18.2 77 34.4 17.7 73	8.2	11	118	118	—
10	27	24.88	65	26.3 18 53 35.8 17.7 66	8.2	11	117	116	—
20	27	25.00	65	34.3 18.2 75 38.5 17.7 65	8.5	11	117	117	—
30									

36.9 18 75 41.3 17.5 74

$$\left(\frac{NO_x \times 5.9}{164.61}\right) \Big/ \left(\frac{20.9 - O_2}{24\ 29}\right) =$$

K O2 1/4 NOx K NOx

20.9 - 17.7 26. × 5.9 /3.2 = 47.9

20.4 - 18.1 2/5 17.7 × 5.9 / = 30.2 17.1

N (1 NOx 40.11 31; 2 O2 19.4 18 63) 33.4 17.8 63 27.3 17.8 26.9 18 54

S (4 NOx 47.0 27.9; 5 O2 18.7 17.5 48) 27.9 47 30.1 17.4 30.5 17.4 50

= 41

GAS # 1 TURBINE TEST DATE: 8-15-91

11 TEST START: 10:28 NOx 50% =27 0.1 INTEGRATOR UNCORR:
TEST STOP : 12:09 Runs #1,2,3 START: 0202 890
STOP: 0207247

TIME (10 min)	LOAD	~~sec/100 cf~~ sec/20gm =2REV	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK A CHART PSA	CHECK B PSA	
10:29	27	24.86	65	A=73 B=	8.8	11	116	116	—
39	27	24.89	65		8.8	11	116	116	—
49	27	24.90	65		9.0	13	116	116	—
59	27	24.83	65	B A	9.0	13	116	116	—
11:09	27	24.95	65	33.8 60 48.8 73 17.6 17.0	9	13	116	116	←
19	27	24.87	65	B A	10	13	116	116	—
29	27	24.82	65	35.2 61 40.8 65 17.5 17.2	10	12.5	116	116	—
39	27	24.77	65	38.1 63 40.3 64 12.3 12.3	10	12.5	116	116	—
49	27	24.79	65	34.4 63 43.9 70 17.7 17.2	9.8	12.5	116	116	—
59	27	24.85	65		9.8	12.5	115	116	—
12:09									

$NO_x \cdot 5.9 = / (20.9 - O_2) =$

GAS # 1 TURBINE TEST DATE: 8-15-91

TEST START: 12:34
TEST STOP : 14:05

NOx 65% = 35 ppm 0.1
Runs #1, 2, 3

INTEGRATOR UNCORR:
START: 0208340
STOP: 0214593

TIME (10 min)	LOAD	~~sec/100 cf~~ SEC/20 GAL = 2 REV	PRESSURE	TEMPERATURE	WATER FLOW A	WATER FLOW B	CHECK CHART A (PSI)	CHECK CHART B (PSI)	
~~12:19~~	~~34~~	~~20.94~~	~~64~~		~~15.8~~	~~16.2~~	~~133~~	~~132~~	
~~24~~									
Start 34	34	20.44	64		14.3	16.2	133	132	—
44	34	21.0	64		14	16	132	132	
54	34	20.7	64		14	16	132	132	
13:04 *	34	20.2	64		14	16	132	132	
14	34	20.0	64		14	16	132	132	
24	34	20.2	64		14	16	132	132	
34 1 hr *	34	20.76	63		14.2	16	132	132	—
44	34	20.53	63	13.4 @ 50.3 12.0 @ 16.7	14.2	16.2	132	132	—
54	34	20.47	64		14	16.2	132	132	—
14:04 *	34	20.45	63		13.9	16	132	132	—
14									
24									
34									

$NO_x \cdot 5.9 = / (20.9 - O_2) =$

13:00
14:00

GAS # 1 TURBINE TEST DATE: 8-15-91

TEST START: 14:38
TEST STOP : 15:48

NO_x 80% = 43MW Runs #1, 2, 3

OIL

INTEGRATOR UNCORR:
START: 0216785
STOP: 0222850

TIME (10 min)	LOAD	~~SEC/100 CF~~ SEC/20 GAL = 2 REV	PRESSURE	TEMPERATURE B	TEMPERATURE A	WATER FLOW A	WATER FLOW B	CHECK A CHART DSA	CHECK B CHART DSA	
14:38	43	17.15	60			19.2	20	150	149	—
:48	43	17.06	60	65	65	19	20	150	149	←
58 *	43	17.18	60	64	64	19.	19.8	150	149	—
15:08 *	43	17.16	60			19	20	150	149	—
18	43	17.20	59			19	20	150	149	—
28	43	17.22	59	65	63.4	18.8	20	150	149	—
38 *	43	17.19	59			19	20	150	149	—
48	43	17.13	59			19.2	20.2	150	149	←
58										
16:08										

$NO_x \cdot 5.9 = / (20.9 - O_2) =$

44.9 16.8 50.4 16.3 50 16.4 50 16.3 15:48 19:38 1:10

50.7 16.4 47.3 16.5

24/3 = 1:12

GAS #1 TURBINE TEST DATE: 8-15-99

TEST START: 16:15 NOx 100% Peak 53MW OIL INTEGRATOR UNCORR:
TEST STOP : 17:51 Runs #1, 2, 3 START: 0223920
STOP: 0231882

TIME (10 min)	LOAD	~~sec/100 cf~~ SEC/20 GAL = 2REV	PRESSURE	TEMPERATURE	WATER FLOW A 73	WATER FLOW B 87	CHECK CHART A MSA	CHECK CHART B DPM	
16:15	53	14.91	54		28	24	165	164	←
25	53	14.64	54	A=70 B=69	24	25	165	164	←
35	53	14.68	54	A	24.5	24.5	167	163	←
45	53	14.55	54		24	24.5	167	163	←
55	53	14.66	54		24	24.5	167	163	←
17:05	53	14.58	54		24.2	24.5	167	163	←
15	53	14.50	54		24	24.5	167	165	
25	53	14.60	54		24	24.5	167	163	
35	53	14.5	54		24	24.5	167	163	
45	53	14.6	54		24.5	24.5	167	163	
~~55~~									

$NO_x \cdot 5.9 = / (20.9 - O_2) =$

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
08:00	8240. lb/hr	0. lb/hr	19392. lb/hr	0.00	0.42
08:05	8352.	0.	19424.	0.00	0.43
08:10	8136.	0.	19424.	0.00	0.42
08:15	8368.	0.	19456.	0.00	0.43
08:20	8256.	0.	19456.	0.00	0.42
08:25	8096.	0.	19488.	0.00	0.42
08:30	8152.	0.	19456.	0.00	0.42
08:35	8080.	0.	19456.	0.00	0.42
08:40	8224.	0.	19488.	0.00	0.42
08:45	8368.	0.	19488.	0.00	0.43
08:50	8152.	0.	19488.	0.00	0.42
08:55	8304.	0.	19488.	0.00	0.43

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
08:00	12368. lb/hr	0. lb/hr	17888. lb/hr	0.00	0.69
08:05	12416.	0.	17952.	0.00	0.69
08:10	12320.	0.	17920.	0.00	0.69
08:15	12448.	0.	17920.	0.00	0.70
08:20	12448.	0.	17920.	0.00	0.69
08:25	12416.	0.	17952.	0.00	0.69
08:30	12432.	0.	17952.	0.00	0.69
08:35	12480.	0.	18016.	0.00	0.69
08:40	12432.	0.	18016.	0.00	0.69
08:45	12304.	0.	17984.	0.00	0.68
08:50	12288.	0.	17984.	0.00	0.68
08:55	12368.	0.	17920.	0.00	0.69

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
09:00	8288. lb/hr	0. lb/hr	19456. lb/hr	0.00	0.43
09:05	8024.	0.	19392.	0.00	0.41
09:10	8048.	0.	19424.	0.00	0.41
09:15	8128.	0.	19392.	0.00	0.42
09:20	8000.	0.	19392.	0.00	0.41
09:25	8208.	0.	19392.	0.00	0.42
09:30	8368.	0.	19392.	0.00	0.43
09:35	8256.	0.	19360.	0.00	0.43
09:40	7936.	0.	19328.	0.00	0.41
09:45	8168.	0.	19296.	0.00	0.42
09:50	8064.	0.	19296.	0.00	0.42
09:55	7896.	0.	19264.	0.00	0.41

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
09:00	12464. lb/hr	0. lb/hr	17856. lb/hr	0.00	0.70
09:05	12432.	0.	17856.	0.00	0.70
09:10	12384.	0.	17856.	0.00	0.69
09:15	12400.	0.	17856.	0.00	0.70
09:20	12320.	0.	17856.	0.00	0.69
09:25	12320.	0.	17888.	0.00	0.69
09:30	12304.	0.	17856.	0.00	0.69
09:35	12320.	0.	17856.	0.00	0.69
09:40	12400.	0.	17792.	0.00	0.70
09:45	12320.	0.	17760.	0.00	0.69
09:50	12448.	0.	17696.	0.00	0.70
09:55	12352.	0.	17728.	0.00	0.70

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
10:00	8024. lb/hr	0. lb/hr	19232. lb/hr	0.00	0.42
10:05	8024.	0.	19232.	0.00	0.42
10:10	8064.	0.	19232.	0.00	0.42
10:15	8032.	0.	19264.	0.00	0.42
10:20	8112.	0.	19232.	0.00	0.42
10:25	8072.	0.	19232.	0.00	0.42
10:30	8048.	0.	19136.	0.00	0.42
10:35	8040.	0.	19168.	0.00	0.42
10:40	8104.	0.	19168.	0.00	0.42
10:45	7920.	0.	19104.	0.00	0.42
10:50	7960.	0.	19104.	0.00	0.42
10:55	8024.	0.	19136.	0.00	0.42

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
10:00	12320. lb/hr	0. lb/hr	17728. lb/hr	0.00	0.70
10:05	12448.	0.	17696.	0.00	0.70
10:10	12384.	0.	17664.	0.00	0.70
10:15	12432.	0.	17664.	0.00	0.70
10:20	12256.	0.	17504.	0.00	0.70
10:25	12400.	0.	17568.	0.00	0.71
10:30	12400.	0.	17408.	0.00	0.71
10:35	12336.	0.	17344.	0.00	0.71
10:40	12240.	0.	17344.	0.00	0.71
10:45	12320.	0.	17312.	0.00	0.71
10:50	12272.	0.	17280.	0.00	0.71
10:55	12320.	0.	17440.	0.00	0.71

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
11:00	7960. lb/hr	0. lb/hr	19104. lb/hr	0.00	0.42
11:05	8024.	0.	19136.	0.00	0.42
11:10	8040.	0.	19104.	0.00	0.42
11:15	7984.	0.	19072.	0.00	0.42
11:20	7952.	0.	19072.	0.00	0.42
11:25	7968.	0.	19040.	0.00	0.42
11:30	8032.	0.	18976.	0.00	0.42
11:35	8000.	0.	18848.	0.00	0.42
11:40	8064.	0.	18816.	0.00	0.43
11:45	8072.	0.	18976.	0.00	0.43
11:50	8000.	0.	18944.	0.00	0.42
11:55	8048.	0.	18880.	0.00	0.43

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
11:00	12384. lb/hr	0. lb/hr	17440. lb/hr	0.00	0.71
11:05	12320.	0.	17440.	0.00	0.71
11:10	12288.	0.	17184.	0.00	0.71
11:15	12400.	0.	17280.	0.00	0.72
11:20	12400.	0.	17344.	0.00	0.72
11:25	12320.	0.	17312.	0.00	0.71
11:30	12400.	0.	17280.	0.00	0.72
11:35	12384.	0.	17184.	0.00	0.72
11:40	12416.	0.	17184.	0.00	0.72
11:45	12416.	0.	17120.	0.00	0.73
11:50	12288.	0.	17152.	0.00	0.72
11:55	12336.	0.	17120.	0.00	0.72

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
12:00	8024. lb/hr	0. lb/hr	18880. lb/hr	0.00	0.42
12:05	8008.	0.	18848.	0.00	0.43
12:10	7984.	0.	18880.	0.00	0.42
12:15	8000.	0.	18976.	0.00	0.42
12:20	8024.	0.	18944.	0.00	0.42
12:25	7944.	0.	18944.	0.00	0.42
12:30	8056.	0.	18976.	0.00	0.42
12:35	8000.	0.	18848.	0.00	0.42
12:40	7960.	0.	18848.	0.00	0.42
12:45	7968.	0.	18816.	0.00	0.42
12:50	8016.	0.	18752.	0.00	0.43
12:55	7912.	0.	18656.	0.00	0.42

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
12:00	12208. lb/hr	0. lb/hr	17184. lb/hr	0.00	0.71
12:05	12160.	0.	17280.	0.00	0.70
12:10	12176.	0.	17344.	0.00	0.70
12:15	12432.	0.	17344.	0.00	0.72
12:20	12304.	0.	17344.	0.00	0.71
12:25	12320.	0.	17408.	0.00	0.71
12:30	12144.	0.	17408.	0.00	0.70
12:35	12240.	0.	17184.	0.00	0.71
12:40	12256.	0.	17312.	0.00	0.71
12:45	12112.	0.	17248.	0.00	0.70
12:50	12144.	0.	17248.	0.00	0.71
12:55	12208.	0.	17152.	0.00	0.71

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
13:00	7928. lb/hr	0. lb/hr	18720. lb/hr	0.00	0.42
13:05	7952.	0.	18720.	0.00	0.42
13:10	8072.	0.	18624.	0.00	0.43
13:15	8056.	0.	18688.	0.00	0.43
13:20	7984.	0.	18752.	0.00	0.43
13:25	7936.	0.	18720.	0.00	0.42
13:30	8024.	0.	18688.	0.00	0.43
13:35	7952.	0.	18560.	0.00	0.43
13:40	7984.	0.	18688.	0.00	0.43
13:45	8120.	0.	18752.	0.00	0.43
13:50	7928.	0.	18592.	0.00	0.43
13:55	7952.	0.	18656.	0.00	0.43

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
13:00	12144. lb/hr	0. lb/hr	17248. lb/hr	0.00	0.71
13:05	12112.	0.	17376.	0.00	0.70
13:10	12192.	0.	17248.	0.00	0.71
13:15	12128.	0.	17248.	0.00	0.70
13:20	12240.	0.	17152.	0.00	0.71
13:25	12112.	0.	17184.	0.00	0.71
13:30	12064.	0.	17152.	0.00	0.70
13:35	12160.	0.	17152.	0.00	0.71
13:40	12128.	0.	17216.	0.00	0.70
13:45	11952.	0.	17248.	0.00	0.69
13:50	12192.	0.	17056.	0.00	0.71
13:55	12208.	0.	16992.	0.00	0.72

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
14:00	7904. lb/hr	0. lb/hr	18624. lb/hr	0.00	0.42
14:05	7864.	0.	18624.	0.00	0.42
14:10	7984.	0.	18560.	0.00	0.43
14:15	7912.	0.	18464.	0.00	0.43
14:20	7968.	0.	18592.	0.00	0.43
14:25	7960.	0.	18592.	0.00	0.43
14:30	7960.	0.	18592.	0.00	0.43
14:35	8016.	0.	18656.	0.00	0.43
14:40	8016.	0.	18624.	0.00	0.43
14:45	7992.	0.	18592.	0.00	0.43
14:50	7952.	0.	18656.	0.00	0.43
14:55	7992.	0.	18560.	0.00	0.43

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
14:00	12208. lb/hr	0. lb/hr	17088. lb/hr	0.00	0.71
14:05	12160.	0.	17120.	0.00	0.71
14:10	12320.	0.	17088.	0.00	0.72
14:15	12160.	0.	16992.	0.00	0.72
14:20	12304.	0.	16992.	0.00	0.72
14:25	12224.	0.	17056.	0.00	0.72
14:30	12304.	0.	16992.	0.00	0.72
14:35	12000.	0.	17120.	0.00	0.70
14:40	12048.	0.	17056.	0.00	0.71
14:45	12032.	0.	17184.	0.00	0.70
14:50	12224.	0.	17088.	0.00	0.72
14:55	12048.	0.	16992.	0.00	0.71

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
15:00	7952. lb/hr	0. lb/hr	18560. lb/hr	0.00	0.43
15:05	7920.	0.	18496.	0.00	0.43
15:10	8048.	0.	18592.	0.00	0.43
15:15	8000.	0.	18592.	0.00	0.43
15:20	7976.	0.	18592.	0.00	0.43
15:25	8016.	0.	18496.	0.00	0.43
15:30	8056.	0.	18496.	0.00	0.44
15:35	7832.	0.	18464.	0.00	0.42
15:40	7944.	0.	18464.	0.00	0.43
15:45	7672.	0.	16160.	0.00	0.48
15:50	6928.	0.	13920.	0.00	0.50
15:55	5880.	0.	11168.	0.00	0.53

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
15:00	12048. lb/hr	0. lb/hr	17120. lb/hr	0.00	0.70
15:05	12128.	0.	17088.	0.00	0.71
15:10	11936.	0.	17152.	0.00	0.70
15:15	11968.	0.	17088.	0.00	0.70
15:20	12016.	0.	17152.	0.00	0.70
15:25	11920.	0.	17024.	0.00	0.70
15:30	12064.	0.	16992.	0.00	0.71
15:35	12000.	0.	16992.	0.00	0.71
15:40	12048.	0.	17056.	0.00	0.71
15:45	12192.	0.	14912.	0.00	0.83
15:50	11232.	0.	12496.	0.00	0.89
15:55	6648.	0.	9664.	0.00	0.69

8/13/91

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
16:00	363. lb/hr	0. lb/hr	8752. lb/hr	0.00	0.04
16:05	66.	0.	8848.	0.00	0.01
16:10	158.	0.	3320.	0.00	0.04
16:15	0.	0.	0.	0.00	0.04
16:20	0.	0.	0.	0.00	0.04
16:25	0.	0.	0.	0.00	0.04
16:30	0.	0.	0.	0.00	0.04
16:35	0.	0.	0.	0.00	0.04
16:40	0.	0.	0.	0.00	0.04
16:45	0.	0.	0.	0.00	0.04
16:50	0.	0.	0.	0.00	0.04
16:55	0.	0.	0.	0.00	0.04

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
16:00	3556. lb/hr	0. lb/hr	7696. lb/hr	0.00	0.46
16:05	3488.	0.	7744.	0.00	0.45
16:10	849.	0.	2896.	0.00	0.16
16:15	0.	0.	0.	0.00	0.09
16:20	0.	0.	0.	0.00	0.09
16:25	0.	0.	0.	0.00	0.09
16:30	0.	0.	0.	0.00	0.09
16:35	0.	0.	0.	0.00	0.09
16:40	0.	0.	0.	0.00	0.09
16:45	0.	0.	0.	0.00	0.09
16:50	0.	0.	0.	0.00	0.09
16:55	0.	0.	0.	0.00	0.09

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GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
07:00	0. lb/hr	0. lb/hr	0. lb/hr	0.00	0.00
07:05	0.	0.	0.	0.00	0.00
07:10	0.	0.	0.	0.00	0.00
07:15	0.	0.	0.	0.00	0.00
07:20	0.	0.	0.	0.00	0.00
07:25	0.	0.	0.	0.00	0.00
07:30	0.	0.	0.	0.00	0.00
07:35	0.	0.	0.	0.00	0.00
07:40	0.	0.	0.	0.00	0.00
07:45	4304.	8496.	0.	0.40	0.00
07:50	7680.	10848.	0.	0.71	0.00
07:55	7944.	10832.	0.	0.73	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
07:00	0. lb/hr	0. lb/hr	0. lb/hr	0.00	0.00
07:05	0.	0.	0.	0.00	0.00
07:10	0.	0.	0.	0.00	0.00
07:15	0.	0.	0.	0.00	0.00
07:20	0.	0.	0.	0.00	0.00
07:25	0.	0.	0.	0.00	0.00
07:30	0.	0.	0.	0.00	0.00
07:35	0.	0.	0.	0.00	0.00
07:40	0.	0.	0.	0.00	0.00
07:45	4760.	9072.	0.	0.41	0.00
07:50	8640.	11616.	0.	0.74	0.00
07:55	8624.	11616.	0.	0.74	0.00

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GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
08:00	7768. lb/hr	10800. lb/hr	0. lb/hr	0.72	0.00
08:05	7760.	10720.	0.	0.72	0.00
08:10	7608.	10672.	0.	0.71	0.00
08:15	8736.	14048.	0.	0.62	0.00
08:20	9440.	16768.	0.	0.56	0.00
08:25	9504.	17120.	0.	0.55	0.00
08:30	9856.	17120.	0.	0.58	0.00
08:35	9616.	17024.	0.	0.57	0.00
08:40	9328.	16928.	0.	0.55	0.00
08:45	9360.	16864.	0.	0.56	0.00
08:50	9664.	16800.	0.	0.58	0.00
08:55	9472.	16800.	0.	0.56	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
08:00	8432. lb/hr	11584. lb/hr	0. lb/hr	0.73	0.00
08:05	8480.	11536.	0.	0.74	0.00
08:10	8432.	11472.	0.	0.74	0.00
08:15	12912.	14912.	0.	0.86	0.00
08:20	14288.	17312.	0.	0.83	0.00
08:25	14416.	17664.	0.	0.82	0.00
08:30	14432.	17792.	0.	0.81	0.00
08:35	14432.	17472.	0.	0.83	0.00
08:40	14416.	17344.	0.	0.83	0.00
08:45	14432.	17280.	0.	0.84	0.00
08:50	14368.	17408.	0.	0.83	0.00
08:55	14432.	17536.	0.	0.82	0.00

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GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
09:00	9488. lb/hr	16800. lb/hr	0. lb/hr	0.57	0.00
09:05	9456.	16768.	0.	0.56	0.00
09:10	9360.	16736.	0.	0.56	0.00
09:15	9456.	16736.	0.	0.56	0.00
09:20	9472.	16768.	0.	0.56	0.00
09:25	9456.	16768.	0.	0.56	0.00
09:30	9440.	16736.	0.	0.56	0.00
09:35	9392.	16704.	0.	0.56	0.00
09:40	9520.	16640.	0.	0.57	0.00
09:45	9424.	16672.	0.	0.56	0.00
09:50	9328.	16640.	0.	0.56	0.00
09:55	9408.	16608.	0.	0.57	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
09:00	14400. lb/hr	17504. lb/hr	0. lb/hr	0.82	0.00
09:05	14416.	17504.	0.	0.82	0.00
09:10	14320.	17472.	0.	0.82	0.00
09:15	14368.	17408.	0.	0.83	0.00
09:20	14352.	17280.	0.	0.83	0.00
09:25	14336.	17504.	0.	0.82	0.00
09:30	14400.	17376.	0.	0.83	0.00
09:35	14336.	17216.	0.	0.83	0.00
09:40	14368.	17344.	0.	0.83	0.00
09:45	14336.	17344.	0.	0.83	0.00
09:50	14320.	17184.	0.	0.83	0.00
09:55	14336.	17408.	0.	0.82	0.00

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GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
10:00	9424. lb/hr	16608. lb/hr	0. lb/hr	0.57	0.00
10:05	9408.	16544.	0.	0.57	0.00
10:10	9360.	16544.	0.	0.57	0.00
10:15	9424.	16576.	0.	0.57	0.00
10:20	9408.	16608.	0.	0.57	0.00
10:25	9568.	16608.	0.	0.58	0.00
10:30	9568.	16544.	0.	0.58	0.00
10:35	9344.	16544.	0.	0.56	0.00
10:40	9552.	16512.	0.	0.58	0.00
10:45	9056.	16512.	0.	0.55	0.00
10:50	MMMMMM	MMMMMM	MMMMMM	MMMM	MMMM
10:55	9328.	16512.	0.	0.57	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
10:00	14288. lb/hr	17408. lb/hr	0. lb/hr	0.82	0.00
10:05	14336.	17120.	0.	0.84	0.00
10:10	14336.	17248.	0.	0.83	0.00
10:15	14304.	17248.	0.	0.83	0.00
10:20	14320.	17248.	0.	0.83	0.00
10:25	14288.	17344.	0.	0.82	0.00
10:30	14320.	17280.	0.	0.83	0.00
10:35	14336.	17056.	0.	0.84	0.00
10:40	14368.	17024.	0.	0.84	0.00
10:45	14272.	17216.	0.	0.83	0.00
10:50	MMMMMM	MMMMMM	MMMMMM	MMMM	MMMM
10:55	14288.	17344.	0.	0.82	0.00

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GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
11:00	9456. lb/hr	16480. lb/hr	0. lb/hr	0.57	0.00
11:05	9168.	16480.	0.	0.56	0.00
11:10	9264.	16512.	0.	0.56	0.00
11:15	9056.	16512.	0.	0.55	0.00
11:20	9248.	16576.	0.	0.56	0.00
11:25	9344.	16608.	0.	0.56	0.00
11:30	9232.	16544.	0.	0.56	0.00
11:35	9200.	16576.	0.	0.55	0.00
11:40	9184.	16512.	0.	0.56	0.00
11:45	9200.	16480.	0.	0.56	0.00
11:50	9456.	16448.	0.	0.57	0.00
11:55	9184.	16368.	0.	0.56	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
11:00	14336. lb/hr	17056. lb/hr	0. lb/hr	0.84	0.00
11:05	14352.	17312.	0.	0.83	0.00
11:10	14336.	17248.	0.	0.83	0.00
11:15	14320.	17120.	0.	0.83	0.00
11:20	14240.	17408.	0.	0.82	0.00
11:25	14208.	17472.	0.	0.81	0.00
11:30	14256.	17440.	0.	0.82	0.00
11:35	14272.	17440.	0.	0.82	0.00
11:40	14272.	17344.	0.	0.82	0.00
11:45	14304.	17088.	0.	0.84	0.00
11:50	14256.	17152.	0.	0.83	0.00
11:55	14256.	17216.	0.	0.83	0.00

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GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
12:00	9232. lb/hr	16480. lb/hr	0. lb/hr	0.56	0.00
12:05	9264.	16384.	0.	0.57	0.00
12:10	9216.	16320.	0.	0.57	0.00
12:15	9264.	16304.	0.	0.57	0.00
12:20	9264.	16336.	0.	0.57	0.00
12:25	9232.	16320.	0.	0.57	0.00
12:30	9296.	16320.	0.	0.57	0.00
12:35	9248.	16336.	0.	0.57	0.00
12:40	9200.	16336.	0.	0.56	0.00
12:45	9168.	16352.	0.	0.56	0.00
12:50	9168.	16208.	0.	0.57	0.00
12:55	9136.	16304.	0.	0.56	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
12:00	14288. lb/hr	17312. lb/hr	0. lb/hr	0.83	0.00
12:05	14208.	17152.	0.	0.83	0.00
12:10	14208.	16992.	0.	0.83	0.00
12:15	14176.	16992.	0.	0.83	0.00
12:20	14240.	16896.	0.	0.84	0.00
12:25	14240.	17120.	0.	0.83	0.00
12:30	14176.	16992.	0.	0.83	0.00
12:35	14240.	16928.	0.	0.84	0.00
12:40	14224.	16896.	0.	0.84	0.00
12:45	14224.	16928.	0.	0.84	0.00
12:50	14224.	16960.	0.	0.84	0.00
12:55	14192.	16928.	0.	0.84	0.00

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GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
13:00	9264. lb/hr	16208. lb/hr	0. lb/hr	0.57	0.00
13:05	9152.	16160.	0.	0.57	0.00
13:10	9344.	16144.	0.	0.58	0.00
13:15	9248.	16032.	0.	0.58	0.00
13:20	9136.	0.	0.	0.56	0.00
13:25	8992.	16384.	0.	0.55	0.00
13:30	9120.	16240.	0.	0.56	0.00
13:35	9200.	16320.	0.	0.56	0.00
13:40	9008.	16336.	0.	0.55	0.00
13:45	8992.	16272.	0.	0.55	0.00
13:50	9072.	16176.	0.	0.56	0.00
13:55	9104.	16176.	0.	0.56	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
13:00	14272. lb/hr	16864. lb/hr	0. lb/hr	0.85	0.00
13:05	14256.	16800.	0.	0.85	0.00
13:10	14192.	16832.	0.	0.84	0.00
13:15	14160.	16800.	0.	0.84	0.00
13:20	14112.	17056.	0.	0.83	0.00
13:25	14160.	16960.	0.	0.83	0.00
13:30	14208.	16832.	0.	0.84	0.00
13:35	14176.	17056.	0.	0.83	0.00
13:40	14160.	16896.	0.	0.84	0.00
13:45	14064.	17024.	0.	0.83	0.00
13:50	14144.	16992.	0.	0.83	0.00
13:55	14128.	17088.	0.	0.83	0.00

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GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
14:00	9152. lb/hr	16016. lb/hr	0. lb/hr	0.57	0.00
14:05	9040.	16288.	0.	0.55	0.00
14:10	9104.	16352.	0.	0.56	0.00
14:15	9120.	16224.	0.	0.56	0.00
14:20	9104.	16256.	0.	0.56	0.00
14:25	9056.	16048.	0.	0.56	0.00
14:30	8896.	16176.	0.	0.55	0.00
14:35	8976.	16096.	0.	0.56	0.00
14:40	9040.	16224.	0.	0.56	0.00
14:45	9120.	16240.	0.	0.56	0.00
14:50	8832.	16144.	0.	0.55	0.00
14:55	8832.	16240.	0.	0.54	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
14:00	14176. lb/hr	16800. lb/hr	0. lb/hr	0.84	0.00
14:05	14128.	17216.	0.	0.82	0.00
14:10	14144.	16960.	0.	0.83	0.00
14:15	14144.	16992.	0.	0.83	0.00
14:20	14032.	16960.	0.	0.83	0.00
14:25	14160.	16800.	0.	0.84	0.00
14:30	14160.	16896.	0.	0.84	0.00
14:35	14176.	16896.	0.	0.84	0.00
14:40	14112.	17152.	0.	0.82	0.00
14:45	14080.	17056.	0.	0.83	0.00
14:50	14128.	16960.	0.	0.83	0.00
14:55	14112.	16928.	0.	0.83	0.00

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GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
15:00	8880. lb/hr	16256. lb/hr	0. lb/hr	0.55	0.00
15:05	9072.	16192.	0.	0.56	0.00
15:10	9008.	16208.	0.	0.56	0.00
15:15	9008.	15792.	0.	0.57	0.00
15:20	9040.	15760.	0.	0.57	0.00
15:25	8992.	15936.	0.	0.56	0.00
15:30	8976.	16096.	0.	0.56	0.00
15:35	8928.	16000.	0.	0.56	0.00
15:40	8944.	15792.	0.	0.57	0.00
15:45	8992.	15744.	0.	0.57	0.00
15:50	8992.	15824.	0.	0.57	0.00
15:55	8944.	15856.	0.	0.56	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
15:00	14112. lb/hr	16896. lb/hr	0. lb/hr	0.83	0.00
15:05	14000.	16928.	0.	0.83	0.00
15:10	14112.	16800.	0.	0.84	0.00
15:15	14208.	16672.	0.	0.85	0.00
15:20	14016.	16672.	0.	0.84	0.00
15:25	14128.	16832.	0.	0.84	0.00
15:30	14048.	16928.	0.	0.83	0.00
15:35	14208.	16800.	0.	0.85	0.00
15:40	14160.	16640.	0.	0.85	0.00
15:45	14080.	16480.	0.	0.85	0.00
15:50	14112.	16640.	0.	0.85	0.00
15:55	14096.	16704.	0.	0.84	0.00

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GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
16:00	9104. lb/hr	15984. lb/hr	0. lb/hr	0.57	0.00
16:05	8848.	16016.	0.	0.55	0.00
16:10	8912.	16048.	0.	0.56	0.00
16:15	8864.	16000.	0.	0.55	0.00
16:20	8960.	15952.	0.	0.56	0.00
16:25	8832.	15904.	0.	0.56	0.00
16:30	8912.	15968.	0.	0.56	0.00
16:35	8864.	15920.	0.	0.56	0.00
16:40	8944.	16000.	0.	0.56	0.00
16:45	8880.	16048.	0.	0.55	0.00
16:50	8896.	16016.	0.	0.55	0.00
16:55	8848.	16032.	0.	0.55	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
16:00	14176. lb/hr	16800. lb/hr	0. lb/hr	0.84	0.00
16:05	14064.	16800.	0.	0.84	0.00
16:10	14032.	16832.	0.	0.83	0.00
16:15	14144.	16832.	0.	0.84	0.00
16:20	14240.	16768.	0.	0.85	0.00
16:25	14096.	16800.	0.	0.84	0.00
16:30	14160.	16832.	0.	0.84	0.00
16:35	14128.	16864.	0.	0.84	0.00
16:40	14224.	16960.	0.	0.84	0.00
16:45	14176.	16768.	0.	0.84	0.00
16:50	14096.	16864.	0.	0.84	0.00
16:55	14064.	16832.	0.	0.84	0.00

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GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
17:00	9040. lb/hr	16032. lb/hr	0. lb/hr	0.56	0.00
17:05	8816.	16016.	0.	0.55	0.00
17:10	8896.	16000.	0.	0.56	0.00
17:15	8896.	16064.	0.	0.55	0.00
17:20	8816.	16048.	0.	0.55	0.00
17:25	8864.	15968.	0.	0.56	0.00
17:30	8720.	15776.	0.	0.55	0.00
17:35	8864.	15648.	0.	0.57	0.00
17:40	8912.	15792.	0.	0.56	0.00
17:45	8816.	15968.	0.	0.55	0.00
17:50	8736.	15824.	0.	0.55	0.00
17:55	8304.	13696.	0.	0.61	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
17:00	14112. lb/hr	16832. lb/hr	0. lb/hr	0.84	0.00
17:05	14144.	16896.	0.	0.84	0.00
17:10	14160.	16800.	0.	0.84	0.00
17:15	14144.	16864.	0.	0.84	0.00
17:20	14080.	16800.	0.	0.84	0.00
17:25	14208.	16800.	0.	0.85	0.00
17:30	14160.	16576.	0.	0.85	0.00
17:35	14048.	16576.	0.	0.85	0.00
17:40	14128.	16576.	0.	0.85	0.00
17:45	14096.	16768.	0.	0.84	0.00
17:50	14160.	16768.	0.	0.85	0.00
17:55	12752.	14736.	0.	0.87	0.00

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GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
18:00	8240. lb/hr	13136. lb/hr	0. lb/hr	0.63	0.00
18:05	8208.	13136.	0.	0.63	0.00
18:10	7752.	12112.	0.	0.64	0.00
18:15	7456.	11328.	0.	0.66	0.00
18:20	7248.	10848.	0.	0.67	0.00
18:25	6848.	10448.	0.	0.65	0.00
18:30	6864.	10432.	0.	0.66	0.00
18:35	6616.	10032.	0.	0.66	0.00
18:40	2752.	8992.	0.	0.29	0.00
18:45	444.	7896.	0.	0.06	0.00
18:50	26.	1518.	0.	0.02	0.00
18:55	0.	0.	0.	0.02	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
18:00	12256. lb/hr	14160. lb/hr	0. lb/hr	0.87	0.00
18:05	12176.	14144.	0.	0.86	0.00
18:10	10144.	13072.	0.	0.78	0.00
18:15	8800.	12240.	0.	0.72	0.00
18:20	8464.	11728.	0.	0.72	0.00
18:25	7888.	11312.	0.	0.70	0.00
18:30	7824.	11280.	0.	0.69	0.00
18:35	7480.	10944.	0.	0.68	0.00
18:40	2820.	9808.	0.	0.27	0.00
18:45	459.	8608.	0.	0.05	0.00
18:50	62.	1664.	0.	0.04	0.00
18:55	0.	0.	0.	0.04	0.00

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GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
07:00	0. lb/hr	0. lb/hr	0. lb/hr	0.00	0.04
07:05	0.	0.	0.	0.00	0.04
07:10	0.	0.	0.	0.00	0.04
07:15	0.	0.	0.	0.00	0.04
07:20	59.	2052.	0.	0.01	0.03
07:25	5880.	10464.	0.	0.56	0.00
07:30	6688.	10480.	0.	0.64	0.00
07:35	6704.	10336.	0.	0.65	0.00
07:40	6568.	10272.	0.	0.64	0.00
07:45	MMMMMM	MMMMMM	MMMMMM	MMMM	MMMM
07:50	MMMMMM	MMMMMM	MMMMMM	MMMM	MMMM
07:55	4496.	10176.	0.	0.44	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
07:00	0. lb/hr	0. lb/hr	0. lb/hr	0.00	0.09
07:05	0.	0.	0.	0.00	0.09
07:10	0.	0.	0.	0.00	0.09
07:15	0.	0.	0.	0.00	0.09
07:20	47.	2192.	0.	0.00	0.07
07:25	7248.	11168.	0.	0.65	0.00
07:30	7912.	11232.	0.	0.70	0.00
07:35	7408.	11088.	0.	0.67	0.00
07:40	7200.	11024.	0.	0.65	0.00
07:45	MMMMMM	MMMMMM	MMMMMM	MMMM	MMMM
07:50	MMMMMM	MMMMMM	MMMMMM	MMMM	MMMM
07:55	4068.	10880.	0.	0.37	0.00

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GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
08:00	3896. lb/hr	10144. lb/hr	0. lb/hr	0.38	0.00
08:05	3512.	10112.	0.	0.35	0.00
08:10	3344.	10080.	0.	0.33	0.00
08:15	3356.	10080.	0.	0.33	0.00
08:20	3380.	10080.	0.	0.33	0.00
08:25	3444.	10096.	0.	0.34	0.00
08:30	3332.	10064.	0.	0.33	0.00
08:35	2784.	10080.	0.	0.28	0.00
08:40	3288.	10080.	0.	0.33	0.00
08:45	3260.	10096.	0.	0.32	0.00
08:50	3272.	10080.	0.	0.32	0.00
08:55	3232.	10080.	0.	0.32	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
08:00	4072. lb/hr	10880. lb/hr	0. lb/hr	0.37	0.00
08:05	4648.	10896.	0.	0.43	0.00
08:10	4240.	10880.	0.	0.39	0.00
08:15	4168.	10864.	0.	0.38	0.00
08:20	4084.	10880.	0.	0.38	0.00
08:25	4040.	10880.	0.	0.37	0.00
08:30	4004.	10864.	0.	0.37	0.00
08:35	4096.	10880.	0.	0.38	0.00
08:40	4020.	10864.	0.	0.37	0.00
08:45	4104.	10896.	0.	0.38	0.00
08:50	4000.	10896.	0.	0.37	0.00
08:55	4052.	10896.	0.	0.37	0.00

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GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
09:00	3248. lb/hr	10096. lb/hr	0. lb/hr	0.32	0.00
09:05	3236.	10128.	0.	0.32	0.00
09:10	3252.	10112.	0.	0.32	0.00
09:15	3148.	10112.	0.	0.31	0.00
09:20	3240.	10128.	0.	0.32	0.00
09:25	3156.	10096.	0.	0.31	0.00
09:30	3160.	10112.	0.	0.31	0.00
09:35	3256.	10112.	0.	0.32	0.00
09:40	3212.	10144.	0.	0.32	0.00
09:45	3276.	10160.	0.	0.32	0.00
09:50	3172.	10144.	0.	0.31	0.00
09:55	3264.	10128.	0.	0.32	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
09:00	4040. lb/hr	10896. lb/hr	0. lb/hr	0.37	0.00
09:05	4152.	10928.	0.	0.38	0.00
09:10	4024.	10912.	0.	0.37	0.00
09:15	4012.	10912.	0.	0.37	0.00
09:20	3992.	10928.	0.	0.37	0.00
09:25	3980.	10912.	0.	0.36	0.00
09:30	3980.	10912.	0.	0.36	0.00
09:35	3924.	10928.	0.	0.36	0.00
09:40	3932.	10960.	0.	0.36	0.00
09:45	3944.	10960.	0.	0.36	0.00
09:50	4000.	10944.	0.	0.37	0.00
09:55	3940.	10912.	0.	0.36	0.00

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
10:00	3196. lb/hr	10128. lb/hr	0. lb/hr	0.32	0.00
10:05	3176.	10144.	0.	0.31	0.00
10:10	3208.	10112.	0.	0.32	0.00
10:15	3160.	10128.	0.	0.31	0.00
10:20	3232.	10144.	0.	0.32	0.00
10:25	3112.	10112.	0.	0.31	0.00
10:30	3144.	10064.	0.	0.31	0.00
10:35	3164.	10112.	0.	0.31	0.00
10:40	3260.	10144.	0.	0.32	0.00
10:45	3076.	10112.	0.	0.30	0.00
10:50	3128.	10096.	0.	0.31	0.00
10:55	3216.	10080.	0.	0.32	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
10:00	3844. lb/hr	10928. lb/hr	0. lb/hr	0.35	0.00
10:05	4004.	10960.	0.	0.37	0.00
10:10	3964.	10944.	0.	0.36	0.00
10:15	3948.	10928.	0.	0.36	0.00
10:20	3924.	10928.	0.	0.36	0.00
10:25	3872.	10880.	0.	0.36	0.00
10:30	3804.	10880.	0.	0.35	0.00
10:35	3848.	10944.	0.	0.35	0.00
10:40	3880.	10912.	0.	0.36	0.00
10:45	3948.	10944.	0.	0.36	0.00
10:50	3948.	10944.	0.	0.36	0.00
10:55	3792.	10912.	0.	0.35	0.00

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
11:00	3132. lb/hr	10096. lb/hr	0. lb/hr	0.31	0.00
11:05	3124.	10112.	0.	0.31	0.00
11:10	3172.	10128.	0.	0.31	0.00
11:15	2976.	10112.	0.	0.29	0.00
11:20	3176.	10128.	0.	0.31	0.00
11:25	2928.	10080.	0.	0.29	0.00
11:30	3056.	10080.	0.	0.30	0.00
11:35	3228.	10112.	0.	0.32	0.00
11:40	3100.	10096.	0.	0.31	0.00
11:45	3288.	10128.	0.	0.32	0.00
11:50	3120.	10096.	0.	0.31	0.00
11:55	3020.	10048.	0.	0.30	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
11:00	3880. lb/hr	10912. lb/hr	0. lb/hr	0.36	0.00
11:05	3884.	10928.	0.	0.35	0.00
11:10	3940.	10960.	0.	0.36	0.00
11:15	3900.	10928.	0.	0.36	0.00
11:20	4472.	10960.	0.	0.41	0.00
11:25	4592.	10960.	0.	0.42	0.00
11:30	4696.	10976.	0.	0.43	0.00
11:35	4728.	11024.	0.	0.43	0.00
11:40	4488.	10944.	0.	0.41	0.00
11:45	4576.	10960.	0.	0.42	0.00
11:50	4544.	10960.	0.	0.41	0.00
11:55	4464.	10944.	0.	0.41	0.00

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
12:00	2988. lb/hr	10128. lb/hr	0. lb/hr	0.29	0.00
12:05	3160.	10160.	0.	0.31	0.00
12:10	3228.	10112.	0.	0.32	0.00
12:15	3152.	10080.	0.	0.31	0.00
12:20	3156.	10096.	0.	0.31	0.00
12:25	3028.	10096.	0.	0.30	0.00
12:30	2956.	10080.	0.	0.29	0.00
12:35	3124.	10080.	0.	0.31	0.00
12:40	2992.	10032.	0.	0.30	0.00
12:45	3536.	11008.	0.	0.32	0.00
12:50	4296.	11232.	0.	0.38	0.00
12:55	5144.	11264.	0.	0.46	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
12:00	4520. lb/hr	10960. lb/hr	0. lb/hr	0.41	0.00
12:05	4624.	11008.	0.	0.42	0.00
12:10	4536.	10992.	0.	0.41	0.00
12:15	4496.	10944.	0.	0.41	0.00
12:20	4440.	10928.	0.	0.41	0.00
12:25	4520.	10944.	0.	0.41	0.00
12:30	4408.	10928.	0.	0.40	0.00
12:35	4456.	10912.	0.	0.41	0.00
12:40	4512.	10896.	0.	0.41	0.00
12:45	5696.	11872.	0.	0.48	0.00
12:50	6360.	12144.	0.	0.52	0.00
12:55	5864.	12112.	0.	0.48	0.00

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
13:00	5096. lb/hr	11248. lb/hr	0. lb/hr	0.45	0.00
13:05	5296.	11280.	0.	0.47	0.00
13:10	5168.	11248.	0.	0.46	0.00
13:15	5088.	11232.	0.	0.45	0.00
13:20	5064.	11264.	0.	0.45	0.00
13:25	5304.	11248.	0.	0.47	0.00
13:30	5128.	11248.	0.	0.46	0.00
13:35	5176.	11264.	0.	0.46	0.00
13:40	5096.	11248.	0.	0.45	0.00
13:45	5104.	11248.	0.	0.45	0.00
13:50	5240.	11280.	0.	0.46	0.00
13:55	5232.	11312.	0.	0.46	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
13:00	5392. lb/hr	12112. lb/hr	0. lb/hr	0.45	0.00
13:05	5488.	12096.	0.	0.45	0.00
13:10	5512.	12096.	0.	0.46	0.00
13:15	5528.	12128.	0.	0.46	0.00
13:20	5392.	12112.	0.	0.45	0.00
13:25	5424.	12080.	0.	0.45	0.00
13:30	5408.	12112.	0.	0.45	0.00
13:35	5376.	12112.	0.	0.44	0.00
13:40	5432.	12080.	0.	0.45	0.00
13:45	5224.	12096.	0.	0.43	0.00
13:50	5352.	12112.	0.	0.44	0.00
13:55	5360.	12128.	0.	0.44	0.00

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
14:00	5120. lb/hr	11312. lb/hr	0. lb/hr	0.45	0.00
14:05	5232.	11312.	0.	0.46	0.00
14:10	5048.	11232.	0.	0.45	0.00
14:15	5216.	11248.	0.	0.46	0.00
14:20	5768.	12384.	0.	0.47	0.00
14:25	6600.	12688.	0.	0.52	0.00
14:30	7992.	12688.	0.	0.63	0.00
14:35	7936.	12880.	0.	0.62	0.00
14:40	7640.	12880.	0.	0.59	0.00
14:45	7960.	13056.	0.	0.61	0.00
14:50	7832.	13056.	0.	0.60	0.00
14:55	8016.	13056.	0.	0.61	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
14:00	5472. lb/hr	12192. lb/hr	0. lb/hr	0.45	0.00
14:05	5392.	12176.	0.	0.44	0.00
14:10	5456.	12112.	0.	0.45	0.00
14:15	5280.	12080.	0.	0.44	0.00
14:20	6720.	13248.	0.	0.51	0.00
14:25	7104.	13440.	0.	0.53	0.00
14:30	7184.	13424.	0.	0.54	0.00
14:35	7128.	13632.	0.	0.52	0.00
14:40	7048.	13712.	0.	0.51	0.00
14:45	7080.	13920.	0.	0.51	0.00
14:50	7016.	13856.	0.	0.51	0.00
14:55	7080.	13808.	0.	0.51	0.00

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	OIL
15:00	8016. lb/hr	13040. lb/hr	0. lb/hr	0.62	0.00
15:05	8040.	13024.	0.	0.62	0.00
15:10	7960.	12992.	0.	0.61	0.00
15:15	7896.	12848.	0.	0.61	0.00
15:20	8088.	12816.	0.	0.63	0.00
15:25	8008.	12832.	0.	0.62	0.00
15:30	7944.	13040.	0.	0.61	0.00
15:35	8088.	13040.	0.	0.62	0.00
15:40	8040.	13040.	0.	0.62	0.00
15:45	8064.	13072.	0.	0.62	0.00
15:50	8352.	15648.	0.	0.53	0.00
15:55	9168.	16128.	0.	0.57	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	OIL
15:00	7104. lb/hr	13792. lb/hr	0. lb/hr	0.51	0.00
15:05	7000.	13760.	0.	0.51	0.00
15:10	7120.	13712.	0.	0.52	0.00
15:15	7016.	13584.	0.	0.52	0.00
15:20	7072.	13584.	0.	0.52	0.00
15:25	7024.	13568.	0.	0.52	0.00
15:30	7072.	13776.	0.	0.51	0.00
15:35	7032.	13808.	0.	0.51	0.00
15:40	7056.	13808.	0.	0.51	0.00
15:45	7000.	13792.	0.	0.51	0.00
15:50	8672.	16176.	0.	0.54	0.00
15:55	10000.	16480.	0.	0.61	0.00

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
16:00	9312. lb/hr	16256. lb/hr	0. lb/hr	0.57	0.00
16:05	9536.	16224.	0.	0.59	0.00
16:10	9248.	16000.	0.	0.58	0.00
16:15	9616.	15952.	0.	0.60	0.00
16:20	9552.	15952.	0.	0.60	0.00
16:25	9504.	15968.	0.	0.59	0.00
16:30	9488.	16144.	0.	0.59	0.00
16:35	9328.	16096.	0.	0.58	0.00
16:40	9488.	15968.	0.	0.59	0.00
16:45	9440.	16048.	0.	0.59	0.00
16:50	9360.	16032.	0.	0.58	0.00
16:55	9264.	16000.	0.	0.58	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
16:00	8944. lb/hr	16640. lb/hr	0. lb/hr	0.54	0.00
16:05	9056.	16448.	0.	0.55	0.00
16:10	8928.	16240.	0.	0.55	0.00
16:15	8912.	16240.	0.	0.55	0.00
16:20	8880.	16272.	0.	0.55	0.00
16:25	8944.	16336.	0.	0.55	0.00
16:30	8928.	16512.	0.	0.54	0.00
16:35	8992.	16368.	0.	0.55	0.00
16:40	8992.	16368.	0.	0.55	0.00
16:45	9056.	16352.	0.	0.55	0.00
16:50	9024.	16384.	0.	0.55	0.00
16:55	9056.	16336.	0.	0.55	0.00

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
17:00	9504. lb/hr	15856. lb/hr	0. lb/hr	0.60	0.00
17:05	9440.	15872.	0.	0.60	0.00
17:10	9600.	15952.	0.	0.60	0.00
17:15	9552.	15920.	0.	0.60	0.00
17:20	9472.	15936.	0.	0.59	0.00
17:25	9328.	15872.	0.	0.59	0.00
17:30	9424.	15888.	0.	0.59	0.00
17:35	9408.	15968.	0.	0.59	0.00
17:40	9424.	15952.	0.	0.59	0.00
17:45	9520.	15936.	0.	0.60	0.00
17:50	9552.	15936.	0.	0.60	0.00
17:55	9344.	16000.	0.	0.58	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
17:00	8960. lb/hr	16304. lb/hr	0. lb/hr	0.55	0.00
17:05	8896.	16336.	0.	0.54	0.00
17:10	8848.	16352.	0.	0.54	0.00
17:15	8720.	16224.	0.	0.54	0.00
17:20	8832.	16272.	0.	0.54	0.00
17:25	8880.	16272.	0.	0.54	0.00
17:30	8896.	16272.	0.	0.55	0.00
17:35	8800.	16288.	0.	0.54	0.00
17:40	9072.	16320.	0.	0.56	0.00
17:45	9056.	16336.	0.	0.55	0.00
17:50	8912.	16368.	0.	0.54	0.00
17:55	8992.	16304.	0.	0.55	0.00

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	OIL
18:00	9296. lb/hr	15968. lb/hr	0. lb/hr	0.58	0.00
18:05	9376.	15856.	0.	0.59	0.00
18:10	9360.	15776.	0.	0.59	0.00
18:15	9408.	15888.	0.	0.59	0.00
18:20	9216.	15856.	0.	0.58	0.00
18:25	9424.	15920.	0.	0.59	0.00
18:30	9376.	15920.	0.	0.59	0.00
18:35	9328.	15888.	0.	0.59	0.00
18:40	9296.	15936.	0.	0.58	0.00
18:45	9360.	15936.	0.	0.59	0.00
18:50	9392.	15936.	0.	0.59	0.00
18:55	9280.	15904.	0.	0.58	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	OIL
18:00	8896. lb/hr	16320. lb/hr	0. lb/hr	0.54	0.00
18:05	8816.	16272.	0.	0.54	0.00
18:10	8848.	16192.	0.	0.55	0.00
18:15	8880.	16304.	0.	0.54	0.00
18:20	8880.	16304.	0.	0.54	0.00
18:25	8816.	16272.	0.	0.54	0.00
18:30	8992.	16336.	0.	0.55	0.00
18:35	8768.	16256.	0.	0.54	0.00
18:40	8944.	16272.	0.	0.55	0.00
18:45	8928.	16320.	0.	0.55	0.00
18:50	8944.	16384.	0.	0.55	0.00
18:55	8896.	16320.	0.	0.55	0.00

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	OIL
19:00	9248. lb/hr	15952. lb/hr	0. lb/hr	0.58	0.00
19:05	9328.	15952.	0.	0.58	0.00
19:10	9344.	15968.	0.	0.58	0.00
19:15	9456.	15984.	0.	0.59	0.00
19:20	9456.	15968.	0.	0.59	0.00
19:25	9360.	15984.	0.	0.59	0.00
19:30	9072.	14720.	0.	0.62	0.00
19:35	8976.	14304.	0.	0.63	0.00
19:40	8928.	14304.	0.	0.62	0.00
19:45	8928.	14352.	0.	0.62	0.00
19:50	8896.	14400.	0.	0.62	0.00
19:55	8944.	14352.	0.	0.62	0.00

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	OIL
19:00	8976. lb/hr	16352. lb/hr	0. lb/hr	0.55	0.00
19:05	8912.	16288.	0.	0.55	0.00
19:10	8992.	16352.	0.	0.55	0.00
19:15	8960.	16352.	0.	0.55	0.00
19:20	9040.	16320.	0.	0.55	0.00
19:25	8896.	16384.	0.	0.54	0.00
19:30	8688.	15312.	0.	0.57	0.00
19:35	8544.	14944.	0.	0.57	0.00
19:40	8336.	14912.	0.	0.56	0.00
19:45	8368.	14944.	0.	0.56	0.00
19:50	8720.	14960.	0.	0.58	0.00
19:55	8272.	14912.	0.	0.55	0.00

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
17:00	12224. lb/hr	0. lb/hr	18976. lb/hr	0.00	0.64
17:05	12400.	0.	18912.	0.00	0.66
17:10	12240.	0.	18944.	0.00	0.65
17:15	12240.	0.	18944.	0.00	0.65
17:20	12496.	0.	18944.	0.00	0.66
17:25	12208.	0.	18976.	0.00	0.64
17:30	12224.	0.	18976.	0.00	0.64
17:35	12288.	0.	18944.	0.00	0.65
17:40	12416.	0.	18976.	0.00	0.65
17:45	12240.	0.	18944.	0.00	0.65
17:50	12128.	0.	18944.	0.00	0.64
17:55	12112.	0.	19008.	0.00	0.64

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
17:00	12208. lb/hr	0. lb/hr	16768. lb/hr	0.00	0.73
17:05	12112.	0.	16736.	0.00	0.72
17:10	12128.	0.	16832.	0.00	0.72
17:15	12112.	0.	16832.	0.00	0.72
17:20	12160.	0.	16768.	0.00	0.73
17:25	12192.	0.	16800.	0.00	0.73
17:30	12144.	0.	16736.	0.00	0.73
17:35	12176.	0.	16704.	0.00	0.73
17:40	12256.	0.	16800.	0.00	0.73
17:45	12160.	0.	16640.	0.00	0.73
17:50	12160.	0.	16832.	0.00	0.72
17:55	12112.	0.	16832.	0.00	0.72

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
16:00	11360. lb/hr	0. lb/hr	18880. lb/hr	0.00	0.60
16:05	11488.	0.	18880.	0.00	0.61
16:10	12128.	0.	18816.	0.00	0.64
16:15	12176.	0.	18944.	0.00	0.64
16:20	12400.	0.	18912.	0.00	0.66
16:25	12384.	0.	19008.	0.00	0.65
16:30	12304.	0.	18976.	0.00	0.65
16:35	12352.	0.	18976.	0.00	0.65
16:40	12416.	0.	19008.	0.00	0.65
16:45	12400.	0.	19008.	0.00	0.65
16:50	12256.	0.	19008.	0.00	0.64
16:55	12272.	0.	18944.	0.00	0.65

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
16:00	14080. lb/hr	0. lb/hr	17152. lb/hr	0.00	0.82
16:05	14064.	0.	17088.	0.00	0.82
16:10	14080.	0.	17024.	0.00	0.83
16:15	13680.	0.	16896.	0.00	0.81
16:20	12624.	0.	16864.	0.00	0.75
16:25	12224.	0.	16800.	0.00	0.73
16:30	12144.	0.	16736.	0.00	0.73
16:35	12192.	0.	16704.	0.00	0.73
16:40	12224.	0.	16800.	0.00	0.73
16:45	12176.	0.	16768.	0.00	0.73
16:50	12160.	0.	16736.	0.00	0.73
16:55	12128.	0.	16832.	0.00	0.72

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
15:00	9872. lb/hr	0. lb/hr	15744. lb/hr	0.00	0.63
15:05	9760.	0.	15808.	0.00	0.62
15:10	9664.	0.	15856.	0.00	0.61
15:15	9808.	0.	15888.	0.00	0.62
15:20	9792.	0.	15808.	0.00	0.62
15:25	9968.	0.	15824.	0.00	0.63
15:30	9584.	0.	15760.	0.00	0.61
15:35	9728.	0.	15840.	0.00	0.61
15:40	9920.	0.	15872.	0.00	0.63
15:45	9760.	0.	15856.	0.00	0.62
15:50	9776.	0.	17472.	0.00	0.56
15:55	10816.	0.	18848.	0.00	0.57

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
15:00	10080. lb/hr	0. lb/hr	13968. lb/hr	0.00	0.72
15:05	10128.	0.	13968.	0.00	0.72
15:10	10192.	0.	14016.	0.00	0.73
15:15	10128.	0.	13952.	0.00	0.73
15:20	10160.	0.	13984.	0.00	0.73
15:25	10144.	0.	13984.	0.00	0.73
15:30	10096.	0.	13936.	0.00	0.73
15:35	10064.	0.	13920.	0.00	0.72
15:40	10096.	0.	13920.	0.00	0.72
15:45	10128.	0.	13952.	0.00	0.73
15:50	11008.	0.	15680.	0.00	0.70
15:55	12784.	0.	17056.	0.00	0.75

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
14:00	7496. lb/hr	0. lb/hr	12848. lb/hr	0.00	0.58
14:05	7544.	0.	13888.	0.00	0.54
14:10	8208.	0.	15520.	0.00	0.53
14:15	8480.	0.	15712.	0.00	0.54
14:20	9952.	0.	15840.	0.00	0.63
14:25	10080.	0.	15840.	0.00	0.64
14:30	10176.	0.	15776.	0.00	0.65
14:35	9648.	0.	15824.	0.00	0.61
14:40	9760.	0.	15824.	0.00	0.62
14:45	9952.	0.	15728.	0.00	0.63
14:50	9856.	0.	15808.	0.00	0.62
14:55	9872.	0.	15824.	0.00	0.62

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
14:00	7960. lb/hr	0. lb/hr	11344. lb/hr	0.00	0.70
14:05	9456.	0.	12416.	0.00	0.75
14:10	12256.	0.	14096.	0.00	0.87
14:15	11760.	0.	14048.	0.00	0.84
14:20	11456.	0.	14016.	0.00	0.82
14:25	9536.	0.	13872.	0.00	0.68
14:30	9472.	0.	13792.	0.00	0.69
14:35	9808.	0.	13808.	0.00	0.71
14:40	10208.	0.	13840.	0.00	0.74
14:45	10112.	0.	13888.	0.00	0.73
14:50	10224.	0.	13952.	0.00	0.73
14:55	9968.	0.	13952.	0.00	0.71

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
13:00	7416. lb/hr	0. lb/hr	12928. lb/hr	0.00	0.57
13:05	7360.	0.	12992.	0.00	0.57
13:10	7528.	0.	12928.	0.00	0.58
13:15	7344.	0.	12928.	0.00	0.57
13:20	6888.	0.	12880.	0.00	0.54
13:25	7472.	0.	12864.	0.00	0.58
13:30	7384.	0.	12896.	0.00	0.57
13:35	7240.	0.	12880.	0.00	0.56
13:40	7688.	0.	12864.	0.00	0.60
13:45	7336.	0.	12896.	0.00	0.57
13:50	7376.	0.	12944.	0.00	0.57
13:55	7352.	0.	12912.	0.00	0.57

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
13:00	8088. lb/hr	0. lb/hr	11456. lb/hr	0.00	0.71
13:05	8120.	0.	11552.	0.00	0.70
13:10	8080.	0.	11472.	0.00	0.70
13:15	8072.	0.	11536.	0.00	0.70
13:20	8208.	0.	11488.	0.00	0.71
13:25	8112.	0.	11488.	0.00	0.71
13:30	8104.	0.	11472.	0.00	0.71
13:35	8080.	0.	11488.	0.00	0.70
13:40	8240.	0.	11408.	0.00	0.72
13:45	8064.	0.	11504.	0.00	0.70
13:50	8080.	0.	11424.	0.00	0.71
13:55	8008.	0.	11440.	0.00	0.70

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
12:00	5848. lb/hr	0. lb/hr	11696. lb/hr	0.00	0.50
12:05	6648.	0.	13040.	0.00	0.51
12:10	6696.	0.	12960.	0.00	0.52
12:15	6872.	0.	12944.	0.00	0.53
12:20	7560.	0.	13008.	0.00	0.58
12:25	7624.	0.	12960.	0.00	0.59
12:30	7584.	0.	13040.	0.00	0.58
12:35	7744.	0.	13136.	0.00	0.59
12:40	7648.	0.	13008.	0.00	0.59
12:45	7824.	0.	13056.	0.00	0.60
12:50	7968.	0.	12960.	0.00	0.62
12:55	7688.	0.	12928.	0.00	0.59

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
12:00	7096. lb/hr	0. lb/hr	10384. lb/hr	0.00	0.68
12:05	8336.	0.	11776.	0.00	0.71
12:10	8152.	0.	11584.	0.00	0.70
12:15	8224.	0.	11616.	0.00	0.71
12:20	6640.	0.	11312.	0.00	0.58
12:25	7416.	0.	11472.	0.00	0.64
12:30	7640.	0.	11488.	0.00	0.66
12:35	8072.	0.	11536.	0.00	0.70
12:40	8288.	0.	11568.	0.00	0.72
12:45	8184.	0.	11632.	0.00	0.70
12:50	8136.	0.	11616.	0.00	0.70
12:55	8104.	0.	11504.	0.00	0.70

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
11:00	4640. lb/hr	0. lb/hr	10464. lb/hr	0.00	0.44
11:05	4664.	0.	10512.	0.00	0.44
11:10	4744.	0.	10496.	0.00	0.45
11:15	4616.	0.	10496.	0.00	0.44
11:20	5288.	0.	10560.	0.00	0.50
11:25	5520.	0.	10624.	0.00	0.52
11:30	5208.	0.	10592.	0.00	0.49
11:35	5376.	0.	10560.	0.00	0.51
11:40	5240.	0.	10608.	0.00	0.49
11:45	5160.	0.	10576.	0.00	0.49
11:50	5200.	0.	10544.	0.00	0.49
11:55	5200.	0.	10576.	0.00	0.49

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
11:00	6472. lb/hr	0. lb/hr	9312. lb/hr	0.00	0.70
11:05	6568.	0.	9312.	0.00	0.71
11:10	6584.	0.	9312.	0.00	0.71
11:15	6520.	0.	9344.	0.00	0.70
11:20	6448.	0.	9360.	0.00	0.69
11:25	6304.	0.	9312.	0.00	0.68
11:30	6256.	0.	9312.	0.00	0.67
11:35	6216.	0.	9328.	0.00	0.67
11:40	6296.	0.	9296.	0.00	0.68
11:45	6184.	0.	9296.	0.00	0.67
11:50	6160.	0.	9296.	0.00	0.66
11:55	6208.	0.	9248.	0.00	0.67

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
10:00	4504. lb/hr	0. lb/hr	10656. lb/hr	0.00	0.42
10:05	4616.	0.	10624.	0.00	0.44
10:10	4608.	0.	10560.	0.00	0.44
10:15	4736.	0.	10576.	0.00	0.45
10:20	4712.	0.	10560.	0.00	0.45
10:25	4832.	0.	10592.	0.00	0.46
10:30	4800.	0.	10592.	0.00	0.45
10:35	4832.	0.	10656.	0.00	0.45
10:40	4752.	0.	10576.	0.00	0.45
10:45	4664.	0.	10512.	0.00	0.44
10:50	4728.	0.	10528.	0.00	0.45
10:55	4592.	0.	10480.	0.00	0.44

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
10:00	5408. lb/hr	0. lb/hr	9280. lb/hr	0.00	0.58
10:05	5376.	0.	9296.	0.00	0.58
10:10	5360.	0.	9248.	0.00	0.58
10:15	6712.	0.	9424.	0.00	0.71
10:20	6456.	0.	9376.	0.00	0.69
10:25	5392.	0.	9200.	0.00	0.59
10:30	5376.	0.	9200.	0.00	0.58
10:35	5344.	0.	9248.	0.00	0.58
10:40	5448.	0.	9216.	0.00	0.59
10:45	6480.	0.	9360.	0.00	0.69
10:50	6576.	0.	9328.	0.00	0.71
10:55	6424.	0.	9232.	0.00	0.70

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
09:00	5312. lb/hr	0. lb/hr	10784. lb/hr	0.00	0.49
09:05	4656.	0.	10672.	0.00	0.44
09:10	4536.	0.	10624.	0.00	0.43
09:15	4456.	0.	10608.	0.00	0.42
09:20	4528.	0.	10608.	0.00	0.43
09:25	4504.	0.	10640.	0.00	0.42
09:30	4488.	0.	10592.	0.00	0.42
09:35	4472.	0.	10544.	0.00	0.42
09:40	4456.	0.	10528.	0.00	0.42
09:45	4480.	0.	10592.	0.00	0.42
09:50	4504.	0.	10624.	0.00	0.42
09:55	4616.	0.	10560.	0.00	0.44

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
09:00	5200. lb/hr	0. lb/hr	9232. lb/hr	0.00	0.56
09:05	6096.	0.	9376.	0.00	0.65
09:10	5536.	0.	9360.	0.00	0.59
09:15	5320.	0.	9216.	0.00	0.58
09:20	5448.	0.	9264.	0.00	0.59
09:25	6200.	0.	9344.	0.00	0.66
09:30	6296.	0.	9344.	0.00	0.67
09:35	6016.	0.	9296.	0.00	0.65
09:40	5760.	0.	9296.	0.00	0.62
09:45	4536.	0.	9104.	0.00	0.50
09:50	5432.	0.	9264.	0.00	0.59
09:55	5432.	0.	9264.	0.00	0.59

GAS TURBINE OUTPUT DATA

UNIT #1, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
08:00	6640. lb/hr	0. lb/hr	10912. lb/hr	0.00	0.61
08:05	6672.	0.	10960.	0.00	0.61
08:10	6528.	0.	11008.	0.00	0.59
08:15	6688.	0.	10864.	0.00	0.62
08:20	6560.	0.	10832.	0.00	0.61
08:25	6528.	0.	10816.	0.00	0.60
08:30	5936.	0.	10752.	0.00	0.55
08:35	5792.	0.	10800.	0.00	0.54
08:40	6360.	0.	10880.	0.00	0.58
08:45	6632.	0.	10912.	0.00	0.61
08:50	6568.	0.	10880.	0.00	0.60
08:55	5776.	0.	10816.	0.00	0.53

UNIT #1, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
08:00	6248. lb/hr	0. lb/hr	9248. lb/hr	0.00	0.68
08:05	6216.	0.	9280.	0.00	0.67
08:10	6384.	0.	9328.	0.00	0.68
08:15	6136.	0.	9280.	0.00	0.66
08:20	5664.	0.	9184.	0.00	0.62
08:25	5560.	0.	9280.	0.00	0.60
08:30	6040.	0.	9232.	0.00	0.65
08:35	7024.	0.	9360.	0.00	0.75
08:40	7136.	0.	9392.	0.00	0.76
08:45	7840.	0.	9568.	0.00	0.82
08:50	8880.	0.	9632.	0.00	0.92
08:55	6928.	0.	9440.	0.00	0.73

August 6, 1991

GAS TURBINE OUTPUT DATA

UNIT #2	ENGINE 'A'			ENGINE 'B'		
TIME	Water Flow (lb/hr)	Gas Flow (lb/hr)	H2O/Gas Ratio	Water Flow (lb/hr)	Gas Flow (lb/hr)	H2O/Gas Ratio
10:10	9417	15032	0.63	12369	14168	0.87
10:20	10201	15228	0.67	11969	14227	0.84
10:40	10797	15151	0.71	11766	14154	0.83
10:50	9827	15302	0.64	12522	14196	0.88
11:00	10204	15313	0.67	11679	14199	0.82
11:10	9697	15250	0.64	12129	14201	0.85
11:20	9578	15237	0.63	12264	13999	0.88
11:30	9464	15440	0.61	12161	14169	0.86
11:40	10090	15415	0.65	11882	14154	0.84
11:50	10002	15486	0.65	11966	14076	0.85
12:00	9878	15430	0.64	12040	14153	0.85
12:10	9570	15348	0.62	12502	14081	0.89
12:20	9972	15265	0.65	11728	13963	0.84
12:30	9535	15551	0.61	12422	14138	0.88
14:05	9477	15189	0.62	12197	14035	0.87
14:15	10372	15428	0.67	11528	13966	0.83
14:25	9654	15229	0.63	12163	13937	0.87
14:35	9947	15279	0.65	11432	13857	0.82
14:45	10087	15413	0.65	11802	13976	0.84
14:55	9399	15413	0.61	11793	13946	0.85
15:05	9122	15318	0.60	11732	14069	0.83
15:15	9685	15275	0.63	12093	13994	0.86
15:25	10068	15440	0.65	11968	13837	0.86
15:35	9407	15388	0.61	11676	13829	0.84
15:45	9759	15477	0.63	11669	13979	0.83
15:55	9295	15651	0.59	11876	13972	0.85
16:05	9271	15352	0.60	12230	13897	0.88
16:15	9576	15552	0.62	11877	13909	0.85
16:25	9960	15514	0.64	12109	13975	0.87
17:34	9430	15493	0.61	11870	14074	0.84
17:44	10108	15490	0.65	12084	14035	0.86
17:54	10135	15440	0.66	12051	13977	0.86
18:04	10113	15622	0.65	12149	14149	0.86
18:14	10054	15514	0.65	12256	14135	0.87
18:24	9542	15277	0.62	11868	14213	0.83
18:34	9713	15431	0.63	11584	14226	0.81
18:44	9728	15418	0.63	11847	14185	0.84
18:54	9989	15359	0.65	11901	14234	0.84
19:04	9606	15305	0.63	11631	14225	0.82
19:24	9291	15172	0.61	11880	14234	0.83
19:34	9872	15243	0.65	11843	14234	0.83

August 7, 1991

GAS TURBINE OUTPUT DATA

UNIT #2

TIME	ENGINE 'A' Water Flow (lb/hr)	ENGINE 'A' Oil Flow (lb/hr)	ENGINE 'A' H2O/Oil Ratio	ENGINE 'B' Water Flow (lb/hr)	ENGINE 'B' Oil Flow (lb/hr)	ENGINE 'B' H2O/Oil Ratio
08:15	9410	16140	0.58	10516	16405	0.64
08:25	9563	16283	0.59	10717	16456	0.65
08:35	9377	16301	0.58	9980	16327	0.61
08:45	9719	16397	0.59	10850	16403	0.66
08:55	9439	16472	0.57	10345	16486	0.63
09:05	9600	16559	0.58	10439	16399	0.64
09:15	9648	16428	0.59	9941	16307	0.61
09:25	9159	16430	0.56	10723	16388	0.65
09:35	9270	16527	0.56	10560	16385	0.64
09:45	8999	16746	0.54	10092	16218	0.62
09:55	9253	16757	0.55	10391	16218	0.64
10:05	9133	16736	0.55	10073	16134	0.62
10:15	9358	16854	0.56	10009	16135	0.62
10:25	9227	16832	0.55	10392	16152	0.64
10:35	9977	16882	0.59	10040	16122	0.62
11:40	9275	16952	0.55	10115	16012	0.63
11:50	8881	16918	0.52	9914	16091	0.62
12:20	8692	17009	0.51	10119	15733	0.64
12:30	8679	17186	0.50	10088	15870	0.64
12:40	8727	17013	0.51	10096	16037	0.63
12:50	8696	16980	0.51	10028	15961	0.63
13:00	9161	17366	0.53	9940	15881	0.63
13:10	8779	17165	0.51	10072	16178	0.62
13:20	8880	17218	0.52	9511	15979	0.60
13:30	9000	17150	0.52	10209	15999	0.64
13:40	8583	17132	0.50	10572	15925	0.66
13:50	8607	17067	0.50	10370	15996	0.65
14:00	8840	17188	0.52	9923	16039	0.62
15:53	8862	17134	0.52	10000	16108	0.62
16:03	8981	17189	0.52	10291	15914	0.65
16:13	9030	17292	0.52	10146	16132	0.63
16:33	8978	17483	0.51	10393	15830	0.66
16:43	9360	17297	0.54	10211	16011	0.64
16:53	8832	17130	0.52	10462	16174	0.65
17:03	9274	17124	0.54	10285	16191	0.64
17:13	9616	17358	0.55	10671	16151	0.66
17:23	9153	17247	0.53	10378	16195	0.64
17:33	9284	17243	0.54	10235	16132	0.63
17:43	9377	17243	0.54	10189	16180	0.63
17:53	9194	17166	0.54	10398	16105	0.65

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
07:00	120. lb/hr	0. lb/hr	0. lb/hr	0.00	0.56
07:05	121.	0.	0.	0.00	0.56
07:10	121.	0.	0.	0.00	0.56
07:15	122.	0.	0.	0.00	0.56
07:20	121.	0.	0.	0.00	0.56
07:25	MMMMMM	MMMMMM	MMMMMM	MMMM	MMMM
07:30	122.	0.	0.	0.00	0.00
07:35	122.	0.	0.	0.00	0.00
07:40	122.	0.	0.	0.00	0.00
07:45	122.	0.	0.	0.00	0.00
07:50	169.	0.	0.	0.00	0.00
07:55	1410.	4344.	0.	0.12	0.00

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
07:00	0. lb/hr	0. lb/hr	0. lb/hr	0.00	0.50
07:05	0.	0.	0.	0.00	0.50
07:10	0.	0.	0.	0.00	0.50
07:15	0.	0.	0.	0.00	0.50
07:20	0.	0.	0.	0.00	0.50
07:25	MMMMMM	MMMMMM	MMMMMM	MMMM	MMMM
07:30	0.	0.	0.	0.00	0.00
07:35	0.	0.	0.	0.00	0.00
07:40	0.	0.	0.	0.00	0.00
07:45	0.	0.	0.	0.00	0.00
07:50	0.	0.	0.	0.00	0.00
07:55	745.	4104.	0.	0.07	0.00

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	OIL
08:00	6664. lb/hr	10960. lb/hr	0. lb/hr	0.61	0.00
08:05	6656.	11008.	0.	0.60	0.00
08:10	6672.	11056.	0.	0.60	0.00
08:15	6640.	11120.	0.	0.60	0.00
08:20	6624.	11168.	0.	0.59	0.00
08:25	6984.	11152.	0.	0.63	0.00
08:30	6816.	11152.	0.	0.61	0.00
08:35	6240.	10624.	0.	0.59	0.00
08:40	3472.	10416.	0.	0.33	0.00
08:45	7040.	10656.	0.	0.66	0.00
08:50	6848.	10624.	0.	0.64	0.00
08:55	6920.	10688.	0.	0.65	0.00

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	OIL
08:00	8288. lb/hr	10288. lb/hr	0. lb/hr	0.81	0.00
08:05	8976.	10336.	0.	0.87	0.00
08:10	8976.	10448.	0.	0.86	0.00
08:15	9200.	10464.	0.	0.88	0.00
08:20	9728.	10528.	0.	0.92	0.00
08:25	9552.	10512.	0.	0.91	0.00
08:30	9536.	10544.	0.	0.90	0.00
08:35	7720.	10016.	0.	0.76	0.00
08:40	8128.	10128.	0.	0.80	0.00
08:45	8168.	10160.	0.	0.80	0.00
08:50	8112.	10160.	0.	0.80	0.00
08:55	8160.	10208.	0.	0.80	0.00

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
09:00	6936. lb/hr	10672. lb/hr	0. lb/hr	0.65	0.00
09:05	7368.	10704.	0.	0.69	0.00
09:10	7048.	10688.	0.	0.66	0.00
09:15	7080.	10704.	0.	0.66	0.00
09:20	6912.	10736.	0.	0.64	0.00
09:25	6944.	10768.	0.	0.65	0.00
09:30	7032.	10736.	0.	0.65	0.00
09:35	7008.	10800.	0.	0.65	0.00
09:40	MMMMMM	MMMMMM	MMMMMM	MMMM	MMMM
09:45	7176.	10848.	0.	0.66	0.00
09:50	7144.	10848.	0.	0.66	0.00
09:55	5184.	10768.	0.	0.48	0.00

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
09:00	8112. lb/hr	10192. lb/hr	0. lb/hr	0.79	0.00
09:05	8288.	10208.	0.	0.81	0.00
09:10	8368.	10224.	0.	0.82	0.00
09:15	8272.	10240.	0.	0.81	0.00
09:20	8400.	10272.	0.	0.82	0.00
09:25	8368.	10304.	0.	0.81	0.00
09:30	8496.	10304.	0.	0.82	0.00
09:35	8912.	10384.	0.	0.86	0.00
09:40	MMMMMM	MMMMMM	MMMMMM	MMMM	MMMM
09:45	8592.	10400.	0.	0.83	0.00
09:50	6000.	10256.	0.	0.58	0.00
09:55	5120.	10224.	0.	0.50	0.00

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
10:00	4152. lb/hr	10720. lb/hr	0. lb/hr	0.39	0.00
10:05	3516.	10688.	0.	0.33	0.00
10:10	3508.	10720.	0.	0.33	0.00
10:15	3244.	10720.	0.	0.30	0.00
10:20	3364.	10688.	0.	0.31	0.00
10:25	3160.	10624.	0.	0.30	0.00
10:30	3312.	10624.	0.	0.31	0.00
10:35	3420.	10608.	0.	0.32	0.00
10:40	3248.	10624.	0.	0.31	0.00
10:45	3436.	10640.	0.	0.32	0.00
10:50	4856.	10704.	0.	0.45	0.00
10:55	4696.	10656.	0.	0.44	0.00

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
10:00	3648. lb/hr	10176. lb/hr	0. lb/hr	0.36	0.00
10:05	3152.	10160.	0.	0.31	0.00
10:10	3460.	10192.	0.	0.34	0.00
10:15	3788.	10224.	0.	0.37	0.00
10:20	3568.	10192.	0.	0.35	0.00
10:25	3548.	10096.	0.	0.35	0.00
10:30	3316.	10064.	0.	0.33	0.00
10:35	3432.	10112.	0.	0.34	0.00
10:40	3544.	10080.	0.	0.35	0.00
10:45	3344.	10080.	0.	0.33	0.00
10:50	3292.	10128.	0.	0.33	0.00
10:55	3272.	10096.	0.	0.32	0.00

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
11:00	4704. lb/hr	10688. lb/hr	0. lb/hr	0.44	0.00
11:05	4664.	10720.	0.	0.44	0.00
11:10	4760.	10736.	0.	0.44	0.00
11:15	5360.	10784.	0.	0.50	0.00
11:20	5816.	10816.	0.	0.54	0.00
11:25	5848.	10848.	0.	0.54	0.00
11:30	5832.	10864.	0.	0.54	0.00
11:35	5808.	10896.	0.	0.53	0.00
11:40	5920.	10896.	0.	0.54	0.00
11:45	5832.	10880.	0.	0.54	0.00
11:50	5944.	10896.	0.	0.54	0.00
11:55	5752.	10848.	0.	0.53	0.00

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
11:00	3336. lb/hr	10080. lb/hr	0. lb/hr	0.33	0.00
11:05	3180.	10128.	0.	0.31	0.00
11:10	3524.	10160.	0.	0.35	0.00
11:15	3524.	10176.	0.	0.35	0.00
11:20	3488.	10224.	0.	0.34	0.00
11:25	3420.	10272.	0.	0.33	0.00
11:30	3816.	10272.	0.	0.37	0.00
11:35	3472.	10288.	0.	0.34	0.00
11:40	3892.	10288.	0.	0.38	0.00
11:45	3564.	10272.	0.	0.35	0.00
11:50	3484.	10288.	0.	0.34	0.00
11:55	3628.	10224.	0.	0.35	0.00

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
12:00	5864. lb/hr	10784. lb/hr	0. lb/hr	0.54	0.00
12:05	5680.	10736.	0.	0.53	0.00
12:10	5408.	10752.	0.	0.50	0.00
12:15	4752.	10688.	0.	0.44	0.00
12:20	4464.	10720.	0.	0.42	0.00
12:25	4672.	10704.	0.	0.44	0.00
12:30	4536.	10704.	0.	0.42	0.00
12:35	4488.	10752.	0.	0.42	0.00
12:40	4536.	10752.	0.	0.42	0.00
12:45	4544.	10752.	0.	0.42	0.00
12:50	4600.	10784.	0.	0.43	0.00
12:55	4512.	10784.	0.	0.42	0.00

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
12:00	3800. lb/hr	10160. lb/hr	0. lb/hr	0.37	0.00
12:05	3592.	10128.	0.	0.35	0.00
12:10	3476.	10144.	0.	0.34	0.00
12:15	4392.	10192.	0.	0.43	0.00
12:20	4952.	10240.	0.	0.48	0.00
12:25	4944.	10240.	0.	0.48	0.00
12:30	4912.	10288.	0.	0.48	0.00
12:35	5096.	10304.	0.	0.49	0.00
12:40	4784.	10272.	0.	0.47	0.00
12:45	5136.	10288.	0.	0.50	0.00
12:50	5144.	10320.	0.	0.50	0.00
12:55	5048.	10368.	0.	0.49	0.00

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
13:00	4544. lb/hr	10784. lb/hr	0. lb/hr	0.42	0.00
13:05	4664.	10784.	0.	0.43	0.00
13:10	4480.	10768.	0.	0.42	0.00
13:15	4592.	10720.	0.	0.43	0.00
13:20	4576.	10704.	0.	0.43	0.00
13:25	4416.	10736.	0.	0.41	0.00
13:30	4576.	10768.	0.	0.42	0.00
13:35	4472.	10768.	0.	0.42	0.00
13:40	4616.	10800.	0.	0.43	0.00
13:45	4600.	10816.	0.	0.43	0.00
13:50	4464.	10816.	0.	0.41	0.00
13:55	4512.	10752.	0.	0.42	0.00

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
13:00	5064. lb/hr	10368. lb/hr	0. lb/hr	0.49	0.00
13:05	5256.	10368.	0.	0.51	0.00
13:10	5336.	10352.	0.	0.52	0.00
13:15	4832.	10304.	0.	0.47	0.00
13:20	5144.	10272.	0.	0.50	0.00
13:25	4888.	10304.	0.	0.47	0.00
13:30	4880.	10336.	0.	0.47	0.00
13:35	5232.	10368.	0.	0.50	0.00
13:40	5288.	10368.	0.	0.51	0.00
13:45	5072.	10384.	0.	0.49	0.00
13:50	5224.	10400.	0.	0.50	0.00
13:55	5040.	10336.	0.	0.49	0.00

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
14:00	4400. lb/hr	10736. lb/hr	0. lb/hr	0.41	0.00
14:05	4456.	10720.	0.	0.42	0.00
14:10	4656.	10672.	0.	0.44	0.00
14:15	4592.	10656.	0.	0.43	0.00
14:20	4464.	10640.	0.	0.42	0.00
14:25	4576.	10688.	0.	0.43	0.00
14:30	4968.	11248.	0.	0.44	0.00
14:35	4976.	11552.	0.	0.43	0.00
14:40	5016.	11712.	0.	0.43	0.00
14:45	5032.	11744.	0.	0.43	0.00
14:50	4992.	11776.	0.	0.42	0.00
14:55	5008.	11744.	0.	0.43	0.00

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
14:00	4848. lb/hr	10272. lb/hr	0. lb/hr	0.47	0.00
14:05	5048.	10272.	0.	0.49	0.00
14:10	4984.	10240.	0.	0.49	0.00
14:15	4784.	10176.	0.	0.47	0.00
14:20	4664.	10176.	0.	0.46	0.00
14:25	4744.	10240.	0.	0.46	0.00
14:30	6320.	10912.	0.	0.57	0.00
14:35	7432.	11184.	0.	0.67	0.00
14:40	8128.	11472.	0.	0.71	0.00
14:45	7840.	11488.	0.	0.68	0.00
14:50	8240.	11472.	0.	0.72	0.00
14:55	7712.	11504.	0.	0.67	0.00

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
15:00	5136. lb/hr	11712. lb/hr	0. lb/hr	0.44	0.00
15:05	5056.	11776.	0.	0.43	0.00
15:10	5080.	11808.	0.	0.43	0.00
15:15	5144.	11728.	0.	0.44	0.00
15:20	4816.	11712.	0.	0.41	0.00
15:25	4936.	11680.	0.	0.42	0.00
15:30	4880.	11696.	0.	0.42	0.00
15:35	4872.	11648.	0.	0.42	0.00
15:40	4832.	11664.	0.	0.41	0.00
15:45	4704.	11616.	0.	0.40	0.00
15:50	4880.	11664.	0.	0.42	0.00
15:55	5088.	11600.	0.	0.44	0.00

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
15:00	8072. lb/hr	11472. lb/hr	0. lb/hr	0.70	0.00
15:05	7864.	11520.	0.	0.68	0.00
15:10	7696.	11488.	0.	0.67	0.00
15:15	7576.	11440.	0.	0.66	0.00
15:20	7624.	11392.	0.	0.67	0.00
15:25	7512.	11344.	0.	0.66	0.00
15:30	7536.	11392.	0.	0.66	0.00
15:35	7352.	11312.	0.	0.65	0.00
15:40	7656.	11360.	0.	0.67	0.00
15:45	7472.	11328.	0.	0.66	0.00
15:50	7496.	11328.	0.	0.66	0.00
15:55	7552.	11344.	0.	0.67	0.00

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
16:00	4784. lb/hr	11616. lb/hr	0. lb/hr	0.41	0.00
16:05	5016.	11600.	0.	0.43	0.00
16:10	4792.	11568.	0.	0.41	0.00
16:15	4680.	11536.	0.	0.41	0.00
16:20	4896.	11600.	0.	0.42	0.00
16:25	4904.	11696.	0.	0.42	0.00
16:30	4968.	12128.	0.	0.41	0.00
16:35	4888.	12096.	0.	0.40	0.00
16:40	5912.	12128.	0.	0.49	0.00
16:45	6152.	12048.	0.	0.51	0.00
16:50	5992.	12000.	0.	0.50	0.00
16:55	6320.	12112.	0.	0.52	0.00

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
16:00	7232. lb/hr	11312. lb/hr	0. lb/hr	0.64	0.00
16:05	7480.	11328.	0.	0.66	0.00
16:10	7576.	11296.	0.	0.67	0.00
16:15	7376.	11280.	0.	0.65	0.00
16:20	7352.	11264.	0.	0.65	0.00
16:25	7864.	11760.	0.	0.66	0.00
16:30	12480.	13936.	0.	0.90	0.00
16:35	12608.	14112.	0.	0.89	0.00
16:40	12544.	13968.	0.	0.90	0.00
16:45	12208.	13936.	0.	0.88	0.00
16:50	12352.	13872.	0.	0.89	0.00
16:55	12288.	13872.	0.	0.89	0.00

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	OIL
17:00	6488. lb/hr	12288. lb/hr	0. lb/hr	0.53	0.00
17:05	6400.	12192.	0.	0.53	0.00
17:10	6576.	12224.	0.	0.54	0.00
17:15	6416.	12256.	0.	0.52	0.00
17:20	6536.	12128.	0.	0.54	0.00
17:25	6656.	12048.	0.	0.55	0.00
17:30	6584.	12080.	0.	0.54	0.00
17:35	6472.	12080.	0.	0.54	0.00
17:40	6368.	12064.	0.	0.53	0.00
17:45	6656.	12144.	0.	0.55	0.00
17:50	6688.	12176.	0.	0.55	0.00
17:55	6320.	12144.	0.	0.52	0.00

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	OIL
17:00	12400. lb/hr	13872. lb/hr	0. lb/hr	0.89	0.00
17:05	12272.	13776.	0.	0.89	0.00
17:10	12208.	13792.	0.	0.88	0.00
17:15	12304.	13872.	0.	0.89	0.00
17:20	12448.	13824.	0.	0.90	0.00
17:25	12224.	13616.	0.	0.90	0.00
17:30	12368.	13648.	0.	0.91	0.00
17:35	12240.	13712.	0.	0.89	0.00
17:40	12464.	13712.	0.	0.91	0.00
17:45	12224.	13776.	0.	0.89	0.00
17:50	12384.	13808.	0.	0.90	0.00
17:55	12720.	13888.	0.	0.92	0.00

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
18:00	6368. lb/hr	12144. lb/hr	0. lb/hr	0.52	0.00
18:05	6480.	12144.	0.	0.53	0.00
18:10	6688.	12256.	0.	0.55	0.00
18:15	7528.	13648.	0.	0.55	0.00
18:20	8560.	15360.	0.	0.56	0.00
18:25	8688.	15232.	0.	0.57	0.00
18:30	8880.	15232.	0.	0.58	0.00
18:35	8960.	15040.	0.	0.60	0.00
18:40	8768.	14848.	0.	0.59	0.00
18:45	8512.	14832.	0.	0.57	0.00
18:50	8896.	14832.	0.	0.60	0.00
18:55	9040.	14784.	0.	0.61	0.00

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
18:00	12416. lb/hr	13920. lb/hr	0. lb/hr	0.89	0.00
18:05	12656.	13904.	0.	0.91	0.00
18:10	12432.	14096.	0.	0.88	0.00
18:15	12128.	14480.	0.	0.84	0.00
18:20	12000.	14416.	0.	0.83	0.00
18:25	12112.	14512.	0.	0.83	0.00
18:30	12272.	14624.	0.	0.84	0.00
18:35	12416.	14736.	0.	0.84	0.00
18:40	12432.	14608.	0.	0.85	0.00
18:45	12112.	14608.	0.	0.83	0.00
18:50	12128.	14576.	0.	0.83	0.00
18:55	12320.	14576.	0.	0.85	0.00

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
19:00	8656. lb/hr	14656. lb/hr	0. lb/hr	0.59	0.00
19:05	8480.	14544.	0.	0.58	0.00
19:10	8816.	14560.	0.	0.61	0.00
19:15	8576.	14528.	0.	0.59	0.00
19:20	8432.	14528.	0.	0.58	0.00
19:25	8656.	14688.	0.	0.59	0.00
19:30	8768.	14800.	0.	0.59	0.00
19:35	8672.	14832.	0.	0.58	0.00
19:40	8544.	14816.	0.	0.58	0.00
19:45	8416.	14752.	0.	0.57	0.00
19:50	8896.	14848.	0.	0.60	0.00
19:55	8432.	14880.	0.	0.57	0.00

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
19:00	12224. lb/hr	14592. lb/hr	0. lb/hr	0.84	0.00
19:05	12384.	14560.	0.	0.85	0.00
19:10	12352.	14528.	0.	0.85	0.00
19:15	12240.	14544.	0.	0.84	0.00
19:20	12288.	14512.	0.	0.85	0.00
19:25	12208.	14624.	0.	0.84	0.00
19:30	12256.	14800.	0.	0.83	0.00
19:35	12144.	14688.	0.	0.83	0.00
19:40	12336.	14624.	0.	0.84	0.00
19:45	12224.	14656.	0.	0.83	0.00
19:50	12576.	14704.	0.	0.86	0.00
19:55	12416.	14736.	0.	0.84	0.00

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
20:00	8368. lb/hr	14896. lb/hr	0. lb/hr	0.56	0.00
20:05	8336.	14880.	0.	0.56	0.00
20:10	8496.	14800.	0.	0.57	0.00
20:15	8400.	14640.	0.	0.57	0.00
20:20	8352.	14624.	0.	0.57	0.00
20:25	8608.	14576.	0.	0.59	0.00
20:30	8352.	14560.	0.	0.57	0.00
20:35	8336.	14592.	0.	0.57	0.00
20:40	8528.	14640.	0.	0.58	0.00
20:45	8496.	14672.	0.	0.58	0.00
20:50	8384.	14624.	0.	0.57	0.00
20:55	8576.	14560.	0.	0.59	0.00

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
20:00	12304. lb/hr	14784. lb/hr	0. lb/hr	0.83	0.00
20:05	12304.	14720.	0.	0.83	0.00
20:10	12368.	14640.	0.	0.84	0.00
20:15	12336.	14512.	0.	0.85	0.00
20:20	12368.	14544.	0.	0.85	0.00
20:25	12256.	14528.	0.	0.84	0.00
20:30	12304.	14512.	0.	0.85	0.00
20:35	12496.	14512.	0.	0.86	0.00
20:40	12384.	14576.	0.	0.85	0.00
20:45	12096.	14592.	0.	0.83	0.00
20:50	12128.	14576.	0.	0.83	0.00
20:55	12240.	14464.	0.	0.85	0.00

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
21:00	8784. lb/hr	14592. lb/hr	0. lb/hr	0.60	0.00
21:05	8512.	14560.	0.	0.58	0.00
21:10	6568.	11584.	0.	0.57	0.00
21:15	6760.	11616.	0.	0.58	0.00
21:20	6800.	11568.	0.	0.59	0.00
21:25	6664.	11600.	0.	0.57	0.00
21:30	6456.	11504.	0.	0.56	0.00
21:35	6568.	11232.	0.	0.58	0.00
21:40	6736.	11200.	0.	0.60	0.00
21:45	6640.	11168.	0.	0.59	0.00
21:50	6328.	11184.	0.	0.57	0.00
21:55	4952.	8736.	0.	0.56	0.00

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
21:00	12288. lb/hr	14448. lb/hr	0. lb/hr	0.85	0.00
21:05	12272.	14544.	0.	0.84	0.00
21:10	10672.	12960.	0.	0.82	0.00
21:15	9024.	11440.	0.	0.79	0.00
21:20	8880.	11408.	0.	0.78	0.00
21:25	9088.	11408.	0.	0.80	0.00
21:30	8256.	11168.	0.	0.74	0.00
21:35	6072.	10416.	0.	0.58	0.00
21:40	5944.	10448.	0.	0.57	0.00
21:45	6040.	10448.	0.	0.58	0.00
21:50	5976.	10416.	0.	0.57	0.00
21:55	4560.	8128.	0.	0.53	0.00

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
07:00	93. lb/hr	0. lb/hr	0. lb/hr	0.52	0.00
07:05	93.	0.	0.	0.52	0.00
07:10	93.	0.	0.	0.52	0.00
07:15	94.	0.	0.	0.52	0.00
07:20	94.	0.	0.	0.52	0.00
07:25	94.	0.	0.	0.52	0.00
07:30	94.	0.	0.	0.52	0.00
07:35	95.	0.	0.	0.52	0.00
07:40	95.	0.	0.	0.52	0.00
07:45	157.	0.	0.	0.52	0.00
07:50	154.	0.	0.	0.52	0.00
07:55	4416.	0.	10480.	0.00	0.42

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
07:00	402. lb/hr	0. lb/hr	0. lb/hr	0.42	0.00
07:05	402.	0.	0.	0.42	0.00
07:10	403.	0.	0.	0.42	0.00
07:15	403.	0.	0.	0.42	0.00
07:20	403.	0.	0.	0.42	0.00
07:25	404.	0.	0.	0.42	0.00
07:30	408.	0.	0.	0.42	0.00
07:35	409.	0.	0.	0.42	0.00
07:40	411.	0.	0.	0.42	0.00
07:45	703.	0.	0.	0.42	0.00
07:50	747.	0.	0.	0.42	0.00
07:55	4544.	0.	10448.	0.00	0.43

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
08:00	5576. lb/hr	0. lb/hr	10704. lb/hr	0.00	0.52
08:05	5592.	0.	10352.	0.00	0.54
08:10	5512.	0.	10368.	0.00	0.53
08:15	5984.	0.	10432.	0.00	0.57
08:20	6280.	0.	10464.	0.00	0.60
08:25	4688.	0.	10320.	0.00	0.45
08:30	4664.	0.	10336.	0.00	0.45
08:35	4904.	0.	10400.	0.00	0.47
08:40	4824.	0.	10416.	0.00	0.46
08:45	4704.	0.	10448.	0.00	0.45
08:50	4704.	0.	10496.	0.00	0.45
08:55	4648.	0.	10496.	0.00	0.44

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
08:00	5480. lb/hr	0. lb/hr	10656. lb/hr	0.00	0.51
08:05	4800.	0.	10272.	0.00	0.47
08:10	4568.	0.	10368.	0.00	0.44
08:15	4560.	0.	10336.	0.00	0.44
08:20	3384.	0.	10224.	0.00	0.33
08:25	4680.	0.	10320.	0.00	0.45
08:30	5112.	0.	10384.	0.00	0.49
08:35	5272.	0.	10448.	0.00	0.50
08:40	5160.	0.	10432.	0.00	0.49
08:45	5576.	0.	10496.	0.00	0.53
08:50	5640.	0.	10624.	0.00	0.53
08:55	6080.	0.	10704.	0.00	0.57

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
09:00	4016. lb/hr	0. lb/hr	10336. lb/hr	0.00	0.39
09:05	4168.	0.	10368.	0.00	0.40
09:10	4128.	0.	10352.	0.00	0.40
09:15	4376.	0.	10368.	0.00	0.42
09:20	4080.	0.	10352.	0.00	0.39
09:25	4296.	0.	10368.	0.00	0.41
09:30	4152.	0.	10416.	0.00	0.40
09:35	4312.	0.	10464.	0.00	0.41
09:40	4208.	0.	10448.	0.00	0.40
09:45	4136.	0.	10448.	0.00	0.40
09:50	4184.	0.	10464.	0.00	0.40
09:55	4092.	0.	10432.	0.00	0.39

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
09:00	6296. lb/hr	0. lb/hr	10640. lb/hr	0.00	0.59
09:05	6312.	0.	10640.	0.00	0.59
09:10	6280.	0.	10624.	0.00	0.59
09:15	6392.	0.	10656.	0.00	0.60
09:20	6248.	0.	10672.	0.00	0.59
09:25	5976.	0.	10672.	0.00	0.56
09:30	6048.	0.	10720.	0.00	0.56
09:35	6424.	0.	10704.	0.00	0.60
09:40	6320.	0.	10688.	0.00	0.59
09:45	6720.	0.	10704.	0.00	0.63
09:50	6696.	0.	10736.	0.00	0.62
09:55	6176.	0.	10736.	0.00	0.58

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
10:00	4160. lb/hr	0. lb/hr	10416. lb/hr	0.00	0.40
10:05	4104.	0.	10480.	0.00	0.39
10:10	4296.	0.	10496.	0.00	0.41
10:15	4328.	0.	10432.	0.00	0.41
10:20	4272.	0.	10544.	0.00	0.40
10:25	4184.	0.	10528.	0.00	0.40
10:30	4496.	0.	10528.	0.00	0.43
10:35	4352.	0.	10592.	0.00	0.41
10:40	4208.	0.	10560.	0.00	0.40
10:45	4080.	0.	10544.	0.00	0.39
10:50	4120.	0.	10560.	0.00	0.39
10:55	4096.	0.	10528.	0.00	0.39

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
10:00	6552. lb/hr	0. lb/hr	10704. lb/hr	0.00	0.61
10:05	6704.	0.	10736.	0.00	0.62
10:10	6560.	0.	10752.	0.00	0.61
10:15	6616.	0.	10864.	0.00	0.61
10:20	6088.	0.	10784.	0.00	0.56
10:25	6424.	0.	10864.	0.00	0.59
10:30	7016.	0.	10864.	0.00	0.65
10:35	6920.	0.	10848.	0.00	0.64
10:40	6848.	0.	10800.	0.00	0.63
10:45	6512.	0.	10768.	0.00	0.60
10:50	6576.	0.	10848.	0.00	0.61
10:55	6856.	0.	10864.	0.00	0.63

8/9/91

GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
12:00	4064. lb/hr	0. lb/hr	10448. lb/hr	0.00	0.39
12:05	4144.	0.	10448.	0.00	0.40
12:10	4240.	0.	10496.	0.00	0.40
12:15	4336.	0.	10784.	0.00	0.40
12:20	4784.	0.	11536.	0.00	0.41
12:25	4616.	0.	11552.	0.00	0.40
12:30	4680.	0.	11584.	0.00	0.40
12:35	4632.	0.	11632.	0.00	0.40
12:40	4624.	0.	11600.	0.00	0.40
12:45	5120.	0.	11728.	0.00	0.44
12:50	5160.	0.	11744.	0.00	0.44
12:55	5112.	0.	11696.	0.00	0.44

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
12:00	6368. lb/hr	0. lb/hr	10768. lb/hr	0.00	0.59
12:05	6360.	0.	10832.	0.00	0.59
12:10	6576.	0.	10880.	0.00	0.60
12:15	5848.	0.	8640.	0.00	0.64
12:20	1802.	0.	307.	0.00	0.83
12:25	3528.	0.	11840.	0.00	0.30
12:30	10176.	0.	13168.	0.00	0.77
12:35	10704.	0.	13488.	0.00	0.79
12:40	10688.	0.	13600.	0.00	0.79
12:45	8896.	0.	13328.	0.00	0.67
12:50	8784.	0.	13296.	0.00	0.66
12:55	8832.	0.	13328.	0.00	0.66

8/9/91

GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
13:00	5280. lb/hr	0. lb/hr	11760. lb/hr	0.00	0.45
13:05	5616.	0.	11952.	0.00	0.47
13:10	5256.	0.	12000.	0.00	0.44
13:15	5232.	0.	11952.	0.00	0.44
13:20	5600.	0.	12016.	0.00	0.47
13:25	5576.	0.	12016.	0.00	0.46
13:30	5896.	0.	12016.	0.00	0.49
13:35	5520.	0.	12048.	0.00	0.46
13:40	3376.	0.	7248.	0.00	0.48
13:45	0.	0.	0.	0.00	0.50
13:50	0.	0.	0.	0.00	0.50
13:55	0.	0.	0.	0.00	0.50

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
13:00	3192. lb/hr	0. lb/hr	0. lb/hr	0.00	0.70
13:05	4272.	0.	10144.	0.00	0.45
13:10	7376.	0.	12208.	0.00	0.60
13:15	7200.	0.	12272.	0.00	0.59
13:20	1562.	0.	0.	0.00	0.56
13:25	1746.	0.	0.	0.00	0.56
13:30	1820.	0.	0.	0.00	0.56
13:35	1502.	0.	0.	0.00	0.56
13:40	1096.	0.	0.	0.00	0.56
13:45	0.	0.	0.	0.00	0.56
13:50	0.	0.	0.	0.00	0.56
13:55	0.	0.	0.	0.00	0.56

8/9/91

GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
14:00	0. lb/hr	0. lb/hr	0. lb/hr	0.00	0.50
14:05	0.	0.	0.	0.00	0.50
14:10	0.	0.	0.	0.00	0.50
14:15	0.	0.	0.	0.00	0.50
14:20	0.	0.	0.	0.00	0.50
14:25	0.	0.	0.	0.00	0.50
14:30	0.	0.	0.	0.00	0.50
14:35	0.	0.	0.	0.00	0.50
14:40	0.	0.	0.	0.00	0.50
14:45	0.	0.	0.	0.00	0.50
14:50	0.	0.	0.	0.00	0.50
14:55	0.	0.	0.	0.00	0.50

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
14:00	0. lb/hr	0. lb/hr	0. lb/hr	0.00	0.56
14:05	0.	0.	0.	0.00	0.56
14:10	0.	0.	0.	0.00	0.56
14:15	0.	0.	0.	0.00	0.56
14:20	0.	0.	0.	0.00	0.56
14:25	0.	0.	0.	0.00	0.56
14:30	0.	0.	0.	0.00	0.56
14:35	0.	0.	0.	0.00	0.56
14:40	0.	0.	0.	0.00	0.56
14:45	0.	0.	0.	0.00	0.56
14:50	0.	0.	0.	0.00	0.56
14:55	0.	0.	0.	0.00	0.56

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
15:00	0. lb/hr	0. lb/hr	0. lb/hr	0.00	0.50
15:05	0.	0.	0.	0.00	0.50
15:10	0.	0.	0.	0.00	0.50
15:15	0.	0.	0.	0.00	0.50
15:20	0.	0.	0.	0.00	0.50
15:25	0.	0.	0.	0.00	0.50
15:30	0.	0.	0.	0.00	0.50
15:35	0.	0.	0.	0.00	0.50
15:40	0.	0.	0.	0.00	0.50
15:45	2068.	0.	6776.	0.00	0.38
15:50	5024.	0.	11600.	0.00	0.43
15:55	5216.	0.	11568.	0.00	0.45

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
15:00	0. lb/hr	0. lb/hr	0. lb/hr	0.00	0.56
15:05	0.	0.	0.	0.00	0.56
15:10	0.	0.	0.	0.00	0.56
15:15	0.	0.	0.	0.00	0.56
15:20	0.	0.	0.	0.00	0.56
15:25	0.	0.	0.	0.00	0.56
15:30	0.	0.	0.	0.00	0.56
15:35	0.	0.	0.	0.00	0.56
15:40	0.	0.	0.	0.00	0.56
15:45	3224.	0.	7656.	0.00	0.48
15:50	9552.	0.	13280.	0.00	0.72
15:55	9440.	0.	13216.	0.00	0.71

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
16:00	4728. lb/hr	0. lb/hr	11552. lb/hr	0.00	0.41
16:05	4504.	0.	11472.	0.00	0.39
16:10	4584.	0.	11424.	0.00	0.40
16:15	4592.	0.	11488.	0.00	0.40
16:20	4504.	0.	11456.	0.00	0.39
16:25	4608.	0.	11504.	0.00	0.40
16:30	4376.	0.	11408.	0.00	0.38
16:35	5184.	0.	11472.	0.00	0.45
16:40	5160.	0.	11504.	0.00	0.45
16:45	4560.	0.	11424.	0.00	0.40
16:50	4392.	0.	11360.	0.00	0.39
16:55	4304.	0.	11408.	0.00	0.38

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
16:00	8976. lb/hr	0. lb/hr	13008. lb/hr	0.00	0.69
16:05	8208.	0.	12960.	0.00	0.63
16:10	8240.	0.	12912.	0.00	0.64
16:15	8016.	0.	12800.	0.00	0.63
16:20	8464.	0.	12832.	0.00	0.66
16:25	8016.	0.	12880.	0.00	0.62
16:30	0.	0.	12784.	0.00	0.64
16:35	7672.	0.	12720.	0.00	0.60
16:40	7664.	0.	12736.	0.00	0.60
16:45	8448.	0.	12768.	0.00	0.66
16:50	7832.	0.	12752.	0.00	0.61
16:55	7328.	0.	12576.	0.00	0.58

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GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
17:00	4536. lb/hr	0. lb/hr	11376. lb/hr	0.00	0.40
17:05	4376.	0.	11344.	0.00	0.39
17:10	4296.	0.	11328.	0.00	0.38
17:15	4168.	0.	11296.	0.00	0.37
17:20	4368.	0.	11392.	0.00	0.38
17:25	4416.	0.	11360.	0.00	0.39
17:30	4240.	0.	11328.	0.00	0.37
17:35	4336.	0.	11328.	0.00	0.38
17:40	4168.	0.	11328.	0.00	0.37
17:45	4424.	0.	11360.	0.00	0.39
17:50	4272.	0.	11328.	0.00	0.38
17:55	4256.	0.	11312.	0.00	0.38

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
17:00	7864. lb/hr	0. lb/hr	12528. lb/hr	0.00	0.63
17:05	6832.	0.	12480.	0.00	0.55
17:10	7296.	0.	12368.	0.00	0.59
17:15	7112.	0.	12352.	0.00	0.58
17:20	6880.	0.	12256.	0.00	0.56
17:25	7320.	0.	12208.	0.00	0.60
17:30	7080.	0.	12256.	0.00	0.58
17:35	7216.	0.	12224.	0.00	0.59
17:40	7336.	0.	12272.	0.00	0.60
17:45	7256.	0.	12352.	0.00	0.59
17:50	7792.	0.	12336.	0.00	0.63
17:55	7336.	0.	12208.	0.00	0.60

8/9/91

GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
18:00	4344. lb/hr	0. lb/hr	11296. lb/hr	0.00	0.38
18:05	4216.	0.	11280.	0.00	0.37
18:10	5184.	0.	14160.	0.00	0.37
18:15	5248.	0.	14096.	0.00	0.37
18:20	5920.	0.	14176.	0.00	0.42
18:25	6192.	0.	14128.	0.00	0.44
18:30	6120.	0.	14128.	0.00	0.43
18:35	6048.	0.	14112.	0.00	0.43
18:40	6344.	0.	14192.	0.00	0.45
18:45	6208.	0.	14144.	0.00	0.44
18:50	6096.	0.	14224.	0.00	0.43
18:55	6008.	0.	14160.	0.00	0.42

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
18:00	7088. lb/hr	0. lb/hr	12176. lb/hr	0.00	0.58
18:05	8208.	0.	13152.	0.00	0.61
18:10	10400.	0.	14176.	0.00	0.73
18:15	9920.	0.	14160.	0.00	0.70
18:20	9328.	0.	14032.	0.00	0.67
18:25	8528.	0.	13936.	0.00	0.61
18:30	8624.	0.	13952.	0.00	0.62
18:35	8912.	0.	14000.	0.00	0.64
18:40	8592.	0.	13920.	0.00	0.62
18:45	8560.	0.	13968.	0.00	0.61
18:50	8512.	0.	13984.	0.00	0.61
18:55	8560.	0.	13888.	0.00	0.62

8/9/91

GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
19:00	6120. lb/hr	0. lb/hr	14016. lb/hr	0.00	0.44
19:05	6176.	0.	14016.	0.00	0.44
19:10	6080.	0.	13984.	0.00	0.43
19:15	6144.	0.	13984.	0.00	0.44
19:20	6216.	0.	14000.	0.00	0.44
19:25	6280.	0.	14064.	0.00	0.45
19:30	5920.	0.	14064.	0.00	0.42
19:35	6144.	0.	14064.	0.00	0.44
19:40	6712.	0.	15712.	0.00	0.43
19:45	6712.	0.	15744.	0.00	0.43
19:50	6784.	0.	15728.	0.00	0.43
19:55	6848.	0.	15760.	0.00	0.43

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
19:00	8400. lb/hr	0. lb/hr	13744. lb/hr	0.00	0.61
19:05	8416.	0.	13792.	0.00	0.61
19:10	8288.	0.	13776.	0.00	0.60
19:15	8480.	0.	13792.	0.00	0.61
19:20	8368.	0.	13744.	0.00	0.61
19:25	8464.	0.	13760.	0.00	0.62
19:30	8352.	0.	13792.	0.00	0.61
19:35	8176.	0.	13824.	0.00	0.59
19:40	10416.	0.	16544.	0.00	0.63
19:45	10656.	0.	16768.	0.00	0.63
19:50	10592.	0.	16800.	0.00	0.63
19:55	10416.	0.	16768.	0.00	0.62

8/9/91

GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
20:00	6952. lb/hr	0. lb/hr	15760. lb/hr	0.00	0.44
20:05	6920.	0.	15792.	0.00	0.44
20:10	7016.	0.	15808.	0.00	0.44
20:15	6752.	0.	15776.	0.00	0.43
20:20	6952.	0.	15776.	0.00	0.44
20:25	7040.	0.	15808.	0.00	0.45
20:30	6792.	0.	15856.	0.00	0.43
20:35	6904.	0.	15824.	0.00	0.44
20:40	6736.	0.	15824.	0.00	0.43
20:45	6672.	0.	15856.	0.00	0.42
20:50	6984.	0.	15840.	0.00	0.44
20:55	6880.	0.	15840.	0.00	0.43

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
20:00	10384. lb/hr	0. lb/hr	16800. lb/hr	0.00	0.62
20:05	10528.	0.	16800.	0.00	0.63
20:10	10384.	0.	16800.	0.00	0.62
20:15	10560.	0.	16800.	0.00	0.63
20:20	10432.	0.	16800.	0.00	0.62
20:25	10592.	0.	16800.	0.00	0.63
20:30	10592.	0.	16832.	0.00	0.63
20:35	10672.	0.	16800.	0.00	0.63
20:40	10512.	0.	16832.	0.00	0.62
20:45	10528.	0.	16864.	0.00	0.63
20:50	10464.	0.	16832.	0.00	0.62
20:55	10480.	0.	16832.	0.00	0.62

8/9/91

GAS TURBINE OUTPUT DATA

UNIT #2, ENGINE 'A'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
21:00	6912. lb/hr	0. lb/hr	15856. lb/hr	0.00	0.44
21:05	6840.	0.	15840.	0.00	0.43
21:10	6960.	0.	15840.	0.00	0.44
21:15	6224.	0.	14432.	0.00	0.43
21:20	112.	0.	1228.	0.00	0.03
21:25	279.	0.	0.	0.00	0.03
21:30	303.	0.	0.	0.00	0.03
21:35	213.	0.	0.	0.00	0.03
21:40	307.	0.	0.	0.00	0.03
21:45	280.	0.	0.	0.00	0.03
21:50	150.	0.	0.	0.00	0.03
21:55	391.	0.	0.	0.00	0.03

UNIT #2, ENGINE 'B'

TIME	WATER FLOW	GAS FLOW	OIL FLOW	H2O/FUEL RATIO GAS	H2O/FUEL RATIO OIL
21:00	10464. lb/hr	0. lb/hr	16832. lb/hr	0.00	0.62
21:05	10416.	0.	16832.	0.00	0.62
21:10	10720.	0.	16832.	0.00	0.64
21:15	11040.	0.	15440.	0.00	0.76
21:20	403.	0.	1172.	0.00	0.19
21:25	2340.	0.	0.	0.00	0.19
21:30	2096.	0.	0.	0.00	0.19
21:35	2140.	0.	0.	0.00	0.19
21:40	2352.	0.	0.	0.00	0.19
21:45	2360.	0.	0.	0.00	0.19
21:50	1854.	0.	0.	0.00	0.19
21:55	1980.	0.	0.	0.00	0.19

ESTIC ATION

TURBINES

Limits	Test Loads		Water Injection Tank Level	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	Avg
			Corr. Load													
	87	46	Megawatts Indicator													
			Megawatts Integrator													
			Megavars													
	10	7														
	2.0	2.0	A.C. Kilowatts													
	12.7	13	A.C. Kilovolts													
60C Trip 230F	75	71	Gen Stator Temp													
Mils Trip 10 Mils	2.0	.9	A Vibration 1.													
Mils Trip 6 Mils	1.5	1.0	A Vibration 2.													
Mils Trip 3 Mils	1.2	1.1	A Vibration 3.													
Mils Trip 10 Mils	1.5	1.5	B Vibration 1.													
Mils Trip 6 Mils	1.0	1.0	B Vibration 2.													
Mils Trip 3 Mils	1.0	1.0	B Vibration 3.													
	0	0	A Gas Monitor Left													
	0	0	A Gas Monitor Right													
	0	0	B Gas Monitor Left													
	0	0	B Gas Monitor Right													
ic Material in																
lube oil system	OK	OK	Chip Detector	OK	OK	✓	—	—	—	—			OK			
			Absolute Pressure	28.80	28.80	28.80	28.80	28.80	28.78	28.74	28.74	28.74	28.72	28.70	28.70	
	81.3	84.0	A PT T	82.5	84.0	85.2	85	84.9	84	84.8	80	82.2	82.8	82.5		
	80.8	84.8	B PT T	78	84.5	84.3	84	85.8	83	82.4	80.5	82.3	82.8	82.9		
	19	19	D.C. Amps	19	20	20	20	20	16	16	16	16	16	16		
123V	130	130	D.C. Volts	135	135	135	135	135	135	135	135	135	135	135		
	99	96	Air Purge Regulator	1050	1040	1040	1040	1040	1040	1040	1040	1040	1040	1040		
75	480/490	470/485	Air Receiver Pressure	1040	1040	1040	1040	1040	1040	1040	1040	1040	1040	1040		
ow 220 psig Trip High 360 psig			Gas Pressure	294	294	294	294	294	294	294	294	290	290	290		
F Max 375 F			Gas Temperature	69	69	71	80	87	92	94	104	109	104	104		
5 psig Trip 1 psig			Oil Pressure													
			Oil Integrals		1054	1020	1020	1025	1025	1024						
15 psi	58	56	A GG Lube Oil Ftr. LP4	53	53	53	53	53	54	55	55	55	65	65		
5 psig Trip 30 psig	46	47	A GG Lube Oil Press LP1	44	44	44	44	44	45	45	45	44	46	46		
Trip 30 psig	46	45	A FT Lube Oil Press LP6	42	42	42	42	42	42	42	42	42	42	42		
3 psig Trip 10 psig	3	0	A GG Breather Press LP3	0	0	0	0	0	0	0	0	0	.3	.3		
3 psig Trip 10 psig	0	0	A FT Breather Press LP7	0	0	0	0	0	0	0	0	0	0	0		
15 psi	53.5	52	A FT Lube Oil Filtr. LP5	45	45	45	45	45	45	45	45	45	40	45		
15 psi	58.5	53	B GG Lube Oil Ftr LP4	57	57	57	57	57	57	53	53	53	57	53		
5 Trip 30 psig	46	44	B GG Lube Oil Press LP1	43	43	43	43	43	44	44	44	44	44	44		
Trip 30 psig	46.5	44	B FT Lube Oil Press LP6	43	43	43	43	43	43	43	43	43	43	43		
3 psig Trip 10 psig	3	0	B GG Breather Press LP3	0	0	0	0	0	0	0	0	.4	.4	.6		
3 psig Trip 10 psig	3	0	B FT Breather Press LP7	0	0	0	0	0	0	0	0	0	0	0		
15 psig	56	53	B FT Lube Oil Ftr LP5	52	51	51	51	53	53	53	53	52	52	52		
			A Water Injection G.P.M	125	10	105	43	95	15	14	18	23.5	24	24		
			B Water Injection G.P.M	13	10	8	9	4.5	16	16	20	21.0	25	25		
30 psig	25	23	Gen Lube Oil Press	30	30	30	30	30	30	30	30	30	30	30		
30 psig	46	46	Gen Lube Oil Press	45	45	45	45	45	45	45	45	45	46	46		
225 Trip 250	155	127	Gen Lube Oil Temperatu	145	150	150	152	153	155	156	158	160	160	161		

	A Oil Integrator	B Oil Integrator	A Engine Oper Time	A Max Peak	A Peak	A Liquid Fuel	A Liquid Max Peak	A Liquid Peak
WWW	Pre 235104	Pre	Pre 1325.7	Pre 32.1	Pre 411.4	Pre 67.7	Pre .3	Pre 17.8
994	For 1945551	For	For 1338.4	For 32.0	For 408.7	For 67.7	For .3	For 9.0
521	Dif 40553 ✓	Dif	Dif 11.8 ✓	Dif .1 ✓	Dif 2.7 ✓	Dif 11.0 ✓	Dif 0 ✓	Dif 2.6 ✓
403								
3,000 ✓	A Engine Counter	B Engine Counter	B Engine Oper Time	B Max Peak	B Peak	B Liquid Fuel	B Liquid Max Peak	B Liquid Peak
	Pre 806	Pre 780	Pre 1345.4	Pre 63.	Pre 412.1	Pre 78.9	Pre .2	Pre 11.8
	For 805	For 778	For 1334.3	For 63.	For 409.5	For 68.0	For .2	For 9.2
	Dif 1 ✓	Dif 2 ✓	Dif 11.1 ✓	Dif	Dif 2.6 ✓	Dif 10.9 ✓	Dif 0 ✓	Dif 2.6 ✓
722490								
722720	A Engine Fire	B Engine Fire						
170 ✓	Pre 655	Pre 675						
	For 653	For 672						
225863	Dif 2 ✓	Dif 3 ✓						
225842								

W.I. Tank Level
Pre 29'6"
For 29'6"
Dif -2"
✓

Time On
7:15 AM
✓

Time Off
6 PM
✓

12-8 Operator

8-12 Operator

8 Foreman

GAS TURBINES

Trip	Limits	Test Loads		Water Injection Tank Level	8 AM	9	10	11	12 M	1 PM	2	3	PM 4:00	PM 5:00	AM 6:00	PM 7:00	PM 8:00	Avg
				Corr. Load														
		87	46	Megawatts Indicator														
				Megawatts Integrator														
		10	2	Megavars														
		2.5	2.4	A.C. Kilowatts														
		12.7	10	A.C. Kilovolts														
860	Alarm 110C Trip 230F	78	71	Gen Stator Temp														
861	Alarm 5 Mils Trip 10 Mils	2.9	.8	A Vibration 1.														
862	Alarm 4 Mils Trip 8 Mils	1.5	1.0	A Vibration 2.														
863	Alarm 3 Mils Trip 3 Mils	1.2	1.1	A Vibration 3.														
864	Alarm 5 Mils Trip 10 Mils	1.5	1.0	B Vibration 1.														
865	Alarm 4 Mils Trip 8 Mils	1.4	1.5	B Vibration 2.														
866	Alarm 3 Mils Trip 3 Mils	1.0	1.0	B Vibration 3.														
		0	0	A Gen Bearing Left														
		0	0	A Gen Bearing Right														
		0	0	B Gen Bearing Left														
		0	0	B Gen Bearing Right														
	Megawatts Measured in engine lube oil system	0K	0K	Cold Reservoir														
				Absolute Pressure														
		81.3	84.0	A PT P														
		80.5	84.0	B PT P														
		10	10	D.C. Amps														
	Low 125V	136	135	D.C. Volts														
		90	89	Air Purge Regulator														
	Low 275	480/490	470/485	Air Header Pressure														
868	Trip Low 230 psig Trip High 350 psig			Gas Pressure														
	Min 200 Max 375 F			Gas Temperature														
	Alarm 5 psig Trip 1 psig			Oil Pressure														
				Oil Integrator														
	Alarm 15 psi	90	86	A Oil Lube Oil Flr. LP4														
869	T/A 43 psig Trip 30 psig	48	87	A Oil Lube Oil Press LP1														
869	Trip 30 psig	46	43	A FT Lube Oil Press LP6														
869	Alarm 3 psig Trip 10 psig	0	0	A Oil Breather Press LV3														
	Alarm 3 psig Trip 10 psig	0	0	A FT Breather Press LB7														
	Alarm 15 psi	83.0	82	A FT Lube Oil Flr- LP5														
	Alarm 15 psi	90.5	89	B Oil Lube Oil Flr LP4														
869	T/A 4.5 Trip 30 psig	46	44	B Oil Lube Oil Press LP1														
869	Trip 30 psig	46.5	44	B FT Lube Oil Press LP6														
869	Alarm 3 psig Trip 10 psig	3	0	B Oil Breather Press LV3														
	Alarm 3 psig Trip 10 psig	2	0	B FT Breather Press LB7														
	Alarm 15 psig	86	83	B FT Lube Oil Flr LP5														
				A Water Injection G.P.M														
				B Water Injection G.P.M														
	Trip 30 psig	38	33	Gen Lube Oil Press														
	Trip 30 psig	46	46	Gen Lube Oil Press														
	Alarm 220 Trip 250	150	127	Gen Lube Oil Temperate														

					A'	B'	C'	D'	E'	F'	G'	H'	I'	J'	K'	L'	M'	
					.30	.27	.28	.28	.26	.25	.25	.25	.25	.25	.25	.25	.25	
					11	11	11	11	11	11	11	11	11	11	11	11	11	
4/1/84					44,114	44,144	44,175	44,205	44,231	44,260	44,285	44,315	44,345	44,381	44,439	44,498	44,591	
					4	4	4	4	4	4	4	4	4	4	4	4	4	
					1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
					13	13	13	13	13	13	13	13	13	13	13	13	13	
					40	52	52	52	52	52	53		28	30	30	31	31	
					.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.1	.1	.1	
					.1	.0	.0	.0	.0	.1	.1	.1	.1	.1	.1	.1	.1	
					.3	.2	.2	.3	.2	.3	.3	.3	.4	.4	.3	.3	.3	
					.6	.6	.6	.6	.6	.6	.8	.8	1.2	1.0	1.1	1.1	1.1	
					.4	.4	.4	.5	.4	.6	.4	.4	.7	.6	.6	.6	.6	
					1.0	.9	.9	.8	.8	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.2	
					0	0	0	0	0	0	0	0	0	0	0	0	0	
					0	0	0	0	0	0	0	0	0	0	0	0	0	
					0	0	0	0	0	0	0	0	0	0	0	0	0	
					0	0	0	0	0	0	0	0	0	0	0	0	0	
					OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	
					28.30	28.31	28.31	28.31	28.30	28.31	28.31	28.31	28.32	28.31	28.34	28.30		
					38.5	37.1	37.1	36.8	36.0	40.5	43.5	42.8	58	577	57.8	57.8		
					36.5	37.9	38.0	37.3	37.0	41.3	43.5	40.4	57.4	57.5	57.1	58.5		
					No	No	No	No	No	No	No	No	15.2	15.6	15.1	15.6		
					135	135	135	135	135	135	135	136	125	125	125	125		
					20/60	20/60	20/60	20/60	20/60	20/60	20/60	20/60	60/60	20/60	20/60	20/60		
					480/480	480/480	480/480	480/480	480/480	480/480	480/480	480/480	480/480	480/480	480/480	480/480		
					240	240	240	240	240	240	240	240	250	250	235	230		
					70	71	73	73	73	73	71	73	73	73	72	72		
					53	53	53	53	53	52	52	52	55	55	55	55		
					44	44	44	44	44	45	45	45	46	46	46	46		
					43	43	43	43	43	43	45	45	43	43	43	43		
					0	0	0	0	0	1	1	1	1	1	1	1		
					.1	.1	0	0	0	0	0	0	0	0	0	0		
					46	45	45	45	46	46	45	45	43	45	45	45		
					53	52	52	52	52	53	53	53	57	57	53	57		
					43	43	43	43	43	43	43	43	44	46	44	44		
					44	43	43	43	43	43	43	43	44	43	43	43		
					.1	.1	.1	.1	.1	.0	.0	.0	.1	.1	.1	.1		
					0	0	0	0	0	0	0	0	0	0	0	0		
					53	53	53	53	53	53	53	53	57	53	53	53		
					12	6	6	6	6	10	10	15	19	12.5	11	13.5	12.5	
					14	8	7	7	9	11	11	14	18	18	17	18	17	
					30	30	30	30	30	30	30	30	30	30	30	30		
					45	45	45	45	45	45	45	45	45	45	45	45		
					122	128	127	130	130	132	128	128	160	160	158	160		

					N'	O'	P'	Q'	R'	S'	T'	U'	V'	W'	X'	Y'	Z'	
					.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	
					11	11	11	11	11	11	11	11	11	11	11	11	11	
					44,650	44,681	44,711	44,741	44,771	44,801	44,831	44,861	44,891	44,921	44,951	44,981	45,011	
					4	4	4	4	4	4	4	4	4	4	4	4	4	
					1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
					13	13	13	13	13	13	13	13	13	13	13	13	13	
					31	31	31	31	31	31	31	31	31	31	31	31	31	
					.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	
					.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	
					.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	
					1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
					.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	
					1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	
					0	0	0	0	0	0	0	0	0	0	0	0	0	
					0	0	0	0	0	0	0	0	0	0	0	0	0	
					0	0	0	0	0	0	0	0	0	0	0	0	0	
					0	0	0	0	0	0	0	0	0	0	0	0	0	
					OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	
					28.30	28.31	28.31	28.31	28.30	28.31	28.31	28.31	28.32	28.31	28.34	28.30		
					38.5	37.1	37.1	36.8	36.0	40.5	43.5	42.8	58	577	57.8	57.8		
					36.5	37.9	38.0	37.3	37.0	41.3	43.5	40.4	57.4	57.5	57.1	58.5		
					No	No	No	No	No	No	No	No	15.2	15.6	15.1	15.6		
					135	135	135	135	135	135	135	136	125	125	125	125		
					20/60	20/60	20/60	20/60	20/60	20/60	20/60	20/60	60/60	20/60	20/60	20/60		
					480/480	480/480	480/480	480/480	480/480	480/480	480/480	480/480	480/480	480/480	480/480	480/480		
					240	240	240	240	240	240	240	240	250	250	235	230		
					70	71	73	73	73	73	71	73	73	73	72	72		
					53	53	53	53	53	52	52	52	55	55	55	55		
					44	44	44	44	44	45	45	45	46	46	46	46		
					43	43	43	43	43	43	45	45	43	43	43	43		
					0	0	0	0	0	1	1	1	1	1	1	1		
					.1	.1	0	0	0	0	0	0	0	0	0	0		
					46	45	45	45	46	46	45	45	43	45	45	45		
					53	52	52	52	52	53	53	53	57	57	53	57		
					43	43	43	43	43	43	43	43	44	46	44	44		
					44	43	43	43	43	43	43	43	44	43	43	43		
					.1	.1	.1	.1	.1	.0	.0	.0	.1	.1	.1	.1		
					0	0	0	0	0	0	0	0	0	0	0	0		
					53	53	53	53	53	53	53	53	57	53	53	53		
					12	6	6	6	6	10	10	15	19	12.5	11	13.5	12.5	
					14	8	7	7	9	11	11	14	18	18	17	18	17	
					30	30	30	30	30	30	30	30	30	30	30	30		
					45	45	45	45	45	45	45	45	45	45	45	45		
					122	128	127	130	130	132	128	128	160	160	158	160		

Gen MWH	A Oil Integrator	B Oil Integrator	A Engine Oper Time	A Max Peak
Pre 46591	Pre	Pre 194551	Pre 1318.5	Pre 32.
For 46099	For 11	For 194551	For 1305.6	For 32.
Diff 492	Diff	Diff 0 ✓	Diff 12.9 ✓	Diff 0
E 1000				
TOT 492000 ✓				

A Engine Counter	B Engine Counter	B Engine Oper Time	B Max Peak
Pre 8065	Pre 778	Pre 1334.3	Pre 63.
For 8049	For 777	For 1321.5	For 62.
Diff 16 ✓	Diff 1 ✓	Diff 12.8 ✓	Diff 1

Gen Meter

A Engine Fire	B Engine Fire
Pre 653	Pre 672
For 652	For 671
Diff 1 ✓	Diff 1 ✓

Corr Pre 572320
For 565520
Diff 6750 ✓

Uncorr Pre 276347
For 272529

A Peak	A Liquid Fuel	A Liquid Max Peak	A Liquid Peak
Pre 408.7	Pre 56.7	Pre .3	Pre 9.2
For 404.5	For 56.7	For .3	For 9.2
Diff 4.2 ✓	Diff 0 ✓	Diff 0 ✓	Diff 0 ✓

B Peak	B Liquid Fuel	B Liquid Max Peak	B Liquid Peak
Pre 407.5	Pre 68.0	Pre .2	Pre 9.2
For 403.3	For 68.0	For .2	For 9.2
Diff 4.2 ✓	Diff 0 ✓	Diff 0 ✓	Diff 0 ✓

8-4 Operator SK

8-12 Operator

12-8 Operator

W.S. Tank Level
Pre 2'6½"
For 2'5½"
Diff 4¾"

Time On
7:20 AM ✓

Time Off
3 PM

SOUT POWER

GAS TURBINES

Trip	Limits	Test Loads		Water Injection Tank Level
				Corr. Load
		97	46	Megawatts Indicator
				Megawatts Integrator
				Megavars
		10	2	A.C. Kilowatts
		2.8	2.4	A.C. Kilovolts
		12.7	13	Gen Stator Temp
86B	Alarm 110C Trip 230F	75	71	A Vibration 1.
86E	Alarm 5 Mils Trip 10 Mils	2.0	.9	A Vibration 2.
86B	Alarm 4 Mils Trip 8 Mils	1.5	1.0	A Vibration 3.
86B	Alarm 3 Mils Trip 3 Mils	1.2	1.1	B Vibration 1.
86E	Alarm 5 Mils Trip 10 Mils	1.9	1.6	B Vibration 2.
86B	Alarm 4 Mils Trip 8 Mils	1.4	1.5	B Vibration 3.
86C	Alarm 3 Mils Trip 3 Mils	1.0	1.0	A Gen Monitor Left
		0	0	A Gen Monitor Right
		.4	0	B Gen Monitor Left
		0	0	B Gen Monitor Right
		0	0	
	Magnetic Material in engine lube oil system	OK	OK	Chip Detector
				Absolute Pressure
		81.5	84.0	A Pt 7
		90.5	84.5	B Pt 7
		10	10	D.C. Amps
	Low 123V	135	135	D.C. Volts
		85	85	Air Purge Regulator
	Low 275	400/430	470/485	Air Receiver Pressure
86E	Trip Low 220 psig Trip High 360 psig			Gen Pressure
	Min 20F Max 375 F			Gen Temperate
	Alarm 5 psig Trip 1 psig			Oil Pressure
				Oil Integrate
	Alarm 15 psi	58	56	A GG Lube Oil Flr. LP4
86B	T/A 4.5 psig Trip 30 psig	46	57	A GG Lube Oil Press LP1
86B	Trip 30 psig	46	49	A FT Lube Oil Press LP8
86E	Alarm 3 psig Trip 10 psig	.8	0	A GG Breather Press LV3
	Alarm 3 psig Trip 10 psig	0	0	A FT Breather Press LB7
	Alarm 15 psi	53.5	52	A FT Lube Oil Filt. LP5
	Alarm 15 psi	58.5	53	B GG Lube Oil Flr LP4
86B	T/A 4.5 Trip 30 psig	49	44	B GG Lube Oil Press LP1
86B	Trip 30 psig	46.5	44	B FT Lube Oil Press LP8
86E	Alarm 3 psig Trip 10 psig	.9	0	B GG Breather Press LV3
	Alarm 3 psig Trip 10 psig	.3	0	B FT Breather Press LB7
	Alarm 15 psig	55	53	B FT Lube Oil Flr LP5
				A Water Injection G.P.M
				B Water Injection G.P.M
	Trip 30 psig	28	23	Gen Lube Oil Press
	Trip 30 psig	48	48	Gen Lube Oil Press
	Alarm 225 Trip 250	150	127	Gen Lube Oil Temperate

	8	9	10	11	12A	1	2	3	4P	5P	6PM		Avg
	K1.	41	42"	K53	K3"	K11"	K8"	K7"					
	K	58	57	56	53	55	55	55	20				
	57	57	57	57	55	54	54	55	21				
22:21	K7.	K114	K371	K427	K474	K514	K574	K624	46311	K691			
	5		5	5	5	5	5	5	2				
	1.		1.	1.	1.	1.	15	15	1.1				
	.		.	.	.	13	13	13	13				
	7.	7	7	72	72	74	70	73	70				
	.	.	.5	.	1	1.	.2	.2	.2				
	.	.	.	.	.	.	.2	.2	.1				
	.	.	.	.	.	.	.0	.0	.1				
	.	1.	1.9	.	1	1.7	1.0	1.3	1.8				
	1.	1.	1.8	1.7	1.6	1.6	1.4	1.4	1.6				
	1.	1.	1.2	1.1	1.1	1.1	1.2	1.2	1.2				
	0	0	0	0	0	0	0	0	0				
	0	0	0	0	0	0	0	0	0				
	0	0	0	0	0	0	0	0	0				
	0	0	0	0	0	0	0	0	0				
	OK	OK	OK	OK	OK	OK	OK	OK					
	23.	22.	23.	23.	23.	23.	23.	23.	23.8				
	115						55	55	22				
	115		46.7		46.5	46.0	55.5	55.6	20				
	17		17	17	16	16	16	16	14				
	135	135	135	135	135	135	135	135	135				
	85	85	85	85	85	85	85	85					
	470	470	470	470	470	470	470	470					
	330	330	330	330	330	330	330	330					
	72	72	72	72	72	72	72	72					
	52	52	52	52	52	52	52	52					
	1450	1450	1450	1450	1450	1450	1450	1450					
	55	55	55	55	55	55	55	55					
	44	44	44	44	44	44	44	44					
	43	43	43	43	43	43	43	43					
	1	1	1	1	1	1	1	1					
	1	1	1	1	1	1	1	0					
	44	44	44	44	44	44	44	44					
	53	53	53	53	53	53	53	53					
	44	44	44	44	44	44	44	44					
	43	43	43	43	43	43	43	43					
	3	3	3	3	3	3	3	3					
	1	1	0	0	0	0	0	0					
	53	53	53	53	53	53	53	53					
	16	17	15	16	16	15	16	K					
	K	15	K	K	K	X	K	K					
	30	30	30	30	30	30	30	30					
	45	45	45	45	45	45	45	45					
	150	150	150	150	150	150	150	150					

Gen MWH
Pre 06099
For 05641
Dif 458

K 1000
101 158,000 ✓

Gen Meter

Corr Pre 565570
For 565570
Dif 0 ✓

Uncorr Pre 2172519
For 2172518
Dif 1 ✓

A Oil Integrator
Pre
For 4545.4
Dif 0 ✓

A Engine Counter
Pre 804
For 807
Dif 2 ✓

A Engine Hrs
Pre 652
For 630
Dif 2 ✓

B Oil Integrator
Pre 194551
For 152386
Dif 42165

B Engine Counter
Pre 777
For 775
Dif 2 ✓

B Engine Hrs
Pre 671
For 669
Dif 2 ✓

A Engine Oper Time
Pre 1305.6
For 1297.0
Dif 8.6 ✓

B Engine Oper Time
Pre 1321.3
For 1313.8
Dif 8.7 ✓

A Max Peak
Pre 32.
For 32.
Dif 0 ✓

B Max Peak
Pre 63.
For 63.
Dif 0 ✓

A Peak
Pre 404.2
For 396.1
Dif 8.4 ✓

B Peak
Pre 405.3
For 396.8
Dif 8.5 ✓

A Liquid Fuel
Pre 56.7
For 48.2
Dif 8.5 ✓

B Liquid Fuel
Pre 68.10
For 59.4
Dif 8.16 ✓

A Liquid Max Peak
Pre .3
For .3
Dif 0 ✓

B Liquid Max Peak
Pre .2
For .2
Dif 0 ✓

A Liquid Peak
Pre 9.2
For .7
Dif 8.5 ✓

B Liquid Peak
Pre 9.7
For .7
Dif 8.5 ✓

4-8 Operator
8. Supervisor SR

4-12 Operator
8. Supervisor

12-4 Operator
8. Super.

W.I. Tank Level
Pre 2513
For 2514
Dif 1 ✓

Time On
7:42 Am ✓

Time Off
4:05 Pm

GAS TURBINES

Trip	Limits	Test Loads		Water Injection Tank Level
				Corr. Load
		87	88	Megawatts Indicator
				Megawatts Integrator
		10	2	Megavars
		2.5	2.4	A.C. Kiloamps
		12.7	13	A.C. Kilovolts
86G	Alarm 110C Trip 230F	75	71	Gas Stator Temp
86E	Alarm 5 Mils Trip 10 Mils	2.0	.9	A Vibration 1.
86G	Alarm 4 Mils Trip 8 Mils	1.5	1.0	A Vibration 2.
86G	Alarm 3 Mils Trip 6 Mils	1.2	1.1	A Vibration 3.
86E	Alarm 5 Mils Trip 10 Mils	1.5	1.0	B Vibration 1.
86G	Alarm 4 Mils Trip 8 Mils	1.4	1.0	B Vibration 2.
86G	Alarm 3 Mils Trip 6 Mils	1.0	1.0	B Vibration 3.
		0	0	A Gas Monitor Left
		.4	0	A Gas Monitor Right
		0	0	B Gas Monitor Left
		0	0	B Gas Monitor Right
	Magnetic Material in engine lube oil system	OK	OK	Chip Detector
				Absolute Pressure
		81.3	84.0	A PT 7
		80.5	84.0	B PT 7
		10	10	G.E. Amps
	Low 122V	135	135	D.C. Volts
		88	86	Air Purge Regulator
	Low 375	465/490	470/485	Air Receiver Pressure
86E	Trip Low 330 psig Trip High 350 psig			Gas Pressure
	Min 200 Max 375 F			Gas Temperate
	Alarm 5 psig Trip 1 psig			Oil Pressure
				Oil Integrate
	Alarm 15 psi	86	86	A GG Lube Oil Ftr. LP6
86G	T/A 4.5 psig Trip 30 psig	48	87	A GG Lube Oil Press LP1
86G	Trip 30 psig	46	43	A FT Lube Oil Press LP6
86E	Alarm 3 psig Trip 10 psig	.5	0	A GG Breather Press LV3
	Alarm 3 psig Trip 10 psig	0	0	A FT Breather Press LB7
	Alarm 15 psi	83.5	82	A FT Lube Oil Ftr. LP1
	Alarm 15 psi	86.5	83	B GG Lube Oil Ftr LP6
86G	T/A 4.5 Trip 30 psig	49	44	B GG Lube Oil Press LP1
86G	Trip 30 psig	46.5	44	B FT Lube Oil Press LP6
86E	Alarm 3 psig Trip 10 psig	.5	0	B GG Breather Press LV3
	Alarm 3 psig Trip 10 psig	.2	0	B FT Breather Press LB7
	Alarm 15 psig	85	83	B FT Lube Oil Ftr LP1
				A Water Injection G.P.M
				B Water Injection G.P.M
	Trip 30 psig	28	23	Gas Lube Oil Press
	Trip 30 psig	48	48	Gas Lube Oil Press
	Alarm 225 Trip 250	188	127	Gas Lube Oil Temperate

	8 AM	9 AM	10 AM	11 AM	12 AM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	Avg.
	K		22K	22K4	22.1K	22.7K	22.5	22.1K	25.4K	25.6K	25.3K	25.2K	
	10	SI	SL	SL	SL	SL	SL	SL	35	58	45		
	21		SL	SL	SL	SL	SL	SL	59	59	43		
45V.D	4510	4511	4518	4521	4520	4525	4520	4526	4551K	4554K	4548K	4548K	
	5		5	5	5	5	6	6	4	4	6		
	1.1		2.1	1.5	2.1	2.5	2.1	2.1	2.6	2.5	2.4		
	11		11	11	11	11	11	11	1.5	1.2	1.3		
	82		82	82	83	80	83	82	93	83	80		
	0		.1	.1	.1	.1	.1	.1	.2	.2	.1		
	0		0	0	.1	.1	0	.1	.1	.1	.1		
	0		.8	.8	.1	.8	.8	.3	.2	.1.1	.1.3		
	1.1		1.1	1.1	1.2	1.2	1.3	1.1	1.2	1.1	1.8		
	.1		.8	.7	.7	.7	.7	.7	.8	.7	.7		
	1.1		1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.1		
	0		0	0	0	0	0	0	0	0	0		
	0		0	0	0	0	0	0	0	0	0		
	0		0	0	0	0	0	0	0	0	0		
	OK		OK	OK	OK	OK	OK	OK	OK	OK	OK		
	R90		R90	R90	R91	R91	R90	R90	27.9	28.4	28.3		
	45		45.0	45.0	45.5	45.5	45.5	45.9	59.0	58.2	59		
	45		45.5	45.8	46.0	46.0	45.4	45.4	60.0	60.0	45		
	14		14	14	14	14	14	14	15	15	15		
	135		135	135	135	135	135	135	133	133	133		
	87		87	87	87	87	87	87	87	87	87		
	470		470	470	470	470	470	470	470	470	470		
	470		470	470	470	470	470	470	470	470	470		
	210		210	210	210	210	210	210	210	210	210		
	73		73	73	73	73	73	73	73	73	73		
	55		55	55	55	55	55	55	53	53	53		
	46		46	46	46	46	46	46	46	46	46		
	42		42	43	43	43	43	43	43	43	43		
	0		.1	.1	.1	.1	.1	.1	.1	.1	.1		
	0		.1	.1	.1	0	.1	.1	0	0	0		
	45		45	45	45	45	45	45	45	45	45		
	54		53	54	54	54	54	54	54	54	54		
	44		44	44	44	44	44	44	44	44	44		
	43		43	43	43	43	43	43	43	43	43		
	0		.1	.1	.1	.1	.1	.1	.2	.2	.2		
	0		0	0	0	0	0	0	0	0	0		
	53		53	53	53	53	53	53	53	53	53		
	18		18	18	18	18	18	17	19	18	18		
	28		28	28	28	28	28	28	28	29	28		
	30		30	30	30	30	30	30	29	29	30		
	45		45	45	45	45	45	45	44	45	45		
	130		130	130	130	130	130	130	136	132	136		

Gas MWH
Pre 45641
For 45060
Dif 581
K 1000 581001
TOT

Gas Meter
Con Pre 565510
For 550040
Dif 7530
Uncon Pre 3745518
For 2633534
Dif 1111984

A Oil Integrator
Pre
For
Dif

A Engine Counter
Pre 802
For 801
Dif 1

A Engine Fire
Pre 650
For 649
Dif 1

B Oil Integrator
Pre
For 152386
Dif

B Engine Counter
Pre 775
For 774
Dif 1

B Engine Fire
Pre 669
For 668
Dif 1

A Engine Oper Time
Pre 1277.0
For 1285.7
Dif 11.3

B Engine Oper Time
Pre 1314.8
For 1301.6
Dif 11.2

A Max Peak
Pre 32.1
For 32.1
Dif

B Max Peak
Pre 6.5
For 6.3
Dif

A Peak
Pre 396.1
For 386.0
Dif 10.1

B Peak
Pre 396.8
For 386.7
Dif 10.1

A Liquid Fuel
Pre 49.4
For 48.2
Dif 0

B Liquid Fuel
Pre 39.4
For 39.4
Dif 0

A Liquid Max Peak
Pre .3
For .3
Dif 0

B Liquid Max Peak
Pre .2
For .2
Dif 0

A Liquid Peak
Pre .7
For .7
Dif 0

B Liquid Peak
Pre .7
For .7
Dif 0

W.I. Tank Level
Pre 95 2 5
For 92 4 4
Dif 2 5 6

Time On
7AM

Time Off
6:48 PM

4-12 Operator DG

12-8 Operator

8-4 Operator SK

GAS TURBINES

Trip	Limits	Test Loads		Water Injection Tank Level
				Corr. Load
		67	45	Megawatts Indicator
				Megawatts Integrator
				Megavars
		10	2	A.C. Kilowmps
		2.5	2.0	A.C. Kilovolts
		12.7	13	Gen Stator Temp
86G	Alarm 110C Trip 230F	75	71	A Vibration 1.
86E	Alarm 5 Mils Trip 10 Mils	2.0	.9	A Vibration 2.
86G	Alarm 4 Mils Trip 8 Mils	1.5	1.0	A Vibration 3.
86G	Alarm 2 Mils Trip 3 Mils	1.2	1.1	B Vibration 1.
86E	Alarm 5 Mils Trip 10 Mils	1.5	1.5	B Vibration 2.
86G	Alarm 4 Mils Trip 8 Mils	1.4	1.5	B Vibration 3.
86G	Alarm 2 Mils Trip 3 Mils	1.0	1.9	A Gas Monitor Left
		.5	0	A Gas Monitor Right
		.4	0	B Gas Monitor Left
		0	0	B Gas Monitor Right
		0	0	
	Magnetic Material in engine lube oil system	OK	OK	Chip Detector
				Absolute Pressure
		61.3	64.0	A PT 7
		60.5	64.5	B PT 7
		10	10	D.C. Amps
	Low 123V	135	135	D.C. Volts
		55	55	Air Purge Regulator
	Low 275	490/490	470/485	Air Receiver Pressure
86E	Trip Low 220 psig Trip High 350 psig			Gas Pressure
	Min 280 Max 375 F			Gas Temperate
	Alarm 5 psig Trip 1 psig			Oil Pressure
				Oil Integrate
	Alarm 15 psi	58	56	A GG Lube Oil Flw. LP4
86G	T/A 4.5 psig Trip 30 psig	48	57	A GG Lube Oil Press LP1
86G	Trip 30 psig	46	43	A FT Lube Oil Press LP8
86E	Alarm 3 psig Trip 10 psig	0	0	A GG Breather Press LV3
	Alarm 3 psig Trip 10 psig	0	0	A FT Breather Press LB7
	Alarm 15 psi	53.5	52	A FT Lube Oil Flw. LP
	Alarm 15 psi	58.5	53	B GG Lube Oil Flw LP4
86G	T/A 4.5 Trip 30 psig	48	44	B GG Lube Oil Press LP1
86G	Trip 30 psig	45.5	44	B FT Lube Oil Press LP8
86E	Alarm 3 psig Trip 10 psig	.9	0	B GG Breather Press LV3
	Alarm 3 psig Trip 10 psig	.2	0	B FT Breather Press LB7
	Alarm 15 psig	55	53	B FT Lube Oil Flw LP9
				A Water Injection G.P.M
				B Water Injection G.P.M
	Trip 35 psig	25	23	Gen Lube Oil Press
	Trip 30 psig	48	40	Gen Lube Oil Press
	Alarm 225 Trip 250	158	127	Gen Lube Oil Temperate

	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	9 AM Avg
	22"H"	22"	23"	23"	22"	22"	22"	22"	22"	
		6	27	29	24	29	33	14	0	
		35412	35429	35486	35497	35502	355	355	355	
		1.4	14	14	14	14				
		12.2	12.2	12.7	12.7	12.7				
		61	57	59	60	62				
		1.5	21	21	22	23				
		.5	.6	.5	.5	.4				
		.3	.2	.3	.5	.3				
		.4	.2	.5	.3	.2				
		.5	.3	.5	.3	.2				
		0	0	0	0	0				
		0	0	0	0	0				
		0	0	0	0	0				
		OK	OK	OK	OK	OK				
		2467	2469	2466	2471	2471				
		38	37	37	38	37				
		40	39	40	40	40				
		14.5	12.0	14	14	14				
		135	135	138	135	135				
		60	60	60	60	60				
		490	490	490	490	488				
		140	140	140	140	140				
		21	21	21	22	20				
		21	21	20	24	24				
		24927								
		57	57	57	57	0				
		47	47	47	47	47				
		45	45	45	45	45				
		0	0	0	0	0				
		0	0	0	0	0				
		53	53	53	53	53				
		57	57	57	57	57				
		44	44	44	44	44				
		46	46	46	46	46				
		0	0	0	0	0				
		0	0	0	0	0				
		51	51	54	54	54				
		11	12	12	12	12				
		10	12	12	13	11				
		28	25	25	24	25				
		38	37	37	38	35				
		130	140	140	140	135				

	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	9 PM Avg
	22"H"	22"	22"	22"	22"	22"	22"	22"	22"	
	33	14	0							
	355	355	355	355	355	355	355	355	355	

GAS TURBINES

Trip	Limits	Test Loads	Water Injection Tank Level
			Corr. Load
		57 46	Megawatts Indicator
			Megawatts Integrator
		10 2	Megavars
		2.5 2.4	A.C. Kiloamps
		12.7 13	A.C. Kilovolts
86G	Alarm 110C Trip 230F	75 71	Gen Stator Temp
86E	Alarm 5 Mils Trip 10 Mils	2.0 .9	A Vibration 1.
86G	Alarm 6 Mils Trip 5 Mils	1.5 1.0	A Vibration 2.
86G	Alarm 2 Mils Trip 3 Mils	1.2 1.1	A Vibration 3.
86E	Alarm 5 Mils Trip 10 Mils	1.5 1.5	B Vibration 1.
86G	Alarm 6 Mils Trip 5 Mils	1.4 1.5	B Vibration 2.
86C	Alarm 2 Mils Trip 3 Mils	1.0 1.0	B Vibration 3.
		0 0	A Gas Monitor Left
		0 0	A Gas Monitor Right
		0 0	B Gas Monitor Left
		0 0	B Gas Monitor Right
	Magnetic Material in		
	engine lube oil system	OK OK	Chip Detector
			Absolute Pressure
		81.3 84.0	A PT 7
		80.5 84.5	B PT 7
		10 10	D.C. Amps
	Low 123V	135 135	D.C. Volts
		55 56	Air Purge Regulator
	Low 270	490/490 470/485	Air Receiver Pressure
86E	Trip Low 220 psig Trip High 350 psig		Gas Pressure
	Min 200F Max 370 F		Gas Temperate
	Alarm 5 psig Trip 1 psig		Oil Pressure
			Oil Integrate
	Alarm 15 psi	56 56	A GG Lube Oil Filt. LP4
86G	T/A 4.5 psig Trip 30 psig	48 47	A GG Lube Oil Press LP1
86G	Trip 30 psig	46 43	A FT Lube Oil Press LP8
86E	Alarm 3 psig Trip 10 psig	.5 0	A GG Breather Press LV3
	Alarm 3 psig Trip 10 psig	0 0	A FT Breather Press LB7
	Alarm 15 psi	53.5 52	A FT Lube Oil Filt. LP8
	Alarm 15 psi	56.5 53	B GG Lube Oil Filt LP4
86G	T/A 4.5 Trip 30 psig	49 44	B GG Lube Oil Press LP1
86G	Trip 30 psig	45.5 44	B FT Lube Oil Press LP8
86E	Alarm 3 psig Trip 10 psig	.5 0	B GG Breather Press LV3
	Alarm 3 psig Trip 10 psig	.2 0	B FT Breather Press LB7
	Alarm 15 psig	55 53	B FT Lube Oil Filt LP8
			A Water Injection G.P.M
			B Water Injection G.P.M
	Trip 30 psig	28 23	Gen Lube Oil Press
	Trip 30 psig	40 40	Gen Lube Oil Press
	Alarm 225 Trip 250	150 127	Gen Lube Oil Temperate

| | | |

SOUTHWEST POWER STATION — CITY UTILITIES OF SPRINGFIELD, MISSOURI — Unit No. # 6 — DATE

GAS TURBINES

Trip	Limits	Test Leads		Water Injection Tank Level	9am	9am	10pm	11AM	12N	1pm	2pm	3pm	4pm	5pm
	Note # 1 Thru Reading at Filter Station			Corr. Load										
				Megawatts Indicator										
				Megawatts Integrator	33813									
				Megavars										
				A.C. Kiloamps										
				A.C. Kilovolts										
				Gen Stator Temp										
				A Vibration 1.										
				A Vibration 2.										
				A Vibration 3.										
				B Vibration 1.										
				B Vibration 2.										
				B Vibration 3.										
				A Gas Monitor Left										
				A Gas Monitor Right										
				B Gas Monitor Left										
				B Gas Monitor Right										
	Magnetic Material in engine lube oil system			Chip Detector										
				Absolute Pressure										
				A PT 1										
				B PT 1										
	Low 122V			D.C. Amps										
				D.C. Volts										
	Low 275			Air Purge Regulator										
	Trip Low 225 psig Trip High 360 psig			Air Receiver Pressure										
	Min 200F Max 375 F			Gas Pressure										
	Alarm 5 psig Trip 1 psig			Gas Temperate										
				Oil Pressure										
	Alarm 15 psi			Oil Integrate										
	T/A 4.5 psig Trip 30 psig			A GG Lube Oil Filt. LP										
	Trip 30 psig			A GG Lube Oil Press LP										
	Alarm 3 psig Trip 10 psig			A FT Lube Oil Press LP										
	Alarm 3 psig Trip 10 psig			A GG Breather Press LV										
	Alarm 15 psi			A FT Breather Press LB										
				A FT Lube Oil Filt. LPS										
	Alarm 15 psi			B GG Lube Oil Filt LPS										
	T/A 4.5 Trip 30 psig			B GG Lube Oil Press LP										
	Trip 30 psig			B FT Lube Oil Press LP										
	Alarm 3 psig Trip 10 psig			B GG Breather Press LV										
	Alarm 3 psig Trip 10 psig			B FT Breather Press LB										
	Alarm 15 psig			B FT Lube Oil Filt LPS										
				A Water Injection G.P.M										
				B Water Injection G.P.M										
	Trip 30 psig			Gen Lube Oil Press										
	Trip 30 psig			Gen Lube Oil Press										
	Alarm 225 Trip 250			Gen Lube Oil Temperate										

	8am	9am	10pm	11AM	12N	1pm	2pm	3pm	4pm	5pm
Water Injection Tank Level	29'10"	29'8"		29'6"	29'4"	29'2"	29'0"	28'10"	28'8"	28'6"
Corr. Load	45	40	40	54	54	49	49	50	50	50
Megawatts Indicator	36	43	42	43	42	43	43	43	43	43
Megawatts Integrator	33828	33868	33900	33940	33987	34040	34085	34145	34204	34263
Megavars	21	21	22	23	24	24	24	23	22	22
A.C. Kiloamps	22	24.5		24.5	24.3	25.0	24.5	24.5	24.4	24.4
A.C. Kilovolts	12.9	12.8		12.8	12.8	12.8	12.9	12.8	12.8	12.8
Gen Stator Temp	88	90		88	91	91	91	91	90	90
A Vibration 1.	1.4	.9		.7	.6	.7	.6	.7	.6	.6
A Vibration 2.	.6	.7		.6	.4	.4	.4	.4	.4	.4
A Vibration 3.	.4	.3		.3	.3	.3	.3	.4	.3	.3
B Vibration 1.	.1	1.4		1.3	1.3	1.3	1.4	1.4	1.4	1.4
B Vibration 2.	.4	.4		.3	.3	.3	.3	.2	.3	.2
B Vibration 3.	.3	.6		.6	.6	.6	.6	.6	.6	.6
A Gas Monitor Left	—	—		—	—	—	—	—	—	—
A Gas Monitor Right	—	—		—	—	—	—	—	—	—
B Gas Monitor Left	—	—		—	—	—	—	—	—	—
B Gas Monitor Right	—	—		—	—	—	—	—	—	—
Chip Detector	—	—		—	—	—	—	—	—	—
Absolute Pressure	28.9	28.9		28.91	28.90	28.9	28.89	28.86	28.84	28.83
A PT 1	54	54		55	54	55.5	55	55	55.5	55.5
B PT 1	56.5	57		55	55	54.5	54.5	54.5	54.3	54.5
D.C. Amps	17	16		16	16	16	16	16	16	15
D.C. Volts	135	135		135	135	135	135	135	135	135
Air Purge Regulator	60	60		60	60	60	60	60	55	55
Air Receiver Pressure	480	480		480	480	480	480	480	482	482
Gas Pressure	—	—								
Gas Temperate	—	—								
Oil Pressure	74	74		62	62	62	63	63	63	62
Oil Integrate	70497	73899		77321	80720	84120	87520	90920	94316	97716
A GG Lube Oil Filt. LP	57	57		58	58	58	58	58	58	58
A GG Lube Oil Press LP	48	48		48	48	48	48	48	48	48
A FT Lube Oil Press LP	45	45		45	45	45	45	45	45	45
A GG Breather Press LV	0	0		0	0	0	0	0	0	0
A FT Breather Press LB	0	0		0	0	0	0	0	0	0
A FT Lube Oil Filt. LPS	53	53		53	53	53	53	53	53	53
B GG Lube Oil Filt LPS	58	58		58	58	58	58	58	58	58
B GG Lube Oil Press LP	48	48		48	48	48	48	48	48	48
B FT Lube Oil Press LP	46	46		46	46	46	46	46	46	46
B GG Breather Press LV	0	0		0	0	0	0	0	0	0
B FT Breather Press LB	0	0		0	0	0	0	0	0	0
B FT Lube Oil Filt LPS	54	55		55	55	55	55	55	55	55
A Water Injection G.P.M	190	190		185	176	176	175	190	188	188
B Water Injection G.P.M	205	206		200	225	205	205	205	205	205
Gen Lube Oil Press	25	25		25	25	25	25	25	25	25
Gen Lube Oil Press	35	35		35	35	35	35	35	35	35
Gen Lube Oil Temperate	150	145		150	152	155	155	155	156	156

Gen MHW
Pre 34138
For 33913
Dif 515
K 1000
TOT 515000

Gas Meter
Corr Pre 30960
For 31060
Dif
Uncorr Pre 197397
For 197597

A Oil Integrator
Pre 217532
For 168961
Dif 48891

A Engine Counter
Pre 799
For 797
Dif 2

A Engine Fire
Pre 636
For 635
Dif 1

B Oil Integrator
Pre
For
Dif

B Engine Counter
Pre 830
For 828
Dif 2

B Engine Fire
Pre 690
For 689
Dif 1

A Engine Oper Time
Pre 1000.8
For 999.2
Dif 1.6

B Engine Oper Time
Pre 1004.7
For 994.1
10.6

A Max Peak
Pre 5.7
For 5.7
Dif

B Max Peak
Pre 4.5
For 4.5
Dif

A Peak
Pre 285.0
For 274.5
Dif 10.5

B Peak
Pre 285.5
For 275.1
Dif 10.4

A Liquid Fuel
Pre 71.3
For 70.7
Dif 10.6

B Liquid Fuel
Pre 76.2
For 65.6
Dif 10.6

A Liquid Max Peak
Pre .3
For .3
Dif

B Liquid Max Peak
Pre .3
For .3
Dif

A Liquid Peak
Pre 11.8
For .8
Dif 10.4

B Liquid Peak
Pre 11.2
For .8
Dif 10.4

W.I. Tank Level
Pre 29'10"
For 27'11"
Dif 2'5"

SOUTHWEST POWER STATION — CITY UTILITIES OF SPRINGFIELD, MISSOURI — Unit No. 2 — DATE 8-6 19 91

GAS TURBINES

Trip	Limits	Test Loads		8AM	9AM	10AM	11AM	12N	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM
				Water Injection Tank Level		23'6½	23'9"	23'9"	24'4"	24'8"	24'8"	25'1"	25'1"	25'1"	25'1"	25'1"	25'1"	25'1"	25'1"
				Corr. Load			12	48	49	49	48	49	49	49	49	49	49	49	49
				Megawatts Indicator			40	43	92	42	43	43	43	43	43	43	43	43	43
				Megawatts Integrator		33141	33141	33201	33251	33300	33350	33400	33450	33500	33550	33600	33650	33700	33750
				Megavars															
				A.C. Kilovamps			22	24	24	26	26	25	25	23	19	18	16	15	16
				A.C. Kilovolts			24	27	25	25.5	26	25.2	25.2	25.1	24	24	24	23.5	23.5
				Gen Stator Temp			12.8	12.8	12.8	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7
				A Vibration 1.			54	92	95	90	93	93	92	92	92	90	86	85	77
				A Vibration 2.			.9	1.1	.8	.8	.8	.8	.7	.8	.8	.8	.9	.9	.4
				A Vibration 3.			.4	.7	.7	.5	.5	.5	.5	.4	.5	.5	.5	.6	.4
				B Vibration 1.			.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3
				B Vibration 2.			.8	1.0	1.0	1.1	1.0	1.1	1.1	1.4	1.1	1.2	1.1	1.1	1.3
				B Vibration 3.			.4	.4	.3	.5	.3	.3	.3	.3	.3	.3	.3	.4	.3
				A Gas Monitor Left			.2	.2	.2	.4	.4	.4	.4	.5	.5	.5	.5	.5	.4
				A Gas Monitor Right			—	—	—	—	—	—	—	—	✓	✓	✓	✓	✓
				B Gas Monitor Left			—	—	—	—	—	—	—	—	✓	✓	✓	✓	✓
				B Gas Monitor Right			—	—	—	—	—	—	—	—	✓	✓	✓	✓	✓
	Magnetic Material in engine lube oil system			Chip Detector			✓	✓	✓	—	—	—	—	✓	✓	✓	✓	✓	✓
				Absolute Pressure															
				A PT 7			28.8	28.82	28.82	28.83	28.83	28.83	28.83	28.81	28.80	28.79	28.7	28.69	28.65
				B PT 7			57	54	54	54.3	54.5	54.5	54.5	53.5	54.2	54.4	55.2	54.9	54.4
				D.C. Amps			37	56.5	55	55	54.5	54	54.5	54	53.5	51.7	53.9	51.8	55.3
	Low 123V			D.C. Volts			14	15	15	15	15	15	15	15	15	15	15	15	15
							135	135	135	135	135	132	132	135	135	135	135	135	135
				Air Purge Regulator															
	Low 275			Air Receiver Pressure				480	480	480	60	60	60	60	52	53	53	53	53
BBE	Trip Low 320 psig Trip High 350 psig			Gas Pressure				480	480	480	480	480	480	480	480	480	480	480	480
	Min 200F Max 375 F			Gas Temperate			290	292	292	292	292	292	292	292	292	292	292	292	292
	Alarm 5 psig Trip 1 psig			Oil Pressure			72	71	72	72	72	72	72	72	72	72	72	72	72
				Oil Integrate															
	Alarm 10 psi			A GG Lube Oil Flo															
BBG	T/A 4.0 psig Trip 30 psig	58	58	A GG Lube Oil Pres			57	58	58	58	58	58	58	58	58	58	58	58	57
BBG	Trip 30 psig	46	57	A FT Lube Oil Pres			48	48	48	48	48	48	48	48	48	48	48	48	48
BBE	Alarm 3 psig Trip 10 psig	46	45	A GG Breather Pres			45	45	45	45	45	45	45	45	45	45	45	45	45
	Alarm 3 psig Trip 10 psig	0	0	A FT Breather Pres			0	0	0	0	0	0	0	0	0	0	0	0	0
	Alarm 10 psi	0	0	A FT Lube Oil Flo			0	0	0	0	.1	.1	.1	.1	.1	.2	.2	.2	.2
		53.5	52	A FT Lube Oil Flo LP9			53	53	53	53	53	53	53	53	53	53	53	53	53
	Alarm 10 psi																		
BBG	T/A 4.5 Trip 30 psig	46.5	53	B GG Lube Oil Flo LP6			58	58	58	58	58	58	58	58	58	58	58	58	58
BBG	Trip 30 psig	46	44	B GG Lube Oil Pres LP			48	48	48	48	48	48	48	48	48	48	48	48	48
BBG		45.5	44	B FT Lube Oil Pres LP			46	46	46	46	46	46	46	46	45	46	46	46	46
BBE	Alarm 3 psig Trip 10 psig	.5	0	B GG Breather Pres LV			.1	.1	.1	.1	.2	.3	.3	.3	.5	.5	.4	.4	.3
	Alarm 3 psig Trip 10 psig	.2	0	B FT Breather Pres LB			0	0	0	0	.1	.1	.1	.1	.2	.2	.2	.2	0
	Alarm 10 psig	55	53	B FT Lube Oil Flo LP9			52	52	52	55	55	55	55	55	55	55	55	55	55
				A Water Injection G			18.4	20	20.3	20.0	19.5	19.0	20.9	20.2	20	20	19	20.5	18.5
				B Water Injection G			24	21.2	24.4	24.4	24.1	24.0	24.0	23.9	24	24	24	24	24
	Trip 30 psig	26	23	Gen Lube Oil Press			25	25	25	25	25	25	25	25	25	26	26	26	25
	Trip 30 psig	48	48	Gen Lube Oil Press			35	35	35	35	35	35	35	35	34	35	35	35	35
	Alarm 225 Trip 250	150	127	Gen Lube Oil Temperate			130	140	148	139	152	152	154	153	158	157	154	152	150

Gen MWH
Pre 33813
For 33142
Dif 671
X 1000
TOT 671 000

Gas Meter
Corr Pre 39060
For 38270
Dif 790
Uncorr Pre 137597

A Oil Integrator
Pre 168161
For 168961
Dif 0

A Engine Counter
Pre 727
For 726
Dif 1

A Engine Hrs
Pre 1,335
For 1,337
Dif 1

B Oil Integrator
Pre
For
Dif

B Engine Counter
Pre 828
For 827
Dif 1

B Engine Hrs
Pre 1,687
For 1,688
Dif 1

A Engine Oper Time
Pre 979.2
For 984.9
Dif 14.5

B Engine Oper Time
Pre 979.1
For 979.6
Dif 14.5

A Max Peak
Pre 53.7
For 52.7
Dif 0

B Max Peak
Pre 17.5
For 16.5
Dif 0

A Peak
Pre 274.5
For 260.2
Dif 14.3

B Peak
Pre 275.1
For 260.4
Dif 14.3

A Liquid Fuel
Pre 46.7
For 46.7
Dif 0

B Liquid Fuel
Pre 45.6
For 45.6
Dif 0

A Liquid Max Peak
Pre .3
For .3
Dif 0

B Liquid Max Peak
Pre .3
For .3
Dif 0

A Liquid Peak
Pre .8
For .8
Dif 0

B Liquid Peak
Pre .8
For .8
Dif 0

W.I. Tank Level
Pre 27'7¼
For 23'6½
Dif 4'0¾"

Time On 7:59 AM

Time Off

Calibration of Test Equipment

Dry Gas Meter Calibration Sheet

Client Springfield Utilities — Run By J. S. TTaw

Project No. TE 91-126 — Date 7-9-91

Module 25-2 — Barometric Press 29.42

Orifice Middle

5 to P = .55

ΔH in. H_2O	Vw initial	Vw final	Vw ft.³	Vd initial	Vd final	Vd ft.³	tw °F	tdi °F	tdo °F	Pw in H_2O	Time Θ min.
.5	057.059	067.970	10.911	732.036	742.643	10.607	79	79	76	—	10 min
1.0	068.295	083.079	14.784	742.952	757.422	14.469	80	81	77	—	10 min
2.0	083.713	103.801	20.088	758.046	777.726	19.680	80	84	80	—	10 min
4.0	104.485	132.230	27.745	778.401	805.418	27.017	80	86	82	—	10 min
6.0	132.955	165.812	32.857	806.149	838.003	31.854	80	87	83	—	10 min

ΔH	ΔH / 13.6	Mc (Y) = Vw Pb (td + 460) / Vd (Pb + ΔH/13.6) (tw + 460)	ΔHa (For Small Orifice Only) = 0.0317 ΔH / Pb (td + 460) = (tw + 460) Θ² / Vw
.5	.0368	.98	
1.0	.0737	.98	
2.0	.147	.98	
4.0	.294	.98	
6.0	.441	.98	
Average		.98	

ΔH = Orfice Setting
Vw = Volume of Gas of Wet Test Meter
Vd = Volume of Gas of Dry Gas Meter
Pw = Pressure of Wet Test Meter
tw = Temperature of Fluid in Wet Test Meter
tdi = Inlet Temperature of Dry Gas Meter
tdo = Outlet Temperature of Dry Gas Meter
td = Average Temperature of Dry Gas Meter
Θ = Time required to pull specified cubic feet
Mc = Dry Gas Meter Correction Factor
ΔHa = Orfice setting that would pull .75 cfm of air at standard conditions

Total Source Analysis, Inc.
Environmental Testing Consultants

Dry Gas Meter Calibration Sheet

Client Springfield Utilities — Run By J. SUTTON

Project No. 91-126 — Date 7-9-91

Module 66-2 — Barometric Press 29.52

Orifice Middle

Sto P = .54

ΔH in. H_2O	Vw initial	Vw final	Vw ft.³	Vd initial	Vd final	Vd ft.³	tw °F	tdi °F	tdo °F	Pw in H_2O	Time Θ min.
.5	248.165	259.275	10.610	764.379	775.054	10.675	80	91	87		10 min
1.0	259.670	273.200	13.530	775.471	789.191	13.720	90	91	87		10 min
2.0	273.725	293.120	19.105	789.637	809.138	19.501	80	94	90		10 min
4.0	293.712	321.485	27.773	809.726	837.331	27.605	82	94	90		10 min
6.0	322.275	355.740	33.465	838.102	871.172	33.070	82	95	92		10 min

ΔH	ΔH / 13.6	Mc (Y) Vw Pb (td + 460) / Vd (Pb + ΔH/13.6) (tw + 460)	ΔHa (For Small Orifice Only) 0.0317 ΔH / Pb (td + 460)	(tw + 460) Θ² / Vw
.5	.0368	.99		
1.0	.0737	.99		
2.0	.147	.99		
4.0	.294	.99		
6.0	.441	.98		
Average		.99		

ΔH = Orifice Setting
Vw = Volume of Gas of Wet Test Meter
Vd = Volume of Gas of Dry Gas Meter
Pw = Pressure of Wet Test Meter
tw = Temperature of Fluid in Wet Test Meter
tdi = Inlet Temperature of Dry Gas Meter
tdo = Outlet Temperature of Dry Gas Meter
td = Average Temperature of Dry Gas Meter
Θ = Time required to pull specified cubic feet
Mc = Dry Gas Meter Correction Factor
ΔHa = Orifice setting that would pull .75 cfm of air at standard conditions

TSA
Total Source Analysis, Inc.
Environmental Testing Consultants

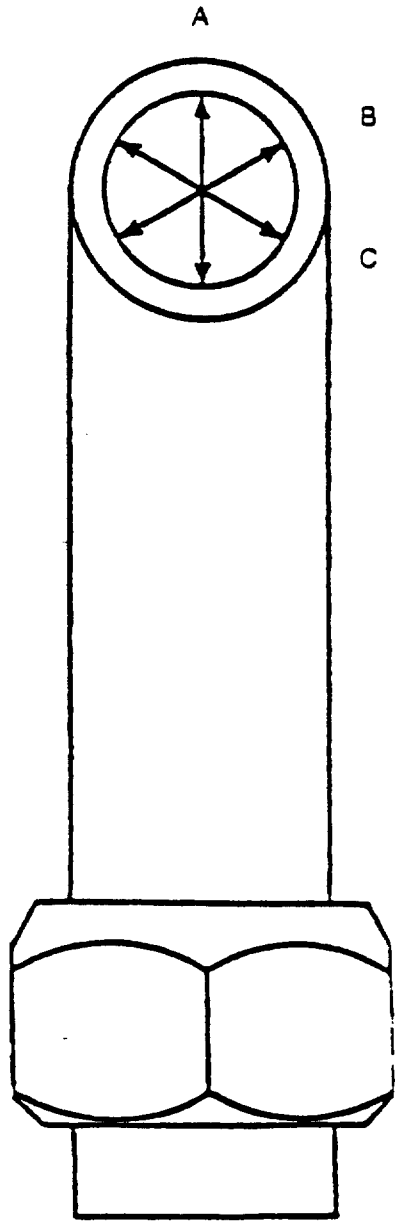
Nozzle Calibration

Sized By JOHN C SUTTON

AEROTHERM

Date	Nozzle	Dimension A	Dimension B	Dimension C	Difference	Avg. Diameter
7-9-91	1-1	.118	.118	.119	.001	.118
	1-2	.120	.121	.122	.002	.121
	1-3	.121	.122	.121	.001	.121
	1-4	.123	.122	.121	.002	.122
	1-5	.122	.123	.123	.001	.123
	1-6	.126	.125	.126	.001	.126
	1-7	.242	.242	.242	.000	.242
	1-8	.250	.250	.249	.001	.250
	1-9	.254	.252	.252	.002	.253
	1-10	.308	.309	.309	.001	.309
	1-11	.306	.306	.305	001	.306
	1-12	.309	.310	.310	.001	.310
	1-13	.310	.311	.310	.001	.310
	1-14	.311	.311	.309	.002	.310
	1-15	.311	.310	.312	002	311
	1-16	.310	.312	.310	.002	.311
	1-17	.310	.311	.312	.002	.311
	1-18	.311	.310	.311	.001	.311
	1-19	.312	312	312	000	312
	1-20	.314	.314	.315	001	.314
	1-21	.378	.380	.380	002	.380
	1-22	.498	.497	.496	002	.497
	1-23	.559	.560	.560	.001	.560
	1-24	.621	.623	622	002	.622
	1-25	626	.626	.626	.000	.626
	1-26	.629	.628	629	001	.629
	1-27	.659	.658	.658	.001	.658
	1-28	.725	.724	.725	.001	.725
	1-29	.750	.751	.750	001	.750
	1-30	.384	.385	.384	.001	.384
	1-31	.122	121	.122	001	.122
	1-32	.125	126	.126	001	.126
	1-33	249	248	250	.002	.249
	1-34	255	254	255	001	.255
	1-35	.311	.312	.313	002	.312

All Dimensions are in inches.



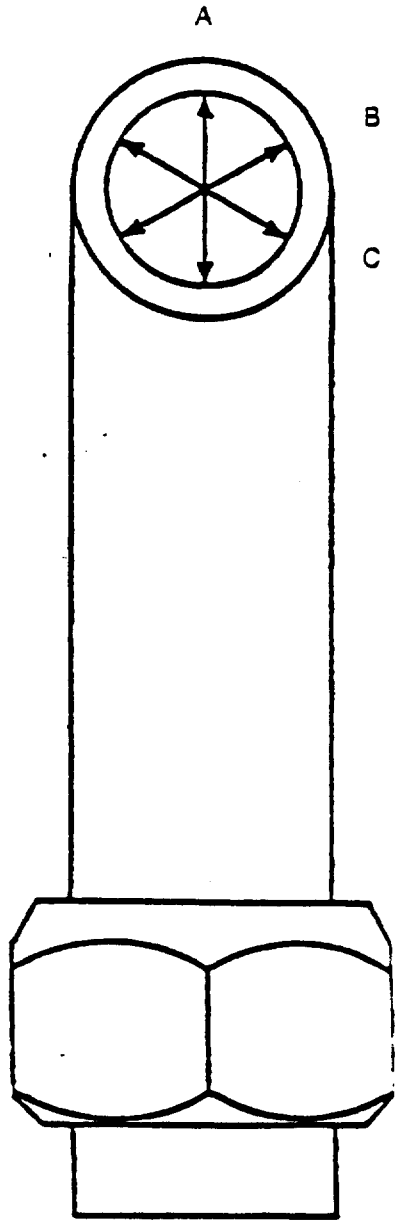
Nozzle Calibration

Sized By John Sutton

AEROTHERM

Date	Nozzle	Dimension A	Dimension B	Dimension C	Difference	Avg. Diameter
7-9-91	1-36	.560	.559	.560	.001	.560
	1-37	.200	.199	.200	.001	.200
	1-38	.185	.184	.185	.001	.185
	1-39	.305	.305	.305	.000	.305
	1-40	.310	.311	.309	.002	.310
	1-41	.250	.248	.248	.002	.249
	1-42	.375	.374	.375	.001	.375
	1-43	.623	.622	.623	.001	.623
	1-44	.752	.752	.752	.000	.752

All Dimensions are in inches.



Total Source Analysis, Inc.
Environmental Testing Consultants

Thermocouple Calibrations

(Oven, ~~Probe~~) STACK

Client Springfield Utilities Barometric Press 29.43

Project No. 9091-126

Aerotherm

Thermocouple Identification	Trendicator	Thermometer	Thermometer Number	Date
(Probes)		GCA/PS	30755	2-9-91
A3-1	248	247		
A3-2	300	301		
A5-1	247	247		
A5-2	249	249		
A5-3	310	310		
A5-4	308	307		
A7-1	248	249		
A7-2	310	310		
A10-1	247	247		
A10-2	245	245		
A10-3	249	249		
A10-4	310	310		
A15-1	290	290		
A15-2	320	320		
A15-3	311	311		
A15-4	315	315		
A20-1	312	312		
A20-2	310	310		
(OVENS)				
A-1	300	300		
A-2	300	300		
A-3	248	248		
A-4	248	248		
A-5	250	250		
A-6	280	280		
A-7	300	300		
A-8	310	310		

Thermocouple Calibrations

(Oven, Probe)

Client Springfield Utilities Barometric Press 29.43

Project No. SC91-126

Aetherm Probe heater

Thermocouple Identification	Trendicator	Thermometer	Thermometer Number	Date
		GCA/PS	30755	7-9-91
A 3-1	230	230		
A 3-2	236	235		
A 5-1	240	239		
A 5-2	240	240		
A 5-3	230	228		
A 5-4	232	230		
A 7-1	244	243		
A 7-2	239	240		
A 10-1	238	238		
A 10-2	248	247		
A 10-3	250	250		
A 10-4	251	250		
A 15-1	247	248		
A 15-2	246	246		
A 15-3	240	240		
A 15-4	242	242		
A 20-1	238	238		
A 20-2	236	236		

Thermocouple Calibrations

(Gas Meter, ~~Impinger Outlet Stack~~)

Client Springfield Utilities Barometric Press 29.43

Project No. 91-106

Thermocouple Identification	Ice Bath		Boiling Water		Thermometer Number	Date
	Trendicator	Thermometer	Trendicator	Thermometer		
(GAS Meter)				GCA\PS	30755	7-9-91
065 IN	36	36	198	198		
out	36	36	198	198		
066 IN	38	37	200	200		
out	38	37	200	200		
090 IN	40	40	191	190		
out	40	40	191	190		
091 IN	36	36	199	199		
out	36	36	199	199		
067 IN	38	38	200	200		
out	38	37	190	190		
068 IN	40	40	194	194		
out	40	40	198	198		

Pitot Calibration Form

Client Springfield Utilities
Project No. 91-126
Test Location

Run By Bruce Woods
Date 7-8-91
Pitot No. A15-1

	● "A" Side Calibration			
Run No.	Δ P std cm H_2O (in. H_2O)	Δ P (s) cm H_2O (in. H_2O)	$C_p(s)$	Deviation $C_p(s) - \bar{C}_p(A)$
1	1.0	1.58	.79	—
2	1.0	1.58	.79	—
3	1.0	1.58	.79	—
	Average	$\bar{C}_p$ (Side A)	.79	—

	●● "B" Side Calibration			
Run No.	Δ P std cm H_2O (in. H_2O)	Δ P (s) cm H_2O (in. H_2O)	$C_p(s)$	Deviation $C_p(s) - \bar{C}_p(B)$
1	1.0	1.58	.79	—
2	1.0	1.58	.79	—
3	1.0	1.58	.79	—
	Average	$\bar{C}_p$ (Side B)	.79	—

Calculations:

$$C_p(s) = 0.99 \sqrt{\frac{\Delta P \text{ (standard)}}{\Delta P \text{ (s)}}}$$

Deviation = $C_{p(s)} = \bar{C}_p$ (A or B)

$$\text{Average Deviation} = \sigma(A \text{ or } B) = \frac{\sum_{1}^{3} |C_p(s) - \bar{C}_p(A \text{ or } B)|}{3}$$

$|\bar{C}_p(\text{Side A}) - \bar{C}_p(\text{Side B})| =$ —

Nozzle size used for Calibrations (inches) .620

Intercomponent Spacings During Calibrations:

Pitot - Nozzle: 1/2 ≥
Pitot - Thermocouple: 1/2 ≥
Pitot - Probe Sheath: 5 1/2

Pitot Calibration Form

Client Springfield Utilities
Project No. 91-126
Test Location

Run By Bruce Woods
Date 7-8-91
Pitot No. A15-2

● "A" Side Calibration

Run No.	Δ P std cm H_2O (in. H_2O)	Δ P (s) cm H_2O (in. H_2O)	C_p(s)	Deviation $C_p(s) - \bar{C}_p(A)$
1	1.0	1.58	.79	—
2	1.0	1.58	.79	—
3	1.0	1.58	.79	—
Average		$\bar{C}_p$ (Side A)	.79	—

●● "B" Side Calibration

Run No.	Δ P std cm H_2O (in. H_2O)	Δ P (s) cm H_2O (in. H_2O)	C_p(s)	Deviation $C_p(s) - \bar{C}_p(B)$
1	1.0	1.58	.79	—
2	1.0	1.58	.79	—
3	1.0	1.58	.79	—
Average		$\bar{C}_p$ (Side B)	.79	—

Calculations:

$$C_p\,(s) = 0.99 \sqrt{\frac{\Delta P\ (standard)}{\Delta P\ (s)}}$$

Deviation = $C_{p(s)} = \bar{C}_p$(A or B)

$$\text{Average Deviation} = \sigma(A \text{ or } B) = \frac{\sum_{1}^{3} |C_p(s) - \bar{C}_p(A \text{ or } B)|}{3}$$

$|\bar{C}_p(\text{Side A}) - \bar{C}_p(\text{Side B})| =$ —

Nozzle size used for Calibrations (inches) .620

Intercomponent Spacings During Calibrations:

Pitot - Nozzle: 1/2 ≥
Pitot - Thermocouple: 1/2 ≥
Pitot - Probe Sheath: 5 1/2

Magnehelic Calibration

Test Location _____ Run By Frank Otto

Test Module 66 Date 8-1-91

Time _____

Magnehelic Range 0-10

Reading No.	Magnehelic	Manometer
4	4.0	4.1
6	6.0	6.1
8	8.0	8.9
10	10.0	9.9

Magnehelic Range _____

Reading No.	Magnehelic	Manometer

Magnehelic Range _____

Reading No.	Magnehelic	Manometer

TSA
Total Source Analysis, Inc.
Environmental Testing Consultants

Magnehelic Calibration

Test Location _____ Run By Frank White

Test Module 65 Date 8-1-91

Time _____

Magnehelic Range 0 - 10

Reading No.	Magnehelic	Manometer
4	4.0	4.1
6	6.0	6.2
8	8.0	8.2
10	10.0	10.1

Magnehelic Range _____

Reading No.	Magnehelic	Manometer

Magnehelic Range _____

Reading No.	Magnehelic	Manometer

TSA
Total Source Analysis, Inc.
Environmental Testing Consultants

Fuel Analysis

DIXIE SERVICES INCORPORATED

P O BOX 451 GALENA PARK, TEXAS 77547 713 672 1619

CERTIFICATE OF ANALYSIS

Number: 52437

Date: August 23, 1991

Company: City Utilities of Springfield
Post Office Box 551
Springfield, Missouri 65801

Attention: Bryan Feemster

Sample: Natural gas, submitted 8-21-91
P.O. No. 31478
Release No. 141-02

	Sulfur, ppm (D 3246)
Gas Turbine #1, August 14, 1991	6
Gas Turbine #2, August 08, 1991	4

Dixie Services Incorporated,

Ernest T. McMillan

ETM/rp

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DIXIE SERVICES INCORPORATED

P.O. BOX 451 GALENA PARK, TEXAS 77547 713 672 1819

CERTIFICATE OF ANALYSIS

Number: 52421

Company: City Utilities of Springfield
Post Office Box 551
Springfield, Missouri 65801

Date: August 26, 1991

Attention: Dave Fraley

Sample: #2 Fuel oil, submitted 8-20-91
Origin: Southwest Power Station
Marks: To comb. turbines
Date: 8-7-91
P.O. No. 33386
Release No. 141-0692

P	021	Carbon	84.6%
		Hydrogen	12.5%
		Oxygen	
D	482	Ash	0.71%
E	1064	Water	0.0001%
D	3605	Sodium	135 ppm
		Vanadium	0.2 ppm
		Potassium	0.8 ppm
			0.1 ppm

Dixie Services Incorporated,

Ernest T. McMillan

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DIXIE SERVICES INCORPORATED

P.O. BOX 451 GALENA PARK TEXAS 77547 713 672 1619

CERTIFICATE OF ANALYSIS

Number: 51755

Date: July 17, 1991

Company: City Utilities of Springfield
Post Office Box 551
Springfield, Missouri 65801

Attention: Bryan Feemster

Sample: #2 Fuel oil, submitted 7-15-91
Location: Southwest Power Station
P.O. No. 31478
Release No. 133-01

D	240	Heat of combustion, BTU/lb		
			net	17,933
			gross	19,210
D	4294	Sulfur		0.37%
D	4629	Total nitrogen, as N		306 ppm

Dixie Services Incorporated,

Ernest T. McMillan

ETM/rp

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Laboratory Reports

Analytical Data Sheet

Client SPRINGFIELD UTILITIES Project No. 91-126-OH Date 8-13-91

Run No. 1 (OIL)
Filter No. 91-148
Acetone No. UNIT #1 NORTH
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1150	1.0881	0.0269
2	82.2957	82.2701	0.0256
3			
Less acetone blank			
Weight of particulate matter			0.0525

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	300	282
Initial	200	250
Liquid collected	100	32
Total Volume Collected	132	g ml

Run No. 2 (OIL)
Filter No. 91-166
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1444	1.1047	0.0397
2	75.6982	75.6865	0.0117
3			
Less acetone blank			
Weight of particulate matter			0.0514

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	315	286
Initial	200	250
Liquid collected	115	36
Total Volume Collected	151	g ml

Run No. 3 (OIL)
Filter No. 91-149
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1124	1.0851	0.0273
2	76.4622	76.4405	0.0217
3			
Less acetone blank			
Weight of particulate matter			0.0490

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	295	292
Initial	200	250
Liquid collected	95	42
Total Volume Collected	137	g ml

Run No.
Filter No.
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1			
2			
3			
Less acetone blank			
Weight of particulate matter			

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final		
Initial		
Liquid collected		
Total Volume Collected		g ml

*Convert weight of water to volume by dividing total weight increase by density of water (1g/ml): $\frac{\text{Increase, g}}{1\text{g/ml}}$ = Volume Water, ml

**See Federal Register, Method 5, 3.6, & 6.7.

Analytical Data Sheet

Client SPRINGFIELD UTILITIES Project No. 91-126-OH Date 8-13-91

Run No. 1 (OIL)
Filter No. 91-152
Acetone No. UNIT #1 SOUTH
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1746	1.0924	0.0822
2	83.2789	83.2650	0.0139
3			
Less acetone blank			
Weight of particulate matter			0.0961

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	355	318
Initial	200	250
Liquid collected	155	68
Total Volume Collected	223	g ml

Run No. 2 (OIL)
Filter No. 91-158
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.2092	1.1042	0.1050
2	66.8522	66.8354	0.0168
3			
Less acetone blank			
Weight of particulate matter			0.1218

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	335	339
Initial	200	250
Liquid collected	135	89
Total Volume Collected	224	g ml

Run No. 3 (OIL)
Filter No. 91-150
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1615	1.0835	0.0780
2	75.0180	75.0103	0.0077
3			
Less acetone blank			
Weight of particulate matter			0.0857

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	358	320
Initial	200	250
Liquid collected	158	70
Total Volume Collected	228	g ml

Run No.
Filter No.
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1			
2			
3			
Less acetone blank			
Weight of particulate matter			

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final		
Initial		
Liquid collected		
Total Volume Collected		g ml

*Convert weight of water to volume by dividing total weight increase by density of water (1g/ml): $\frac{\text{Increase, g}}{1\text{g/ml}}$ = Volume Water, ml

**See Federal Register, Method 5, 3.6, & 6.7.

Analytical Data Sheet

Client SPRINGFIELD UTILITIES. Project No. 91-126-OH Date 8-7-91

Run No. 1 (OIL)
Filter No. 91-167
Acetone No. UNIT #2 NORTH
Amount liquid lost during transport (OIL)
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1355	1.1026	0.0329
2	66.1943	66.1620	0.0323
3			
Less acetone blank			
Weight of particulate matter			0.0652

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	345	296
Initial	200	250
Liquid collected	145	46
Total Volume Collected	191	g ml

Run No. 2 (OIL)
Filter No. 91-168
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1487	1.1055	0.0432
2	66.8691	66.8349	0.0342
3			
Less acetone blank			
Weight of particulate matter			0.0774

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	290	292
Initial	200	250
Liquid collected	90	42
Total Volume Collected	132	g ml

Run No. 3 (OIL)
Filter No. 91-139
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1239	1.0941	0.0298
2	75.0292	75.0111	0.0181
3			
Less acetone blank			
Weight of particulate matter			0.0479

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	300	306
Initial	200	250
Liquid collected	100	56
Total Volume Collected	156	g ml

Run No.
Filter No.
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1			
2			
3			
Less acetone blank			
Weight of particulate matter			

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final		
Initial		
Liquid collected		
Total Volume Collected		g ml

*Convert weight of water to volume by dividing total weight increase by density of water (1 g/ml): $\frac{\text{Increase, g}}{1\ \text{g/ml}}$ = Volume Water, ml

**See Federal Register, Method 5, 6.6, & 6.7.

Analytical Data Sheet

Client Springfield IIT Project No. 91-126-01A Date 8-7-91

Run No. 1 (OIL)
Filter No. 91-154
Acetone No. UNIT 2 SOUTH
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected g		
	Final Weight	Tare Weight	Weight Gain
1	1.1672	1.1077	0.0595
2	78.9861	78.9619	0.0242
3			
Less acetone blank			
Weight of particulate matter			0.0837

	Volume of Liquid Water Collected		
	Impinger Volume, ml.	Silica Gel Weight, g	
Final	388	322	
Initial	200	250	
Liquid collected	135	72	
Total Volume Collected	207	g*	ml

Run No. 2
Filter No. 91-162
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected g		
	Final Weight	Tare Weight	Weight Gain
1	1.1679	1.1039	0.0640
2	73.9840	73.9539	0.0301
3			
Less acetone blank			
Weight of particulate matter			0.0941

	Volume of Liquid Water Collected		
	Impinger Volume, ml.	Silica Gel Weight, g	
Final	325	334	
Initial	200	250	
Liquid collected	125	84	
Total Volume Collected	209	g*	ml

Run No. 3 (OIL)
Filter No. 91-134
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected g		
	Final Weight	Tare Weight	Weight Gain
1	1.1505	1.0863	0.0642
2	72.0626	72.0489	0.0137
3			
Less acetone blank			
Weight of particulate matter			0.0779

	Volume of Liquid Water Collected		
	Impinger Volume, ml.	Silica Gel Weight, g	
Final	340	320	
Initial	200	250	
Liquid collected	140	70	
Total Volume Collected	210	g*	ml

Run No.
Filter No.
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected g		
	Final Weight	Tare Weight	Weight Gain
1			
2			
3			
Less acetone blank			
Weight of particulate matter			

	Volume of Liquid Water Collected		
	Impinger Volume, ml.	Silica Gel Weight, g	
Final			
Initial			
Liquid collected			
Total Volume Collected		g*	ml

*Convert weight of water to volume by dividing total weight increase by density of water (1g/ml): $\frac{\text{Increase, g}}{\text{1g/ml}}$ = Volume Water, ml

**See Federal Register, Method 5, 6.6, & 6.7.

Analytical Data Sheet

Client SPRINGFIELD UTILITIES Project No. 91-126-01H Date 8-12-91

Run No. 1 (GAS)
Filter No. 91-129
Acetone No. UNIT #1 NORTH
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.0760	1.0709	0.0051
2	~~68.4513~~		
3	75.0509	75.0262	0.0247
Less acetone blank			
Weight of particulate matter			0.0298

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	340	288
Initial	200	250
Liquid collected	140	38
Total Volume Collected	178	g* ml

Run No. 2 (GAS)
Filter No. 91-137
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.0895	1.0834	0.0061
2	77.3760	77.3458	0.0302
3			
Less acetone blank			
Weight of particulate matter			0.0363

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	336	286
Initial	200	250
Liquid collected	135	36
Total Volume Collected	171	g* ml

Run No. 3 (GAS)
Filter No. 91-088
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.0851	1.0835	0.0016
2	68.4906	68.4513	0.0393
3			
Less acetone blank			
Weight of particulate matter			0.0409

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	340	290
Initial	200	250
Liquid collected	140	40
Total Volume Collected	180	g* ml

Run No.
Filter No.
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1			
2			
3			
Less acetone blank			
Weight of particulate matter			

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final		
Initial		
Liquid collected		
Total Volume Collected		g* ml

*Convert weight of water to volume by dividing total weight increase by density of water (1g/ml): $\frac{\text{Increase, g}}{1\text{g/ml}}$ = Volume Water, ml

**See Federal Register, Method 5, 3.6, & 3.7.

Analytical Data Sheet

Client SPRINGFIELD UTILITIES Project No. 91-126-OH Date 8-12-91

Run No. 1 (GAS)
Filter No. 91-155
Acetone No. UNIT #1 SOUTH
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1145	1.1080	0.0065
2	70.8701	70.8615	0.0086
3			
Less acetone blank			
Weight of particulate matter			0.0151

	Volume of Liquid Water Collected	
	Impinger Volume, ml	Silica Gel Weight, g
Final	345	322
Initial	200	250
Liquid collected	145	72
Total Volume Collected	217	g ml

Run No. 2 (GAS)
Filter No. 91-156
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1182	1.1063	0.0119
2	60.4960	60.4782	0.0178
3			
Less acetone blank			
Weight of particulate matter			0.0297

	Volume of Liquid Water Collected	
	Impinger Volume, ml	Silica Gel Weight, g
Final	388	304
Initial	200	250
Liquid collected	188	54
Total Volume Collected	242	g ml

Run No. 3 (GAS)
Filter No. 91-153
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.0952	1.0912	0.0040
2	74.0391	74.0270	0.0121
3			
Less acetone blank			
Weight of particulate matter			0.0161

	Volume of Liquid Water Collected	
	Impinger Volume, ml	Silica Gel Weight, g
Final	348	332
Initial	200	250
Liquid collected	148	82
Total Volume Collected	230	g ml

Run No.
Filter No.
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1			
2			
3			
Less acetone blank			
Weight of particulate matter			

	Volume of Liquid Water Collected	
	Impinger Volume, ml	Silica Gel Weight, g
Final		
Initial		
Liquid collected		
Total Volume Collected		g ml

*Convert weight of water to volume by dividing total weight increase by density of water (1g/ml): $\frac{\text{Increase, g}}{1\text{g/ml}}$ = Volume Water, ml

**See Federal Register, Method 5, 6.6, & 6.7.

Analytical Data Sheet

Client SPRINGFIELD UTILITIES Project No. 91-126-OH Date 8-6-91

Run No. 1 (GAS)
Filter No. 91-163
Acetone No. UNIT #2 NORTH
Amount liquid lost during transport (GAS)
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1088	1.1026	0.0062
2	83.2900	83.2656	0.0244
3			
Less acetone blank			
Weight of particulate matter			0.0306

	Volume of Liquid Water Collected	
	Impinger Volume, ml	Silica Gel Weight, g
Final	405	308
Initial	200	250
Liquid collected	205	58
Total Volume Collected	263	g* ml

Run No. 2 (GAS)
Filter No. 91-164
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1087	1.1048	0.0039
2	63.6641	63.6306	0.0335
3			
Less acetone blank			
Weight of particulate matter			0.0374

	Volume of Liquid Water Collected	
	Impinger Volume, ml	Silica Gel Weight, g
Final	365	304
Initial	200	250
Liquid collected	165	54
Total Volume Collected	219	g* ml

Run No. 3 (GAS)
Filter No. 91-165
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1122	1.1091	0.0031
2	80.1200	80.0938	0.0262
3			
Less acetone blank			
Weight of particulate matter			0.0293

	Volume of Liquid Water Collected	
	Impinger Volume, ml	Silica Gel Weight, g
Final	325	292
Initial	200	250
Liquid collected	125	42
Total Volume Collected	167	g* ml

Run No.
Filter No.
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1			
2			
3			
Less acetone blank			
Weight of particulate matter			

	Volume of Liquid Water Collected	
	Impinger Volume, ml	Silica Gel Weight, g
Final		
Initial		
Liquid collected		
Total Volume Collected		g* ml

*Convert weight of water to volume by dividing total weight increase by density of water (1g/ml): $\frac{\text{Increase, g}}{1\text{g/ml}}$ = Volume Water, ml

**See Federal Register, Method 5, 6.6, & 6.7.

Analytical Data Sheet

Client Springfield Utilities Project No. 91-126-04 Date 8-6-91

Run No. 1 (Gas)
Filter No. 91-159
Acetone No. Unit 2 South
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1179	1.1066	0.0113
2	60.4171	60.3995	0.0176
3			
Less acetone blank			
Weight of particulate matter			0.0289

	Volume of Liquid Water Collected		
	Impinger Volume, ml.	Silica Gel Weight, g	
Final	382	337	
Initial	200	250	
Liquid collected	182	87	
Total Volume Collected	269	g*	ml

Run No. 2 (Gas)
Filter No. 91-160
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1141	1.1056	0.0085
2	77.9878	77.9714	0.0164
3			
Less acetone blank			
Weight of particulate matter			0.0249

	Volume of Liquid Water Collected		
	Impinger Volume, ml.	Silica Gel Weight, g	
Final	380	274	
Initial	200	250	
Liquid collected	180	24	
Total Volume Collected	204	g*	ml

Run No. 3 (Gas)
Filter No. 91-161
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1144	1.1045	0.0099
2	73.1473	73.1394	0.0079
3			
Less acetone blank			
Weight of particulate matter			0.0178

	Volume of Liquid Water Collected		
	Impinger Volume, ml.	Silica Gel Weight, g	
Final	370	298	
Initial	200	250	
Liquid collected	170	48	
Total Volume Collected	218	g*	ml

Run No.
Filter No.
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1			
2			
3			
Less acetone blank			
Weight of particulate matter			

	Volume of Liquid Water Collected		
	Impinger Volume, ml.	Silica Gel Weight, g	
Final			
Initial			
Liquid collected			
Total Volume Collected		g*	ml

*Convert weight of water to volume by dividing total weight increase by density of water (1g/ml): $\frac{\text{Increase, g}}{\text{1g/ml}}$ = Volume Water, ml

**See Federal Register, Method 5, 6.6, & 6.7.

Analytical Data Sheet

Client Spring Field Utilities Project No. 91-126-014 Date 9-23-91

Run No. ONE SAS
Filter No. 91-129
Acetone No. UNIT # 1 North
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected g		
	Final Weight	Tare Weight	Weight Gain
1	1.0235	1.0209	.0026
2			
3	75.0307	75.0262	.0045
	Less acetone blank		
	Weight of particulate matter		.0071

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	340	288
Initial	200	250
Liquid collected	140	38
Total Volume Collected	178	g* ml

Run No. TWO SAS
Filter No. 91-132
Acetone No. UNIT #1 North
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected g		
	Final Weight	Tare Weight	Weight Gain
1	1.0865	1.0834	.0031
2	77.3520	77.3458	.0062
3			
	Less acetone blank		
	Weight of particulate matter		.0093

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	335	286
Initial	200	250
Liquid collected	135	36
Total Volume Collected	171	g* ml

Run No. three SASS
Filter No. 91-088
Acetone No. UNIT #1 North
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected g		
	Final Weight	Tare Weight	Weight Gain
1	1.0849	1.0835	.0014
2	68.4589	68.4513	.0076
3			
	Less acetone blank		
	Weight of particulate matter		.0090

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	340	290
Initial	200	250
Liquid collected	140	40
Total Volume Collected	180	g* ml

Results for Gas Turbine after metal flakes were removed

*Convert weight of water to volume by dividing total weight increase by density of water (1g/ml): $\frac{\text{Increase, g}}{1\text{g/ml}}$ = Volume Water, ml

**See Federal Register, Method 5, 6.6, & 6.7.

Analytical Data Sheet

Client Spring Field Utilities Project No. 91-126-01 Date 9-23-91

Run No. ONE SAS
Filter No. 91-155
Acetone No. UNIT # 2 South
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected g		
	Final Weight	Tare Weight	Weight Gain
1	1.1122	1.1080	.0042
2	70.8651	70.8615	.0036
3			
Less acetone blank			
Weight of particulate matter			.0078

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	345	322
Initial	200	250
Liquid collected	145	72
Total Volume Collected	217	g* ml

Run No. TWO SAS
Filter No. 91-156
Acetone No. UNIT # 2 South
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected g		
	Final Weight	Tare Weight	Weight Gain
1	1.1114	1.1063	.0051
2	60.4818	60.4782	.0036
3			
Less acetone blank			
Weight of particulate matter			.0087

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	388	304
Initial	200	250
Liquid collected	188	54
Total Volume Collected	242	g* ml

Run No. THREE
Filter No. 91-153
Acetone No. UNIT # 2 South
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected g		
	Final Weight	Tare Weight	Weight Gain
1		1.0912	.0063
2		74.0270	.0040
3			
Less acetone blank			
Weight of particulate matter			.0103

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	348	332
Initial	200	250
Liquid collected	148	82
Total Volume Collected	230	g* ml

Results for Gas Turbine after metal flakes were removed

*Convert weight of water to volume by dividing total weight increase by density of water (1g/ml): $\frac{\text{increase, g}}{1\text{g/ml}}$ = Volume Water, ml

**See Federal Register, Method 5, 6.6, & 6.7.

Analytical Data Sheet

Client Springfield Utilities Project No. 91-126-014 Date 9-23-91

Run No. ONE SAS
Filter No. 91-159
Acetone No. UNIT #2 South
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected g		
	Final Weight	Tare Weight	Weight Gain
1	1.1097	1.1066	.0031
2	60.4050	60.3995	.0055
3			
	Less acetone blank		
	Weight of particulate matter		.0086

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	382	337
Initial	200	250
Liquid collected	182	87
Total Volume Collected	269	g* | ml

Run No. TWO SAS
Filter No. 91-160
Acetone No. UNIT # 2 South
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected g		
	Final Weight	Tare Weight	Weight Gain
1	1.1103	1.1056	.0047
2	77.9765	77.9714	.0051
3			
	Less acetone blank		
	Weight of particulate matter		.0098

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	380	274
Initial	200	250
Liquid collected	180	24
Total Volume Collected	204	g* | ml

Run No. three SAS
Filter No. 91-161
Acetone No. UNIT # 2 South
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected g		
	Final Weight	Tare Weight	Weight Gain
1	1.1095	1.1045	.0050
2	73.1437	73.1394	.0043
3			
	Less acetone blank		
	Weight of particulate matter		.0093

	Volume of Liquid Water Collected	
	Impinger Volume, ml.	Silica Gel Weight, g
Final	370	298
Initial	200	250
Liquid collected	170	48
Total Volume Collected	218	g* | ml

Results for Gas Turbine after metal flakes were removed

*Convert weight of water to volume by dividing total weight increase by density of water (1g/ml): $\frac{\text{Increase, g}}{1\text{g/ml}}$ = Volume Water, ml

**See Federal Register, Method 5, 6.6, & 6.7.

Analytical Data Sheet

Client Spring Field Utilities Project No. 91-126-04 Date 9-23-91

Run No. ONE GAS
Filter No. 91-163
Acetone No. UNIT # 2 NORTH
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1074	1.1026	.0048
2	83.2719	83.2656	.0063
3			
Less acetone blank			
Weight of particulate matter			.0111

	Volume of Liquid Water Collected	
	Impinger Volume, ml	Silica Gel Weight, g
Final	405	308
Initial	200	250
Liquid collected	205	58
Total Volume Collected	263	g* / ml

Run No. TWO GAS
Filter No. 91-164
Acetone No. UNIT # 2 NORTH
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1082	1.1048	.0034
2	63.6369	63.6306	.0063
3			
Less acetone blank			
Weight of particulate matter			.0097

	Volume of Liquid Water Collected	
	Impinger Volume, ml	Silica Gel Weight, g
Final	365	304
Initial	200	250
Liquid collected	165	54
Total Volume Collected	219	g* / ml

Run No. THREE GAS
Filter No. 91-165
Acetone No.
Amount liquid lost during transport
Acetone blank volume, ml
Acetone wash volume, ml
Acetone blank concentration, mg/mg (equation 5-4)**
Acetone wash blank, mg (equation 5-5)**

Container Number	Weight of Particulate Collected, g		
	Final Weight	Tare Weight	Weight Gain
1	1.1132	1.1091	.0041
2	80.1005	80.0938	.0067
3			
Less acetone blank			
Weight of particulate matter			.0108

	Volume of Liquid Water Collected	
	Impinger Volume, ml	Silica Gel Weight, g
Final	325	292
Initial	200	250
Liquid collected	125	42
Total Volume Collected	167	g* / ml

Results for Gas Turbine after metal flakes were removed

*Convert weight of water to volume by dividing total weight increase by density of water (1g/ml): $\frac{\text{Increase, g}}{1\text{g/ml}}$ = Volume Water, ml

**See Federal Register, Method 5, 6.6, & 6.7.

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

CHAIN OF CUSTODY RECORD

PROJ. NO. | PROJECT NAME

SAMPLERS: (Signature)
I. S. A INC

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Acetone	Filters	Silica gel	REMARKS
I				/	UNIT # I SAS	3	3			PROBE WASH
I				/	UNIT # I O.L	3	3			PROBE WASH
I				/	UNIT # I SAS	3		3		FILTERS method # S
I				/	UNIT # I O.L	3		3		FILTERS method # S
I				/	UNIT # I SAS Silica Gel				3	SILICA GEL
I				/	UNIT # I O.L Silica Gel				3	SILICA GEL
II				/	UNIT # II SAS	3	3			"
					UNIT # II O.L	3	3			"
					UNIT # II SAS	3		3		"
					UNIT # II O.L	3		3		"
					UNIT # II SAS	3			3	"
					UNIT # II O.L	3			3	"

Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank White	8-20-91 9:00	Frank White
Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: Amir Behesht

Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)

Date / Time: 8-20-91

Remarks

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

Figure 3. Example of chain-of-custody record.

TSA Monitor Calibration Data

AMBIENT DATA
FOR METHOD 20

TURBINE IDENTIFICATION TYPE _____ SERIAL # _____

TEST DATE 8-8-91 OPERATOR HAMILTON LOCATION UNIT 2 #5 SOUTH #6 NORTH

START TIME _____ FINISH TIME _____ FUEL: NAT. GAS

TIME	AMBIENT TEMPERATURE DRY BULB	AMBIENT TEMPERATURE WET BULB	AMBIENT HUMIDITY	AMBIENT PRESSURE
3:30	99	79	40	28.80
3:45	99	79	40	28.79
4:00	99	78	36	28.78
4:15	98	77	36	28.76
4:30	98	78	40	28.76
4:45	98	78	40	28.75
5:00	98	78	40	28.73
5:15	98	78	40	28.72
5:30	98	79	42	28.70
5:45	98	79	42	28.70
6:00	98	79	42	28.70
RAIN DELAY				
6:45	72	70	90%	28.70
7:00	73	70	86%	28.68
7:15	72	70	90	28.72
7:30	73	70	86	28.72
7:45	74	71	86	28.72
8:00	74	71	86	28.72
8:15	74	71	86	28.72

AMBIENT DATA
FOR METHOD 20

TURBINE IDENTIFICATION TYPE _____ SERIAL # _____

TEST DATE 8-8-91 OPERATOR WHITT/HAMPTON LOCATION UNIT 2 - NORTH & SOUTH

START TIME _____ FINISH TIME _____ FUEL: NATURAL GAS

TIME	AMBIENT TEMPERATURE DRY BULB	AMBIENT TEMPERATURE WET BULB	AMBIENT HUMIDITY	AMBIENT PRESSURE
10:10	92°	82°	66%	28.92
10:25	96	84	60%	28.92
10:40	97	80	46%	28.94
10:55	93	78	50%	28.93
11:10	94	79	51%	28.92
11:25	93	78	50%	28.92
11:40	92	78	51%	28.91
11:55	94	78	48%	28.92
12:10	92	75	45%	28.90
12:25	93	78	50%	28.90
12:40	92	78	51%	28.90
12:55				
RUN 1 1:00	98	81	46	28.90
1:15	98	78	40%	28.89
1:30	97	78	42%	28.85
1:45	98	77	37%	28.83
2:00	98	78	38%	28.84
2:15	98	78	38%	28.84
2:30	98	78	38	28.84
2:45	99	79	40%	28.82
3:00	99	79	40%	28.82
3:15	99	82	44%	28.81

AMBIENT DATA
FOR METHOD 20
CITY OF SPRINGFIELD

TURBINE IDENTIFICATION TYPE _____ SERIAL # _____

TEST DATE 8-9-91 OPERATOR Hampton LOCATION UNIT 2 NORTH SOUTH

START TIME _____ FINISH TIME _____ FUEL: OIL

TIME	AMBIENT TEMPERATURE DRY BULB	AMBIENT TEMPERATURE WET BULB	AMBIENT HUMIDITY	AMBIENT PRESSURE
5:00 PM	69	67	90%	29.73
5 15	67	67	100%	29.74
5 30	67	67	100	29.74
600	67	67	100	29.74
15	62	62	100	29.74
30	63	63	100	29.74
45	64	64	100	29.75
700	64	64	100	29.75
15	65	65	100	29.75
30	65	65	100	29.75
45	65	65	100	29.75
800	65	65	100	29.76
15	66	66	100	29.76
30	66	66	100	29.76
45	66	66	100	29.76
900 PM	66	66	100	29.76
15				
30				

AMBIENT DATA
FOR METHOD 20
SPRINGFIELD CITY UTILITY

TURBINE IDENTIFICATION TYPE_____SERIAL #_____

TEST DATE 8-9-91 OPERATOR HAMPTON LOCATION UNIT 2 NORTH/SOUTH

START TIME_____FINISH TIME_____ FUEL #2 OIL

TIME	AMBIENT TEMPERATURE DRY BULB	AMBIENT TEMPERATURE WET BULB	AMBIENT HUMIDITY	AMBIENT PRESSURE
8.30 AM	72	71	94%	29.72
845	73	71	90	29.72
900	73	71	90	29.72
15	73	71	90	29.72
30	73	71	90	29.72
45	74	71	86	29.72
10:00	74	71	86	29.72
15	75	72	86	29.72
30	77	74	86	29.72
45	76	74	90	29.72
11:00	75	73	90	29.73
15	77	73	82	29.73
30	79	74	78	29.73
45	79	74	78	29.73
12:00	79	74	78	29.73
12 15	79	75	82	29.73
30	79	75	82	29.73
45	78	74	82	29.74
1 00	78	74	82	29.74
15	UNIT TRIP			
30				
45				

AMBIENT DATA
FOR METHOD 20
CITY UTILITY OF SPRINGFIELD

TURBINE IDENTIFICATION TYPE _____ SERIAL # _____

TEST DATE 8-14-91 OPERATOR HAMPTON LOCATION UNIT 1 SOUTH NORTH

START TIME _____ FINISH TIME _____ FUEL: GAS

TIME	AMBIENT TEMPERATURE DRY BULB	AMBIENT TEMPERATURE WET BULB	AMBIENT HUMIDITY	AMBIENT PRESSURE
1240	90	74	46	29.73
55	90	74	46	29.72
2 10	91	74	42	29.72
25	91	75	46	29.72
40	90	75	48	29.72
55	89	72	42	29.71
3 10	88	71	43	29.71
25	87	71	44	29.70
40	87	71	44	29.70
55	87	72	47	29.70
410	87	72	47	29.69
25	87	70	42	29.69
40	87	70	42	29.69
55	85	70	46	29.69
5 10	85	70	46	29.69

AMBIENT DATA
FOR METHOD 20
CITY UTILITY OF SPRINGFIELD

TURBINE IDENTIFICATION TYPE_____SERIAL #_____

TEST DATE 8-14-91 OPERATOR HAMPTON LOCATION UNIT 1 NORTH & SOUTH

START TIME_____FINISH TIME_____ FUEL: GAS

TIME	AMBIENT TEMPERATURE DRY BULB	AMBIENT TEMPERATURE WET BULB	AMBIENT HUMIDITY	AMBIENT PRESSURE
8:10	67	63	79%	29.76
825	68	64	79	29.76
40	70	66	80	2976
55	72	~~67~~ 67	76	29.76
9:10	72	67	76	29.76
25	75	68	70	29.75
40	76	~~69~~	71	29.76
55	76	69	71	29.76
10:10	77	69	66	29.76
25	78	69	63	29.76
40	80	70	62	29.76
55	84	72	56	29.76
11:10	84	72	56	29.75
25	83	70	52	29.76
40	83	70	52	29.76
55	86	71	47	29.76
12:10	86	71	47	29.76
25	87	72	48	29.76
40	87	73	50	29.75
55	87	74	54	29.75
1:10	89	74	48	29.74
25	89	74	48	29.74

AMBIENT DATA
FOR METHOD 20
CITY UTILITIES OF SPRINGFIELD

TURBINE IDENTIFICATION TYPE _____ SERIAL # _____

TEST DATE 8-15-91 OPERATOR Hampton LOCATION UNIT 1 (NORTH) SOUTH

START TIME _____ FINISH TIME _____ FUEL: OIL

TIME	AMBIENT TEMPERATURE DRY BULB	AMBIENT TEMPERATURE WET BULB	AMBIENT HUMIDITY	AMBIENT PRESSURE
8:00 AM	67	63	79%	28.60
8 15	69	64	76	28.60
8 30	70	65	76	28.60
845	75	68	70	28.61
900	77	68	62	28.61
915	77	68	62	28.60
30	78	69	63	28.60
45	78	69	63	28.60
1000	80	70	62	28.60
15	82	72	62	28.60
30	83	73	62	28.60
45	83	72	59	28.60
1100	83	72	59	28.60
15	86	72	50	28.62
30	87	74	54	28.62
45	88	76	56	28.62
12:00	88	76	56	28.6
15	88	76	56	28.58
30	89	76	54	28.58
45	89	75	52	28.55
1:00	88	72	46	28.55
15	88	72	46	28.55

AMBIENT DATA
FOR METHOD 20
CITY UTILITIES OF SPRINGFIELD

TURBINE IDENTIFICATION TYPE _____ SERIAL # _____

TEST DATE 8-15-91 OPERATOR Hampton LOCATION UNIT 1 NORTH / SOUTH

START TIME _____ FINISH TIME _____ FUEL: OIL

TIME	AMBIENT TEMPERATURE DRY BULB	AMBIENT TEMPERATURE WET BULB	AMBIENT HUMIDITY	AMBIENT PRESSURE
1:30PM	88	71	42	28.55
45	88	71	42	28.55
2 00	88	71	42	28.55
15	89	72	44	28.55
30	89	72	44	28.55
45	90	73	44	28.55
3 00	90	73	44	28.55
15	92	75	44	28.54
30	92	76	46	28.54
45	92	74	42	28.54
4 00	94	72	38	28.54
15	94	72	38	28.54
30	93	72	38	" "
45	93	72	39	" "
5 00	94	72	39	" "

Response Time

South

span gas concentration: 500

analyzer span setting: 100 ppm

Date: 8-8-91

By: TW

upscale:

1. 67 seconds
2. 63 seconds
3. 68 seconds

avg. response: 66 seconds

downscale:

1. 69 seconds
2. 68 seconds
3. 65 seconds

avg. response: 67 seconds

system response time: 66 seconds

slower average time: 67 seconds

Response Time

NORTH
span gas concentration: 0-50ppm
analyzer span setting: 0-100 ppm

Date: 8-8-91
By:

upscale:

1. 42 seconds
2. 38 seconds
3. 41 seconds

avg. response: 40 seconds

downscale:

1. 49 seconds
2. 53 seconds
3. 56 seconds

avg. response: 53 seconds

system response time: 40 seconds
slower average time: 53 seconds

ZERO AND CALIBRATION DATA

CLIENT _____ PROJECT # _____ OPERATOR _____

LOAD GAS TEST DATE 8-8 PBAR _____

North

NOX	CYLINDER VALUE % OR PPM	INITIAL RESPONSE	RUN 1	RUN 2	FINAL RESPONSE	DIFF PPM OR %
LOW-GAS	24.66	24.7			24.9	
MID-GAS	49.79	49.8	48.4	49.1	48.7	
HIGH-GAS	84.98	84.8			84.9	
~~ZERO GAS~~ AMBIENT	0	.01	-1.1	.6		

O2	CYLINDER VALUE % OR PPM	INITIAL RESPONSE	RUN 1	RUN 2	FINAL RESPONSE	DIFF PPM OR %
LOW-GAS						
MID-GAS	12.33	12.2	12.2	12.4	12.3	
HIGH-GAS	20.9				21.0	
ZERO GAS ~~AMBIENT~~	0		0	0	.1	

ZERO AND CALIBRATION DATA

CLIENT _____ PROJECT # _____ OPERATOR _____

LOAD 50% 65% 80% 100% TEST DATE 8-8 PBAR _____

GAS

South

NOx	CYLINDER VALUE % OR PPM	INITIAL RESPONSE	RUN 1	RUN 2	FINAL RESPONSE	DIFF PPM OR %
LOW-GAS	24.66	24.5			24.5	
MID-GAS	49.79	49.8	49.8	49.6	48.7	
HIGH-GAS	84.98	85.0			85.0	
ZERO GAS AMBIENT	0	0	1.5	.2	.1	

O_2	CYLINDER VALUE % OR PPM	INITIAL RESPONSE	RUN 1	RUN 2	FINAL RESPONSE	DIFF PPM OR %
LOW-GAS	12.33	12.4			12.3	
MID-GAS			12.4	12.3		
HIGH-GAS	20.9	20.8			20.8	
ZERO GAS ~~AMBIENT~~	0		-.02	0		

ZERO AND CALIBRATION DATA

CLIENT_____ PROJECT #_____ OPERATOR_____

LOAD 0.2 TEST DATE_____ PBAR_____

1

NOx	CYLINDER VALUE % OR PPM	INITIAL RESPONSE	RUN 1	RUN 2	FINAL RESPONSE	DIFF PPM OR %
LOW-GAS	24.66	24.6			24.8	
MID-GAS	49.79	49.4	49.8	49.7	49.7	
HIGH-GAS	84.98	85.2			85.3	
~~ZERO GAS~~ AMBIENT		-0.1	0	0	0	

2

	CYLINDER VALUE % OR PPM	INITIAL RESPONSE	RUN 1	RUN 2	FINAL RESPONSE	DIFF PPM OR %
LOW-GAS						
MID-GAS	12.3	12.4	12.3	12.2		
HIGH-GAS	20.9	20.9				
ZERO GAS ~~AMBIENT~~	0	0	0	.1		

ZERO AND CALIBRATION DATA

CLIENT_____ PROJECT #_____ OPERATOR_____

LOAD 0.2 TEST DATE 8-9 PBAR_____

4

NOx	CYLINDER VALUE % OR PPM	INITIAL RESPONSE	RUN 1	RUN 2	FINAL RESPONSE	DIFF PPM OR %
LOW-GAS	24.66	24.3			24.5	
MID-GAS	49.79	49.8	49.4	49.8	49.7	
HIGH-GAS	84.98	84.9			85.0	
~~ZERO GAS~~ AMBIENT	0	-0.1	-.3	0	.01	

5

O2	CYLINDER VALUE % OR PPM	INITIAL RESPONSE	RUN 1	RUN 2	FINAL RESPONSE	DIFF PPM OR %
LOW-GAS	—	—				
MID-GAS	12.33	12.2	12.2	12.2	12.4	
HIGH-GAS	20.9	21.0			20.8	
ZERO GAS AMBIENT	0	0	0	-0.1	.1	

ZERO AND CALIBRATION DATA

CLIENT C.U.O.S PROJECT # 91-126-04 OPERATOR TW

LOAD O:L TEST DATE 8-14-91 PBAR

NOx	CYLINDER VALUE % OR PPM	INITIAL RESPONSE	RUN 1	RUN 2	FINAL RESPONSE	DIFF PPM OR %
LOW-GAS	24.66	24.6	49.8	49.6	24.7	
MID-GAS	49.79	49.6			49.8	
HIGH-GAS	84.98	85.1	.1	.3	84.8	
~~ZERO GAS~~ AMBIENT	0	0			.2	.3

O_2	CYLINDER VALUE % OR PPM	INITIAL RESPONSE	RUN 1	RUN 2	FINAL RESPONSE	DIFF PPM OR %
LOW-GAS			12.2	12.4		
MID-GAS	12.3	12.3			12.3	.2
HIGH-GAS	20.9	20.9	.1	.0	20.9	
ZERO GAS ~~AMBIENT~~	0	0			.1	

ZERO AND CALIBRATION DATA

CLIENT C.U.O.S PROJECT # 91-12-604 OPERATOR F White

LOAD GAS TEST DATE 8-15-91 PBAR

NOx	CYLINDER VALUE % OR PPM	INITIAL RESPONSE	RUN 1	RUN 2	FINAL RESPONSE	DIFF PPM OR %
LOW-GAS	24.66	24.6			24.6	
MID-GAS	49.79	49.8	49.7	49.6	49.7	
HIGH-GAS	84.98	85.1			85.1	
~~ZERO GAS~~ AMBIENT	0	0	.2	.1	.1	.2

O_2	CYLINDER VALUE % OR PPM	INITIAL RESPONSE	RUN 1	RUN 2	FINAL RESPONSE	DIFF PPM OR %
LOW-GAS						
MID-GAS	12.33	12.3	12.2	12.2	12.3	.1
HIGH-GAS	20.9	20.9			20.8	.1
~~ZERO GAS~~ ~~AMBIENT~~	0	0	.1	.1	-.1	.2

Correspondence