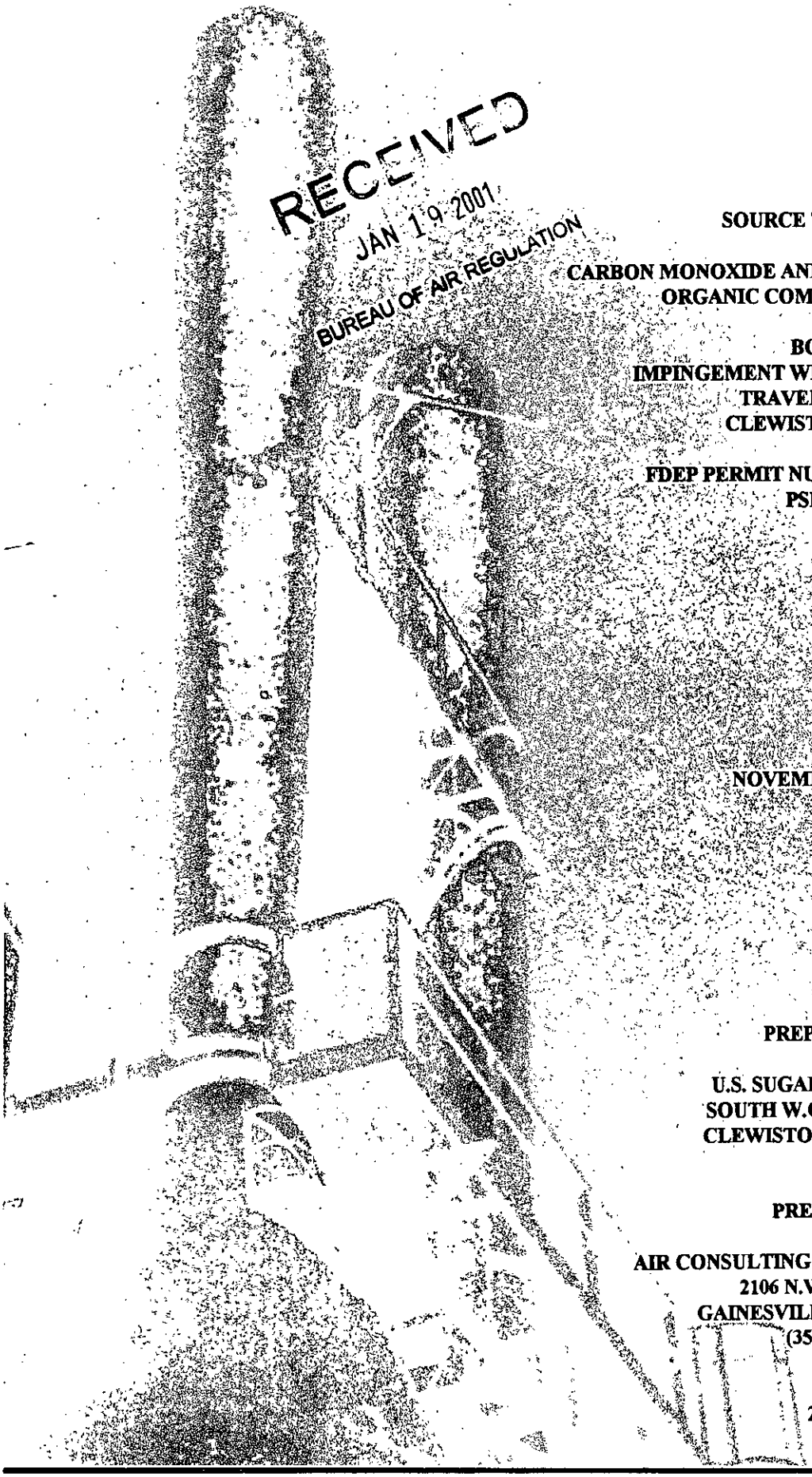

SOURCE TEST REPORT
FOR
CARBON MONOXIDE AND NON-METHANE VOLATILE ORGANIC COMPOUNDS EMISSIONS

BOILER 4
IMPINGEMENT WET SCRUBBER OUTLET
TRAVELING GRATE
CLEWISTON, FLORIDA

FDEP PERMIT NUMBER 051-0003-009-AC
PSD-FL-272

NOVEMBER 13-17, 2000

PREPARED FOR:

U.S. SUGAR CORPORATION
SOUTH W.C. OWEN AVENUE
CLEWISTON, FLORIDA 33440

PREPARED BY:

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238-00-01

TABLE OF CONTENTS

APPENDICES

LIST OF TABLES

LIST OF FIGURES

ACE
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REPORT CERTIFICATION

To the best of my knowledge, all applicable field and analytical procedures comply with the Florida Department of Environmental Protection requirements and all test data and plant operating data are true and correct.

Dagmar Fick

Dagmar Fick, Mechanical Engineer

4/11/2000

Date

1.0 INTRODUCTION

On November 13 through17, 2000, Air Consulting and Engineering, Inc. (ACE) performed Carbon Monoxide (CO) and Volatile Organic Compounds (VOC) testing on the wet scrubber outlet of Boiler 4 at the U.S. Sugar Corporation (USSC) - Clewiston Mill located in Clewiston, Florida. Testing was conducted to satisfy conditions of the Florida Department of Environmental Protection (FDEP) Permit Number 051-0003-009-AC, PSD-FL-272.

United States Environmental Protection Agency (EPA) Method 1-4 (velocity, moisture and CO_2 and O_2 content), 10 (CO), and 25A (VOC) and 18 (CH_4) were used for the emissions testing.

Mr. Don Griffin of USSC coordinated testing and provided the scrubber data. Mr. Darrel Graziani of the FDEP Ft. Myers office observed a portion of the test.

2.0 SUMMARY AND DISCUSSION OF RESULTS

Table 1 is a summary of the emission results, flue gas and boiler parameters. A total of 18 runs were performed.

Bagasse only was used to fire the boiler.

Non-methane VOCs were reported as pounds per hour and pounds per million BTU per hour as propane. In order to obtain non-methane organics emissions, bag samples were taken from the CEM gas stream manifold while running the emissions tests and were analyzed on a Byron 301 hydrocarbon analyzer. The methane was then subtracted from the total to yield non-methane organics.

Complete emission summaries, field data sheets, and CO and VOC data are presented in Appendices A, B, and C.

Production rate summaries are provided in Appendix E. These data were obtained from control room recordings of steam flow, temperature, and pressure as well as feed water temperature and pressure. Steam integrator readings were recorded at the beginning and at the end of the each run.

Table 1. Emission Summary
Boiler 4 - Scrubber Outlet
United States Sugar Corporation - Clewiston Mill
Clewiston, Florida
November 13-17, 2000

Run Number	Date	Time	Boiler Steam Rate lbs/hr	Boiler Heat Input MMBTUH	Stack Flow Rate dscfm	Stack Moisture %	Stack Temperature F	Oxygen %	Carbon Dioxide %	CO Emissions lbs/MMBTU	CO Emissions lbs/hr	Non-Methane VOC Emissions as Propane lbs/MMBTU	Non-Methane VOC Emissions as Propane lbs/hr
1	11/13/00	1134-1240	219474	470.6	155784	22.5	148.9	10.8	9.9	0.921	433.3	0.025	11.98
2		1343-1449	217600	465.9	157058	22.8	148.3	11.0	9.7	0.631	294.1	0.012	5.63
3		1532-1639	221667	474.7	155345	23.8	148.9	10.9	9.8	0.750	356.2	0.029	13.86
4	11/14/00	0838-0945	249730	540.1	155049	22.6	153.1	9.4	11.1	3.031	1637.0	0.161	86.79
5		1024-1130	238356	516.5	154844	23.3	151.1	10.3	10.5	1.360	702.1	0.062	32.02
6		1407-1514	235068	509.6	154535	24.3	152.1	10.1	10.8	2.801	1427.5	0.151	76.85
7	11/15/00	0846-0953	230833	497.5	156986	22.5	148.5	10.6	10.3	0.843	419.4	0.043	21.29
8		1036-1142	249041	542.0	157865	23.4	153.1	10.0	10.7	2.147	1163.8	0.095	51.26
9		1307-1414	263200	579.4	156710	24.6	152.7	9.4	11.2	4.401	2550.2	0.334	193.71
10		1446-1554	241622	523.0	154864	25.1	153.4	9.1	11.4	8.271	4325.9	0.823	430.26
11		1634-1740	261370	565.5	156431	25.0	152.1	9.2	11.3	5.172	2924.9	0.323	182.81
12	11/16/00	0833-0940	267042	578.9	155381	25.7	152.1	9.2	11.4	5.478	3171.3	0.470	271.84
13		1035-1142	250685	542.9	153267	26.8	154.3	9.3	11.2	7.893	4285.3	0.614	333.17
14		1219-1326	260548	565.1	154932	25.9	153.5	9.4	11.0	6.622	3742.0	0.517	292.21
15		1400-1507	252500	547.2	158969	24.7	151.6	10.1	10.6	2.742	1500.3	0.229	125.57
1C	11/17/00	0845-0950	258400	558.2	161372	24.7	152.3	9.5	10.4	4.159	2321.1	0.333	185.93
2C		1044-1150	256667	554.7	160074	25.5	152.4	9.7	10.7	3.108	1724.2	0.219	121.22
3C		1240-1347	262192	566.9	161936	24.7	153.1	9.7	10.6	3.697	2095.9	0.378	214.45

lbs/hr CO = ppmdry CO(2.595 x 10E-9)(28 lb/lb-mole)(dscfm)(60 min/hr)
lbs/hr VOC as propane = (ppmdry propane - (ppmdry CH4)(2.595 x 10E-9)(44.033 lb/lb-mole)(dscfm)(60min/hr)
lbs/MMBTU = (lbs/hr)/heat input in MMBTUH)

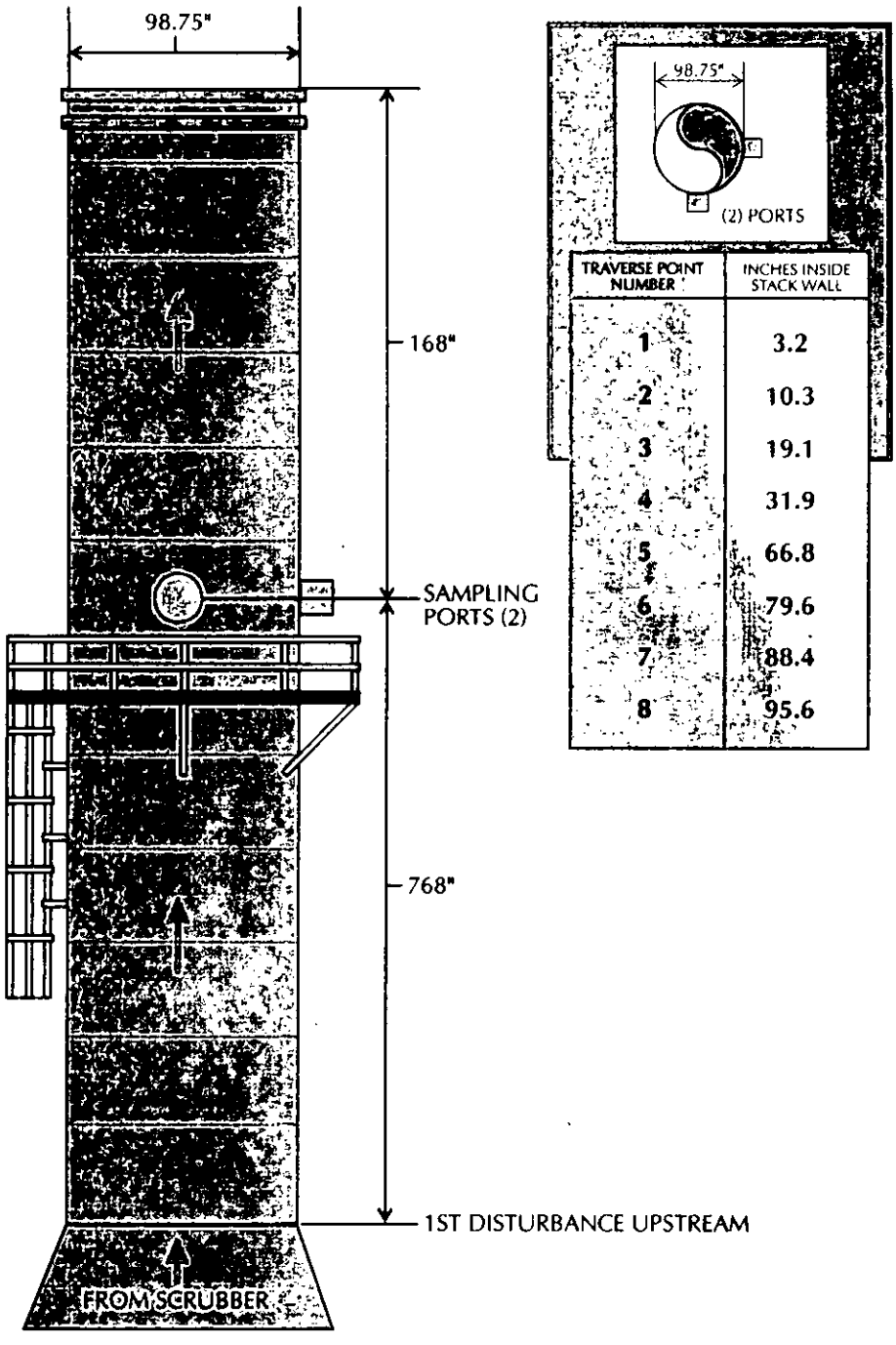
3.0 PROCESS DESCRIPTION AND OPERATIONS

The Number 4 Boiler at USSC's Clewiston plant is a traveling grate stoker design used primarily for bagasse fuel firing. Supplemental oil firing was not used during the emission test series.

Oil meters, steam integrators, and other production monitoring devices were rigorously calibrated prior to the production season.

4.0 SAMPLING POINT LOCATION

Figure 1 is a schematic of the exhaust stack with sampling point locations.



NOTE: NOT TO SCALE

SOURCE: AIR CONSULTING & ENGINEERING, INC. (CLEW4) 11/27/00

ACE AIR CONSULTING & ENGINEERING, INC

FIGURE 1.
SAMPLING POINT LOCATION
BOILER NUMBER 4 SCRUBBER OUTLET
U.S. SUGAR CORPORATION
CLEWISTON, FLORIDA

5.0 FIELD AND ANALYTICAL PROCEDURES

5.1 Determination of Carbon Monoxide Emissions from Stationary Source --EPA Method 10

The sampling system is shown in Figure 2. A sample was drawn from the stack at a rate of approximately 2 SCFH. A stainless steel probe assembly was followed by a three-way stainless steel valve. The sample was pumped through an ice-cooled condensate trap followed by a 3/8" O.D. TEFLON sampling line. Calibration gases were introduced at the sampling interface (the three way valve) through another 3/8" O.D. TEFLON line. The sample pump delivered gases to a manifold system where one flow is divided between a Teledyne 320P O_2 analyzer and a Thermo Electron Model 48 CO analyzer (NDIR with gas filter correlation). Excess flow is dumped to ambient. All instrument responses were recorded on strip chart recorders. The sampling system yields O_2, and CO, concentrations on a dry gas basis.

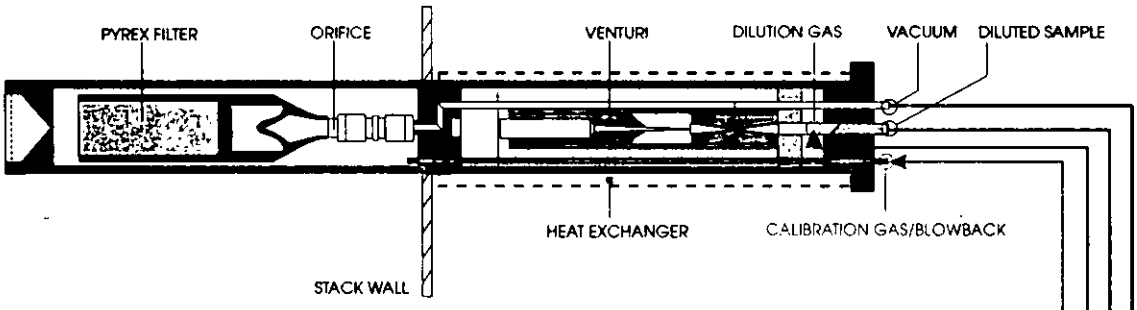
Calibration gases consisted of CO, and O_2 standards in nitrogen. All calibration gases were certified NBS traceable, Protocol 1.

5.2 Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer --EPA Method 25A

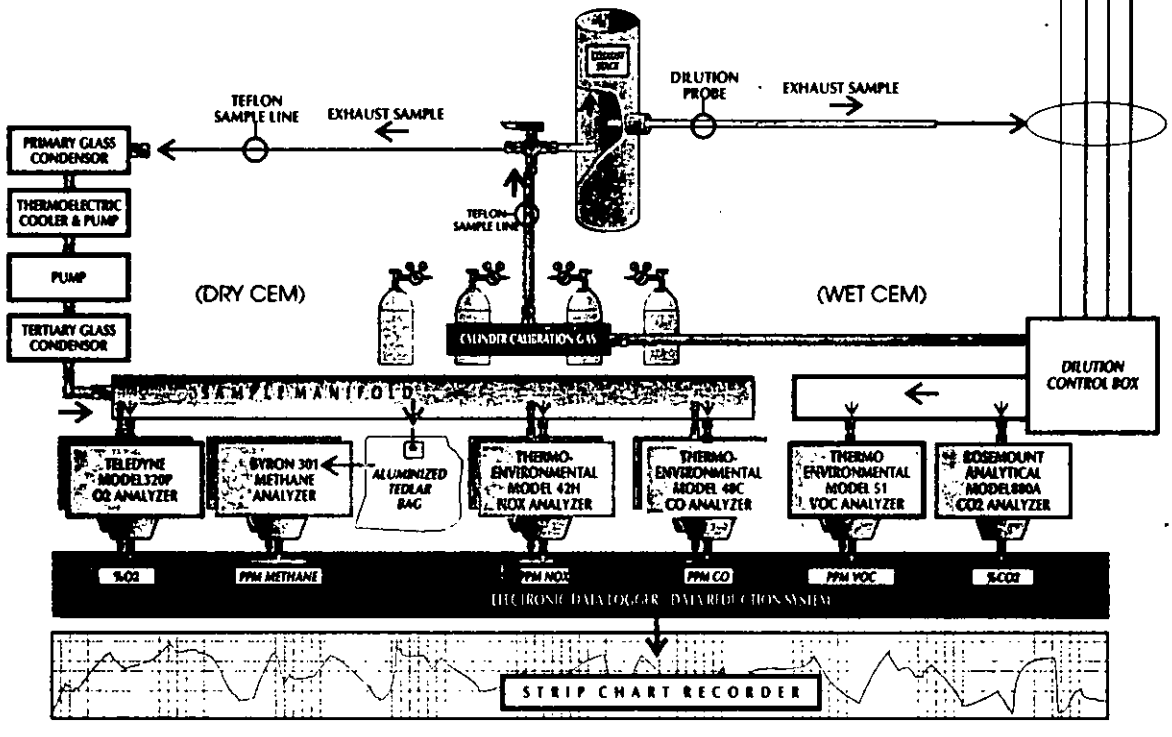
A Flame Ionization Analyzer (FIA) is used to monitor Volatile Organic Compounds (VOC) concentrations based on propane calibrations. Results are reported as ppm carbon. A Thermo Environmental Model 51, a California Analytical 300M HFID or a Ratfisch RS55 VOC analyzer with heated components was used for the testing. Results are actually total hydrocarbons, including methane and ethane.

A schematic of the sample system is provided in Figure 2. Sample gases are continuously removed through a heated probe and heat traced TEFLON sample line maintained at approximately 250°F to the FIA using its internal heated pump. Propane calibration gases are injected through a three-way valve at the probe exit so that they "see" the same sample system as source gases. Three calibration gases plus a zero air gas are utilized for the sample range of interest (0-100 ppm, 0-1000 ppm, and 0-10000 ppm).

Before testing a calibration error test is conducted after adjustment of zero and span gas values by injecting the remaining two gases into the sample system. These gases must demonstrate a linearity of within 5% of the calibration gas values.



DILUTION PROBE DETAIL



CEM MOBILE LABORATORY

NOTE: NOT TO SCALE

SOURCE: AIR CONSULTING & ENGINEERING, INC. (SUG12002) 12/4/00

ACE AIR CONSULTING & ENGINEERING, INC.

FIGURE 2
U.S. EPA METHODS 3A, 7E,10, 18 & 25A CEM
WET & DRY GAS CONTINUOUS MONITORING SCHEMATIC
(DETERMINATION OF OXYGEN & CARBON DIOXIDE CONCENTRATIONS, NITROGEN OXIDE, & VOC AS METHANE & PROPANE)

After each test run (or hourly), a propane and zero gas are injected to demonstrate the drift rate. Both gases should demonstrate a drift of ≤3% of range.

Since all source gases are sampled on a wet basis, final concentrations must be divided by the source dry gas fraction to correct values to a dry gas basis. Total mass emissions as carbon are then determined by multiplying these concentrations by the source standard hourly flow rate. A dilution probe is used to eliminate large quantities of moisture-laden gas going to the instrument.

5.3 Measurements of Gaseous Organic Compound Using GC Analyzer--EPA Method 18

Gaseous volatile organic compound samples were collected in 100 liter aluminized mylar bags. All bags were leaked checked before field use.

Bag samples were taken concurrently with the three one-hour VOC (EPA Method 25A) runs. The samples were then analyzed the same day for methane concentrations on a Byron 301 VOC analyzer. The Byron was calibrated with certified methane standards. The methane concentration is then subtracted from the total VOC concentration (EPA Method 25A) yielding total gaseous non methane organics (TGNMO).

5.4 Flow Rate Determination--EPA Methods 1-4

Flue gas velocity, temperature, molecular weight, moisture and stack pressure were measured using EPA Methods 1-4. Volumetric flow rates and mass emissions were then calculated.

APPENDIX A

COMPLETE EMISSION DATA WITH SAMPLE CALCULATIONS

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/13/00

RUN NUMBER:	1-P		IMPINGER ml.	250.0
BEGIN TIME (hour : minute):	11:34		SILICA GEL. gms.	10.0
END TIME (hour : minute):	12:40		% O2:	10.83
TOTAL RUN TIME:	64	MINUTES	% CO2:	9.91
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000			
FINAL METER:	354.857	CUBIC FT.		
INITIAL METER:	313.030	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.		
PITOT Cp:	0.84			

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	231427
AVG. SQ. RT. VEL. HEAD:	1.1711	VOLUMETRIC FLOW(WVSCFM):	45339
AVG. VEL. HEAD (in H2O):	1.3716	VOLUMETRIC FLOW(DSCFM):	155784
AVG. STACK TEMP. (F):	148.9	**STEAM RATE (LB/Hr):**	**219474**
AVG. METER TEMP. (F):	67.8		
AVG. ORIFICE DIFFERENTIAL:	1.264		
METER ACF:	41.827		
METER SCF:	42.050		
MEASURED SCF MOISTURE:	12.238		
MEASURED MOISTURE %:	22.54		
STACK TEMP. (deg. C):	65.0		
VAPOR PRESSURE:	7.3		
SATURATION MOISTURE %:	24.46		
PERCENT WATER VAPOR:	22.54		
GAS MOLECULAR WT.(dry):	30.02		
GAS MOLECULAR WT.(wet):	27.31		
PERCENT EXCESS AIR:	107.285		
AVERAGE VELOCITY(FPS):	72.5		
MMBTUH(if applicable):	**470.59**		
PERCENT ISOKINETIC:	93.30		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/13/00

RUN NUMBER:	2-P		IMPINGER ml.	274.0
BEGIN TIME (hour : minute):	13:43		SILICA GEL. gms.	10.2
END TIME (hour : minute):	14:49		% O2:	11.04
TOTAL RUN TIME:	64	MINUTES	% CO2:	9.65
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000			
FINAL METER:	400.472	CUBIC FT.		
INITIAL METER:	355.407	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.		
PITOT Cp:	0.84			

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	233929
AVG. SQ. RT. VEL. HEAD:	1.1832	VOLUMETRIC FLOW(WVSCFM):	46469
AVG. VEL. HEAD (in H2O):	1.3999	VOLUMETRIC FLOW(DSCFM):	157058
AVG. STACK TEMP. (F):	148.3	**STEAM RATE (LB/Hr):**	**217600**
AVG. METER TEMP. (F):	69.1		
AVG. ORIFICE DIFFERENTIAL:	1.400		
METER ACF:	45.065		
METER SCF:	45.213		
MEASURED SCF MOISTURE:	13.377		
MEASURED MOISTURE %:	22.83		
STACK TEMP. (deg. C):	64.6		
VAPOR PRESSURE:	7.2		
SATURATION MOISTURE %:	24.04		
PERCENT WATER VAPOR:	22.83		
GAS MOLECULAR WT.(dry):	29.99		
GAS MOLECULAR WT.(wet):	27.25		
PERCENT EXCESS AIR:	111.539		
AVERAGE VELOCITY(FPS):	73.3		
MMBTUH(if applicable):	**465.93**		
PERCENT ISOKINETIC:	99.50		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/13/00

RUN NUMBER:	3-P		IMPINGER ml.	288.0
BEGIN TIME (hour : minute):	15:32		SILICA GEL. gms.	11.8
END TIME (hour : minute):	16:39		% O2:	10.94
TOTAL RUN TIME:	64	MINUTES	% CO2:	9.80
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000			
FINAL METER:	446.352	CUBIC FT.		
INITIAL METER:	401.102	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.		
PITOT Cp:	0.84			

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	234472
AVG. SQ. RT. VEL. HEAD:	1.1831	VOLUMETRIC FLOW(WVSCFM):	48424
AVG. VEL. HEAD (in H2O):	1.3998	VOLUMETRIC FLOW(DSCFM):	155345
AVG. STACK TEMP. (F):	148.9	**STEAM RATE (LB/Hr):**	**221667**
AVG. METER TEMP. (F):	70.6		
AVG. ORIFICE DIFFERENTIAL:	1.400		
METER ACF:	45.25		
METER SCF:	45.271		
MEASURED SCF MOISTURE:	14.112		
MEASURED MOISTURE %:	23.76		
STACK TEMP. (deg. C):	65.0		
VAPOR PRESSURE:	7.3		
SATURATION MOISTURE %:	24.46		
PERCENT WATER VAPOR:	23.76		
GAS MOLECULAR WT.(dry):	30.01		
GAS MOLECULAR WT.(wet):	27.15		
PERCENT EXCESS AIR:	109.568		
AVERAGE VELOCITY(FPS):	73.5		
MMBTUH(if applicable):	**474.68**		
PERCENT ISOKINETIC:	100.73		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/14/00

RUN NUMBER:	4-P		IMPINGER ml.	265.0
BEGIN TIME (hour : minute):	8:38		SILICA GEL. gms.	11.6
END TIME (hour : minute):	9:45		% O2:	9.42
TOTAL RUN TIME:	64	MINUTES	% CO2:	11.10
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000			
FINAL METER:	490.857	CUBIC FT.		
INITIAL METER:	446.898	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.		
PITOT Cp:	0.84			

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	232089
AVG. SQ. RT. VEL. HEAD:	1.1726	VOLUMETRIC FLOW(WVSCFM):	45271
AVG. VEL. HEAD (in H2O):	1.3749	VOLUMETRIC FLOW(DSCFM):	155049
AVG. STACK TEMP. (F):	153.1	**STEAM RATE (LB/Hr):**	**249730**
AVG. METER TEMP. (F):	63.3		
AVG. ORIFICE DIFFERENTIAL:	1.375		
METER ACF:	43.959		
METER SCF:	44.591		
MEASURED SCF MOISTURE:	13.020		
MEASURED MOISTURE %:	22.60		
STACK TEMP. (deg. C):	67.3		
VAPOR PRESSURE:	8.1		
SATURATION MOISTURE %:	27.12		
PERCENT WATER VAPOR:	22.60		
GAS MOLECULAR WT.(dry):	30.15		
GAS MOLECULAR WT.(wet):	27.41		
PERCENT EXCESS AIR:	81.469		
AVERAGE VELOCITY(FPS):	72.7		
MMBTUH(if applicable):	**540.07**		
PERCENT ISOKINETIC:	99.40		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/14/00

RUN NUMBER:	5-P		IMPINGER ml.	280.0
BEGIN TIME (hour : minute):	10:24		SILICA GEL. gms.	10.6
END TIME (hour : minute):	11:30		% O2:	10.34
TOTAL RUN TIME:	64	MINUTES	% CO2:	10.48
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000			
FINAL METER:	536.269	CUBIC FT.		
INITIAL METER:	491.294	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.		
PITOT Cp:	0.84			

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	233037
AVG. SQ. RT. VEL. HEAD:	1.1765	VOLUMETRIC FLOW(WVSCFM):	46974
AVG. VEL. HEAD (in H2O):	1.3842	VOLUMETRIC FLOW(DSCFM):	154844
AVG. STACK TEMP. (F):	151.1	**STEAM RATE (LB/Hr):**	**238356**
AVG. METER TEMP. (F):	69.4		
AVG. ORIFICE DIFFERENTIAL:	1.384		
METER ACF:	44.975		
METER SCF:	45.089		
MEASURED SCF MOISTURE:	13.679		
MEASURED MOISTURE %:	23.28		
STACK TEMP. (deg. C):	66.1		
VAPOR PRESSURE:	7.7		
SATURATION MOISTURE %:	25.78		
PERCENT WATER VAPOR:	23.28		
GAS MOLECULAR WT.(dry):	30.09		
GAS MOLECULAR WT.(wet):	27.28		
PERCENT EXCESS AIR:	97.884		
AVERAGE VELOCITY(FPS):	73.0		
MMBTUH(if applicable):	**516.45**		
PERCENT ISOKINETIC:	100.65		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/14/00

RUN NUMBER:	6-P		IMPINGER ml.	295.0
BEGIN TIME (hour : minute):	14:07		SILICA GEL. gms.	12.3
END TIME (hour : minute):	15:14		% O2:	10.10
TOTAL RUN TIME:	64	MINUTES	% CO2:	10.77
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000			
FINAL METER:	582.569	CUBIC FT.		
INITIAL METER:	536.676	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.		
PITOT Cp:	0.84			

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	235991
AVG. SQ. RT. VEL. HEAD:	1.1884	VOLUMETRIC FLOW(WVSCFM):	49486
AVG. VEL. HEAD (in H2O):	1.4124	VOLUMETRIC FLOW(DSCFM):	154535
AVG. STACK TEMP. (F):	152.1	**STEAM RATE (LB/Hr):**	**235068**
AVG. METER TEMP. (F):	79.3		
AVG. ORIFICE DIFFERENTIAL:	1.413		
METER ACF:	45.893		
METER SCF:	45.170		
MEASURED SCF MOISTURE:	14.465		
MEASURED MOISTURE %:	24.26		
STACK TEMP. (deg. C):	66.7		
VAPOR PRESSURE:	7.9		
SATURATION MOISTURE %:	26.46		
PERCENT WATER VAPOR:	24.26		
GAS MOLECULAR WT.(dry):	30.13		
GAS MOLECULAR WT.(wet):	27.19		
PERCENT EXCESS AIR:	93.602		
AVERAGE VELOCITY(FPS):	73.9		
MMBTUH(if applicable):	**509.56**		
PERCENT ISOKINETIC:	101.03		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/15/00

RUN NUMBER:	7-P		IMPINGER ml.	270.0
BEGIN TIME (hour : minute):	8:46		SILICA GEL. gms.	8.7
END TIME (hour : minute):	9:53		% O2:	10.55
TOTAL RUN TIME:	64	MINUTES	% CO2:	10.31
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000			
FINAL METER:	628.039	CUBIC FT.		
INITIAL METER:	582.919	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.		
PITOT Cp:	0.84			

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	233006
AVG. SQ. RT. VEL. HEAD:	1.1805	VOLUMETRIC FLOW(WVSCFM):	45655
AVG. VEL. HEAD (in H2O):	1.3935	VOLUMETRIC FLOW(DSCFM):	156986
AVG. STACK TEMP. (F):	148.5	**STEAM RATE (LB/Hr):**	**230833**
AVG. METER TEMP. (F):	70.9		
AVG. ORIFICE DIFFERENTIAL:	1.394		
METER ACF:	45.12		
METER SCF:	45.108		
MEASURED SCF MOISTURE:	13.118		
MEASURED MOISTURE %:	22.53		
STACK TEMP. (deg. C):	64.7		
VAPOR PRESSURE:	7.3		
SATURATION MOISTURE %:	24.19		
PERCENT WATER VAPOR:	22.53		
GAS MOLECULAR WT.(dry):	30.07		
GAS MOLECULAR WT.(wet):	27.35		
PERCENT EXCESS AIR:	102.002		
AVERAGE VELOCITY(FPS):	73.0		
MMBTUH(if applicable):	**497.45**		
PERCENT ISOKINETIC:	99.31		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/15/00

RUN NUMBER:	8-P		IMPINGER ml.	290.0
BEGIN TIME (hour : minute):	10:36		SILICA GEL. gms.	10.4
END TIME (hour : minute):	11:42		% O2:	10.00
TOTAL RUN TIME:	64	MINUTES	% CO2:	10.70
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000		-	
FINAL METER:	674.556	CUBIC FT.		
INITIAL METER:	628.350	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.		
PITOT Cp:	0.84			

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	238911
AVG. SQ. RT. VEL. HEAD:	1.2041	VOLUMETRIC FLOW(WVSCFM):	48344
AVG. VEL. HEAD (in H2O):	1.4498	VOLUMETRIC FLOW(DSCFM):	157865
AVG. STACK TEMP. (F):	153.1	**STEAM RATE (LB/Hr):**	**249041**
AVG. METER TEMP. (F):	71.4		
AVG. ORIFICE DIFFERENTIAL:	1.598		
METER ACF:	46.206		
METER SCF:	46.173		
MEASURED SCF MOISTURE:	14.140		
MEASURED MOISTURE %:	23.44		
STACK TEMP. (deg. C):	67.3		
VAPOR PRESSURE:	8.1		
SATURATION MOISTURE %:	27.12		
PERCENT WATER VAPOR:	23.44		
GAS MOLECULAR WT.(dry):	30.11		
GAS MOLECULAR WT.(wet):	27.27		
PERCENT EXCESS AIR:	91.448		
AVERAGE VELOCITY(FPS):	74.9		
MMBTUH(if applicable):	**542.03**		
PERCENT ISOKINETIC:	101.09		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/15/00

RUN NUMBER:	9-P		IMPINGER ml.	310.0
BEGIN TIME (hour : minute):	13:07		SILICA GEL. gms.	9.6
END TIME (hour : minute):	14:14		% O2:	9.37
TOTAL RUN TIME:	64	MINUTES	% CO2:	11.21
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000			
FINAL METER:	720.567	CUBIC FT.		
INITIAL METER:	674.900	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.		
PITOT Cp:	0.84			

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	240524
AVG. SQ. RT. VEL. HEAD:	1.2105	VOLUMETRIC FLOW(WVSCFM):	51039
AVG. VEL. HEAD (in H2O):	1.4654	VOLUMETRIC FLOW(DSCFM):	156710
AVG. STACK TEMP. (F):	152.7	**STEAM RATE (LB/Hr):**	**263200**
AVG. METER TEMP. (F):	64.9		
AVG. ORIFICE DIFFERENTIAL:	1.466		
METER ACF:	45.667		
METER SCF:	46.190		
MEASURED SCF MOISTURE:	15.044		
MEASURED MOISTURE %:	24.57		
STACK TEMP. (deg. C):	67.0		
VAPOR PRESSURE:	8.0		
SATURATION MOISTURE %:	26.83		
PERCENT WATER VAPOR:	24.57		
GAS MOLECULAR WT.(dry):	30.17		
GAS MOLECULAR WT.(wet):	27.18		
PERCENT EXCESS AIR:	80.798		
AVERAGE VELOCITY(FPS):	75.4		
MMBTUH(if applicable):	**579.40**		
PERCENT ISOKINETIC:	101.88		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/15/00

RUN NUMBER:	10-P		IMPINGER ml.	315.0
BEGIN TIME (hour : minute):	14:46		SILICA GEL. gms.	10.0
END TIME (hour : minute):	15:54		% O2:	9.08
TOTAL RUN TIME:	64	MINUTES	% CO2:	11.35
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000		-	
FINAL METER:	766.443	CUBIC FT.		
INITIAL METER:	721.133	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.		
PITOT Cp:	0.84			

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	239615
AVG. SQ. RT. VEL. HEAD:	1.2041	VOLUMETRIC FLOW(WVSCFM):	51868
AVG. VEL. HEAD (in H2O):	1.4498	VOLUMETRIC FLOW(DSCFM):	154864
AVG. STACK TEMP. (F):	153.4	**STEAM RATE (LB/Hr):**	**241622**
AVG. METER TEMP. (F):	66.6		
AVG. ORIFICE DIFFERENTIAL:	1.450		
METER ACF:	45.31		
METER SCF:	45.675		
MEASURED SCF MOISTURE:	15.298		
MEASURED MOISTURE %:	25.09		
STACK TEMP. (deg. C):	67.4		
VAPOR PRESSURE:	8.2		
SATURATION MOISTURE %:	27.29		
PERCENT WATER VAPOR:	25.09		
GAS MOLECULAR WT.(dry):	30.18		
GAS MOLECULAR WT.(wet):	27.12		
PERCENT EXCESS AIR:	76.133		
AVERAGE VELOCITY(FPS):	75.1		
MMBTUH(if applicable):	**523.02**		
PERCENT ISOKINETIC:	101.94		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/15/00

RUN NUMBER:	11-P		IMPINGER ml.	318.0
BEGIN TIME (hour : minute):	16:34		SILICA GEL. gms.	10.0
END TIME (hour : minute):	17:40		% O2:	9.22
TOTAL RUN TIME:	64	MINUTES	% CO2:	11.33
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000			
FINAL METER:	812.959	CUBIC FT.		
INITIAL METER:	766.908	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.		
PITOT Cp:	0.84			

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	241080
AVG. SQ. RT. VEL. HEAD:	1.2131	VOLUMETRIC FLOW(WVSCFM):	52011
AVG. VEL. HEAD (in H2O):	1.4717	VOLUMETRIC FLOW(DSCFM):	156431
AVG. STACK TEMP. (F):	152.1	**STEAM RATE (LB/Hr):**	**261370**
AVG. METER TEMP. (F):	66.5		
AVG. ORIFICE DIFFERENTIAL:	1.472		
METER ACF:	46.051		
METER SCF:	46.436		
MEASURED SCF MOISTURE:	15.439		
MEASURED MOISTURE %:	24.95		
STACK TEMP. (deg. C):	66.7		
VAPOR PRESSURE:	7.9		
SATURATION MOISTURE %:	26.42		
PERCENT WATER VAPOR:	24.95		
GAS MOLECULAR WT.(dry):	30.18		
GAS MOLECULAR WT.(wet):	27.14		
PERCENT EXCESS AIR:	78.436		
AVERAGE VELOCITY(FPS):	75.5		
MMBTUH(if applicable):	**565.50**		
PERCENT ISOKINETIC:	102.60		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/16/00

RUN NUMBER:	12-P		IMPINGER ml.	334.0
BEGIN TIME (hour : minute):	8:33		SILICA GEL. gms.	9.6
END TIME (hour : minute):	9:40		% O2:	9.18
TOTAL RUN TIME:	64	MINUTES	% CO2:	11.39
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000		-	
FINAL METER:	859.394	CUBIC FT.		
INITIAL METER:	813.502	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.		
PITOT Cp:	0.84			

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	241997
AVG. SQ. RT. VEL. HEAD:	1.2157	VOLUMETRIC FLOW(WVSCFM):	53854
AVG. VEL. HEAD (in H2O):	1.4780	VOLUMETRIC FLOW(DSCFM):	155381
AVG. STACK TEMP. (F):	152.1	**STEAM RATE (LB/Hr):**	**267042**
AVG. METER TEMP. (F):	62.1		
AVG. ORIFICE DIFFERENTIAL:	1.478		
METER ACF:	45.892		
METER SCF:	46.664		
MEASURED SCF MOISTURE:	16.173		
MEASURED MOISTURE %:	25.74		
STACK TEMP. (deg. C):	66.7		
VAPOR PRESSURE:	7.9		
SATURATION MOISTURE %:	26.42		
PERCENT WATER VAPOR:	25.74		
GAS MOLECULAR WT.(dry):	30.19		
GAS MOLECULAR WT.(wet):	27.05		
PERCENT EXCESS AIR:	77.866		
AVERAGE VELOCITY(FPS):	75.8		
MMBTUH(if applicable):	**578.89**		
PERCENT ISOKINETIC:	103.80		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/16/00

RUN NUMBER:	13-P		IMPINGER ml.	352.0
BEGIN TIME (hour : minute):	10:35		SILICA GEL. gms.	10.2
END TIME (hour : minute):	11:42		% O2:	9.29
TOTAL RUN TIME:	64	MINUTES	% CO2:	11.16
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000		-	
FINAL METER:	906.148	CUBIC FT.		
INITIAL METER:	859.905	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.		
PITOT Cp:	0.84			

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	243145
AVG. SQ. RT. VEL. HEAD:	1.2157	VOLUMETRIC FLOW(WVSCFM):	56190
AVG. VEL. HEAD (in H2O):	1.4780	VOLUMETRIC FLOW(DSCFM):	153267
AVG. STACK TEMP. (F):	154.3	**STEAM RATE (LB/Hr):**	**250685**
AVG. METER TEMP. (F):	67.9		
AVG. ORIFICE DIFFERENTIAL:	1.478		
METER ACF:	46.243		
METER SCF:	46.503		
MEASURED SCF MOISTURE:	17.049		
MEASURED MOISTURE %:	26.83		
STACK TEMP. (deg. C):	68.0		
VAPOR PRESSURE:	8.4		
SATURATION MOISTURE %:	27.92		
PERCENT WATER VAPOR:	26.83		
GAS MOLECULAR WT.(dry):	30.16		
GAS MOLECULAR WT.(wet):	26.90		
PERCENT EXCESS AIR:	79.326		
AVERAGE VELOCITY(FPS):	76.2		
MMBTUH(if applicable):	**542.94**		
PERCENT ISOKINETIC:	104.87		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/16/00

RUN NUMBER:	14-p		IMPINGER ml.	330.0
BEGIN TIME (hour : minute):	12:19		SILICA GEL. gms.	9.5
END TIME (hour : minute):	13:26		% O2:	9.35
TOTAL RUN TIME:	64	MINUTES	% CO2:	11.04
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000			
FINAL METER:	953.243	CUBIC FT.		
INITIAL METER:	907.381	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.		
PITOT Cp:	0.84			

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	242253
AVG. SQ. RT. VEL. HEAD:	1.2145	VOLUMETRIC FLOW(WVSCFM):	54033
AVG. VEL. HEAD (in H2O):	1.4749	VOLUMETRIC FLOW(DSCFM):	154932
AVG. STACK TEMP. (F):	153.5	**STEAM RATE (LB/Hr):**	**260548**
AVG. METER TEMP. (F):	71.4		
AVG. ORIFICE DIFFERENTIAL:	1.475		
METER ACF:	45.862		
METER SCF:	45.821		
MEASURED SCF MOISTURE:	15.980		
MEASURED MOISTURE %:	25.86		
STACK TEMP. (deg. C):	67.5		
VAPOR PRESSURE:	8.2		
SATURATION MOISTURE %:	27.37		
PERCENT WATER VAPOR:	25.86		
GAS MOLECULAR WT.(dry):	30.14		
GAS MOLECULAR WT.(wet):	27.00		
PERCENT EXCESS AIR:	80.140		
AVERAGE VELOCITY(FPS):	75.9		
MMBTUH(if applicable):	**565.10**		
PERCENT ISOKINETIC:	102.22		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/16/00

RUN NUMBER:	15-p		IMPINGER ml.	310.0
BEGIN TIME (hour : minute):	14:00		SILICA GEL. gms.	9.2
END TIME (hour : minute):	15:07		% O2:	10.11
TOTAL RUN TIME:	64	MINUTES	% CO2:	10.56
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000			
FINAL METER:	999.618	CUBIC FT.		
INITIAL METER:	953.704	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.		
PITOT Cp:	0.84			

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	243937
AVG. SQ. RT. VEL. HEAD:	1.2272	VOLUMETRIC FLOW(WVSCFM):	52094
AVG. VEL. HEAD (in H2O):	1.5060	VOLUMETRIC FLOW(DSCFM):	158969
AVG. STACK TEMP. (F):	151.6	**STEAM RATE (LB/Hr):**	**252500**
AVG. METER TEMP. (F):	71.7		
AVG. ORIFICE DIFFERENTIAL:	1.506		
METER ACF:	45.914		
METER SCF:	45.850		
MEASURED SCF MOISTURE:	15.025		
MEASURED MOISTURE %:	24.68		
STACK TEMP. (deg. C):	66.5		
VAPOR PRESSURE:	7.8		
SATURATION MOISTURE %:	26.14		
PERCENT WATER VAPOR:	24.68		
GAS MOLECULAR WT.(dry):	30.09		
GAS MOLECULAR WT.(wet):	27.11		
PERCENT EXCESS AIR:	93.325		
AVERAGE VELOCITY(FPS):	76.4		
MMBTUH(if applicable):	**547.24**		
PERCENT ISOKINETIC:	99.69		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP.
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/17/00

RUN NUMBER:	1		IMPINGER ml.	320.0
BEGIN TIME (hour : minute):	8:45		SILICA GEL. gms.	11.8
END TIME (hour : minute):	9:50		% O2:	9.51
TOTAL RUN TIME:	64	MINUTES	% CO2:	10.41
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000		PARTICULATE DATA	
FINAL METER:	47.243	CUBIC FT.		
INITIAL METER:	0.130	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.	FILTER mg.:	108.6
PITOT Cp:	0.84		WASH mg.:	3.7

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	248028
AVG. SQ. RT. VEL. HEAD:	1.2462	VOLUMETRIC FLOW(WVSCFM):	52990
AVG. VEL. HEAD (in H2O):	1.5529	VOLUMETRIC FLOW(DSCFM):	161372
AVG. STACK TEMP. (F):	152.3	**STEAM RATE (LB/Hr):**	**258400**
AVG. METER TEMP. (F):	66.0		
AVG. ORIFICE DIFFERENTIAL:	1.553	**PARTICULATE EMISSION RATE:**	
METER ACF:	47.113	**POUNDS PER HOUR:**	**50.40**
METER SCF:	47.561	**POUNDS PER MMBTU:**	**0.090**
MEASURED SCF MOISTURE:	15.618		
MEASURED MOISTURE %:	24.72	**ALLOWABLE EMISSION RATE:**	
STACK TEMP. (deg. C):	66.8	**POUNDS PER HOUR:**	**83.72**
VAPOR PRESSURE:	8.0	**POUNDS PER MMBTU:**	**0.150**
SATURATION MOISTURE %:	26.59		
PERCENT WATER VAPOR:	24.72		
GAS MOLECULAR WT.(dry):	30.05	**METHOD 8 AM**	
GAS MOLECULAR WT.(wet):	27.07		
PERCENT EXCESS AIR:	81.763	PPM:	3.6
AVERAGE VELOCITY(FPS):	77.7	POUNDS PER HOUR:	5.84
MMBTUH(if applicable):	**558.16**	POUNDS PER MMBTU:	0.010
PERCENT ISOKINETIC:	101.87		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP.
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/17/00

RUN NUMBER:	2		IMPINGER ml.	317.0
BEGIN TIME (hour : minute):	10:44		SILICA GEL. gms.	14.0
END TIME (hour : minute):	11:50		% O2:	9.69
TOTAL RUN TIME:	64	MINUTES	% CO2:	10.65
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000		PARTICULATE DATA	
FINAL METER:	100.038	CUBIC FT.		
INITIAL METER:	54.212	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.	FILTER mg.:	124.9
PITOT Cp:	0.84		WASH mg.:	5.3

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	248560
AVG. SQ. RT. VEL. HEAD:	1.2474	VOLUMETRIC FLOW(WVSCFM):	54704
AVG. VEL. HEAD (in H2O):	1.5560	VOLUMETRIC FLOW(DSCFM):	160074
AVG. STACK TEMP. (F):	152.4	**STEAM RATE (LB/Hr):**	**256667**
AVG. METER TEMP. (F):	73.8		
AVG. ORIFICE DIFFERENTIAL:	1.556	**PARTICULATE EMISSION RATE:**	
METER ACF:	45.826	**POUNDS PER HOUR:**	**60.47**
METER SCF:	45.590	**POUNDS PER MMBTU:**	**0.109**
MEASURED SCF MOISTURE:	15.580		
MEASURED MOISTURE %:	25.47	**ALLOWABLE EMISSION RATE:**	
STACK TEMP. (deg. C):	66.9	**POUNDS PER HOUR:**	**83.21**
VAPOR PRESSURE:	8.0	**POUNDS PER MMBTU:**	**0.150**
SATURATION MOISTURE %:	26.67		
PERCENT WATER VAPOR:	25.47		
GAS MOLECULAR WT.(dry):	30.09	**METHOD 8 AM**	
GAS MOLECULAR WT.(wet):	27.01		
PERCENT EXCESS AIR:	85.448	PPM:	4.1
AVERAGE VELOCITY(FPS):	77.9	POUNDS PER HOUR:	6.58
MMBTUH(if applicable):	**554.74**	POUNDS PER MMBTU:	0.012
PERCENT ISOKINETIC:	98.44		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	UNITED STATES SUGAR CORP.
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/17/00

RUN NUMBER:	3		IMPINGER ml.	307.0
BEGIN TIME (hour : minute):	12:40		SILICA GEL. gms.	12.3
END TIME (hour : minute):	13:47		% O2:	9.66
TOTAL RUN TIME:	64	MINUTES	% CO2:	10.58
BAROMETRIC PRESSURE:	30.00	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.00	inches Hg.		
NOZZLE DIAMETER:	0.210	INCHES		
METER CORR. FACTOR:	1.000		PARTICULATE DATA	
FINAL METER:	153.708	CUBIC FT.		
INITIAL METER:	107.102	CUBIC FT.		
STACK AREA:	53.197	SQ. FT.	FILTER mg.:	106.1
PITOT Cp:	0.84		WASH mg.:	3.7

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000241	VOLUMETRIC FLOW(ACFM):	249043
AVG. SQ. RT. VEL. HEAD:	1.2512	VOLUMETRIC FLOW(WVSCFM):	53018
AVG. VEL. HEAD (in H2O):	1.5654	VOLUMETRIC FLOW(DSCFM):	161936
AVG. STACK TEMP. (F):	153.1	**STEAM RATE (LB/Hr):**	**262192**
AVG. METER TEMP. (F):	79.1		
AVG. ORIFICE DIFFERENTIAL:	1.566	**PARTICULATE EMISSION RATE:**	
METER ACF:	46.606	**POUNDS PER HOUR:**	**51.23**
METER SCF:	45.905	**POUNDS PER MMBTU:**	**0.090**
MEASURED SCF MOISTURE:	15.029		
MEASURED MOISTURE %:	24.66	**ALLOWABLE EMISSION RATE:**	
STACK TEMP. (deg. C):	67.3	**POUNDS PER HOUR:**	**85.03**
VAPOR PRESSURE:	8.1	**POUNDS PER MMBTU:**	**0.150**
SATURATION MOISTURE %:	27.12		
PERCENT WATER VAPOR:	24.66		
GAS MOLECULAR WT.(dry):	30.08	**METHOD 6 SO2**	
GAS MOLECULAR WT.(wet):	27.10		
PERCENT EXCESS AIR:	84.762	PPM:	2.5
AVERAGE VELOCITY(FPS):	78.0	POUNDS PER HOUR:	4.01
MMBTUH(if applicable):	**566.87**	POUNDS PER MMBTU:	0.007
PERCENT ISOKINETIC:	97.98		

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/13/00
RUN NUMBER: 1-P **START:** 11:34 **END:** 12:40

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP, F	METER TEMP F
1 - 1	95.56	1.40	1.29	1.29	148	65
1 - 2	88.41	1.40	1.29	1.29	149	65
1 - 3	79.61	1.35	1.24	1.24	149	65
1 - 4	66.83	1.40	1.29	1.29	148	65
1 - 5	31.92	1.35	1.24	1.24	148	66
1 - 6	19.14	1.40	1.29	1.29	149	66
1 - 7	10.34	1.40	1.29	1.29	149	66
1 - 8	3.19	1.40	1.29	1.29	149	67
2 - 1		1.30	1.20	1.20	150	68
2 - 2		1.30	1.20	1.20	150	69
2 - 3		1.30	1.20	1.20	150	69
2 - 4		1.40	1.29	1.29	149	70
2 - 5		1.40	1.29	1.29	150	70
2 - 6		1.40	1.29	1.29	149	71
2 - 7		1.40	1.29	1.29	148	71
2 - 8		1.35	1.24	1.24	148	72
AVERAGES:		1.372		1.264	148.94	67.81

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/13/00
RUN NUMBER: 2-P **START:** 13:43 **END:** 14:49

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP, F	METER TEMP,F
1 - 1	95.56	1.40	1.40	1.40	150	67
1 - 2	88.41	1.40	1.40	1.40	150	67
1 - 3	79.61	1.35	1.35	1.35	149	67
1 - 4	66.83	1.40	1.40	1.40	150	67
1 - 5	31.92	1.40	1.40	1.40	149	67
1 - 6	19.14	1.40	1.40	1.40	149	67
1 - 7	10.34	1.40	1.40	1.40	148	68
1 - 8	3.19	1.40	1.40	1.40	149	69
2 - 1		1.45	1.45	1.45	148	69
2 - 2		1.40	1.40	1.40	148	70
2 - 3		1.40	1.40	1.40	147	70
2 - 4		1.40	1.40	1.40	147	71
2 - 5		1.35	1.35	1.35	147	71
2 - 6		1.40	1.40	1.40	147	71
2 - 7		1.40	1.40	1.40	147	72
2 - 8		1.45	1.45	1.45	147	72
AVERAGES:		1.400	1.400	148.25		69.06

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/13/00
RUN NUMBER: 3-P **START:** 15:32 **END:** 16:39

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP. F	METER TEMP.F
1 - 1	95.56	1.35	1.35	1.35	148	69
1 - 2	88.41	1.35	1.35	1.35	150	69
1 - 3	79.61	1.40	1.40	1.40	150	69
1 - 4	66.83	1.40	1.40	1.40	149	69
1 - 5	31.92	1.40	1.40	1.40	149	69
1 - 6	19.14	1.40	1.40	1.40	150	70
1 - 7	10.34	1.45	1.45	1.45	149	70
1 - 8	3.19	1.40	1.40	1.40	149	70
2 - 1		1.45	1.45	1.45	148	71
2 - 2		1.40	1.40	1.40	149	71
2 - 3		1.40	1.40	1.40	149	71
2 - 4		1.35	1.35	1.35	149	71
2 - 5		1.40	1.40	1.40	148	72
2 - 6		1.40	1.40	1.40	149	72
2 - 7		1.45	1.45	1.45	149	73
2 - 8		1.40	1.40	1.40	148	73
AVERAGES:		1.400	1.400	148.94	70.56	

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/14/00
RUN NUMBER: 4-P **START:** 8:38 **END:** 9:45

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP. F	METER TEMP.F
1 - 1	95.56	1.40	1.40	1.40	152	60
1 - 2	88.41	1.40	1.40	1.40	153	60
1 - 3	79.61	1.35	1.35	1.35	153	60
1 - 4	66.83	1.35	1.35	1.35	153	60
1 - 5	31.92	1.40	1.40	1.40	153	61
1 - 6	19.14	1.40	1.40	1.40	153	61
1 - 7	10.34	1.40	1.40	1.40	153	62
1 - 8	3.19	1.35	1.35	1.35	152	62
2 - 1		1.40	1.40	1.40	152	63
2 - 2		1.40	1.40	1.40	153	64
2 - 3		1.40	1.40	1.40	154	65
2 - 4		1.35	1.35	1.35	155	66
2 - 5		1.35	1.35	1.35	154	66
2 - 6		1.35	1.35	1.35	154	67
2 - 7		1.35	1.35	1.35	153	67
2 - 8		1.35	1.35	1.35	153	68
AVERAGES:		1.375		1.375	153.13	63.25

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/14/00
RUN NUMBER: 5-P **START:** 10:24 **END:** 11:30

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP. F	METER TEMP.F
1 - 1	95.56	1.40	1.40	1.40	150	66
1 - 2	88.41	1.40	1.40	1.40	150	66
1 - 3	79.61	1.40	1.40	1.40	149	66
1 - 4	66.83	1.35	1.35	1.35	150	67
1 - 5	31.92	1.40	1.40	1.40	150	67
1 - 6	19.14	1.40	1.40	1.40	150	68
1 - 7	10.34	1.35	1.35	1.35	151	68
1 - 8	3.19	1.35	1.35	1.35	152	69
2 - 1		1.40	1.40	1.40	151	70
2 - 2		1.35	1.35	1.35	151	70
2 - 3		1.35	1.35	1.35	150	71
2 - 4		1.45	1.45	1.45	152	71
2 - 5		1.40	1.40	1.40	153	72
2 - 6		1.40	1.40	1.40	153	73
2 - 7		1.40	1.40	1.40	153	73
2 - 8		1.35	1.35	1.35	152	74
AVERAGES:		1.384		1.384	151.06	69.44

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/14/00
RUN NUMBER: 6-P **START:** 14:07 **END:** 15:14

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP, F	METER TEMP,F
1 - 1	95.56	1.40	1.40	1.40	151	72
1 - 2	88.41	1.40	1.40	1.40	152	73
1 - 3	79.61	1.45	1.45	1.45	153	74
1 - 4	66.83	1.40	1.40	1.40	152	75
1 - 5	31.92	1.35	1.35	1.35	150	76
1 - 6	19.14	1.40	1.40	1.40	149	77
1 - 7	10.34	1.45	1.45	1.45	150	78
1 - 8	3.19	1.40	1.40	1.40	152	79
2 - 1		1.45	1.45	1.45	149	81
2 - 2		1.40	1.40	1.40	152	82
2 - 3		1.40	1.40	1.40	153	83
2 - 4		1.40	1.40	1.40	154	83
2 - 5		1.45	1.45	1.45	154	84
2 - 6		1.45	1.45	1.45	154	84
2 - 7		1.40	1.40	1.40	155	84
2 - 8		1.40	1.40	1.40	154	84
AVERAGES:		1.413		1.413	152.13	79.31

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/15/00
RUN NUMBER: 7-P **START:** 8:46 **END:** 9:53

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP, F	METER TEMP,F
1 - 1	95.56	1.45	1.45	1.45	148	66
1 - 2	88.41	1.40	1.40	1.40	148	67
1 - 3	79.61	1.45	1.45	1.45	147	68
1 - 4	66.83	1.45	1.45	1 45	146	69
1 - 5	31.92	1.40	1.40	1.40	148	70
1 - 6	19.14	1.35	1.35	1.35	149	71
1 - 7	10.34	1.40	1.40	1.40	149	71
1 - 8	3.19	1.40	1.40	1.40	148	72
2 - 1		1.40	1.40	1.40	147	72
2 - 2		1.40	1.40	1.40	149	72
2 - 3		1.35	1.35	1.35	150	72
2 - 4		1.40	1.40	1.40	149	72
2 - 5		1.40	1.40	1.40	149	72
2 - 6		1.35	1.35	1.35	149	73
2 - 7		1.35	1.35	1.35	150	74
2 - 8		1.35	1 35	1.35	150	74
AVERAGES:		1.394	1.394		148.50	70 94

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/15/00
RUN NUMBER: 8-P **START:** 10:36 **END:** 11:42

SOURCE PARAMETER ENTRIES

PORT-POINT	"Inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP. F	METER TEMP.F
1 - 1	95.56	1.45	1.60	1.60	153	71
1 - 2	88.41	1.45	1.60	1.60	153	71
1 - 3	79.61	1.45	1.60	1.60	154	71
1 - 4	66.83	1.45	1.60	1.60	153	71
1 - 5	31.92	1.50	1.65	1.65	152	71
1 - 6	19.14	1.50	1.65	1.65	152	71
1 - 7	10.34	1.45	1.60	1.60	152	71
1 - 8	3.19	1.40	1.54	1.54	152	71
2 - 1		1.40	1.54	1.54	152	71
2 - 2		1.50	1.65	1.65	153	72
2 - 3		1.50	1.65	1.65	154	72
2 - 4		1.45	1.60	1.60	154	72
2 - 5		1.45	1.60	1.60	155	72
2 - 6		1.45	1.60	1.60	154	72
2 - 7		1.40	1.54	1.54	154	72
2 - 8		1.40	1.54	1.54	153	72
AVERAGES:		1.450	1.598		153.13	71.44

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/15/00
RUN NUMBER: 9-P **START:** 13:07 **END:** 14:14

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP. F	METER TEMP F
1 - 1	95.56	1.50	1.50	1.50	152	63
1 - 2	88.41	1.50	1.50	1.50	152	63
1 - 3	79.61	1.50	1.50	1.50	152	63
1 - 4	66.83	1.45	1.45	1.45	153	63
1 - 5	31.92	1.45	1.45	1.45	153	63
1 - 6	19.14	1.45	1.45	1.45	153	64
1 - 7	10.34	1.40	1.40	1.40	154	64
1 - 8	3.19	1.40	1.40	1.40	155	65
2 - 1		1.45	1.45	1.45	152	65
2 - 2		1.50	1.50	1.50	153	66
2 - 3		1.50	1.50	1.50	153	66
2 - 4		1.50	1.50	1.50	152	66
2 - 5		1.50	1.50	1.50	152	66
2 - 6		1.45	1.45	1.45	152	67
2 - 7		1.45	1.45	1.45	153	67
2 - 8		1.45	1.45	1.45	152	67
AVERAGES:		1.466	1.466		152.69	64.88

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/15/00
RUN NUMBER: 10-P **START:** 14:46 **END:** 15:54

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE DELTA P CALC.	ACTUAL	STACK TEMP. F	METER TEMP.F
1 - 1	95.56	1.50	1.50	1.50	152	65
1 - 2	88.41	1.50	1.50	1.50	152	65
1 - 3	79.61	1.50	1.50	1.50	153	65
1 - 4	66.83	1.45	1.45	1.45	154	65
1 - 5	31.92	1.45	1.45	1.45	155	65
1 - 6	19.14	1.45	1.45	1.45	155	66
1 - 7	10.34	1.45	1.45	1.45	155	66
1 - 8	3.19	1.40	1.40	1.40	154	66
2 - 1		1.45	1.45	1.45	153	67
2 - 2		1.50	1.50	1.50	155	67
2 - 3		1.45	1.45	1.45	155	67
2 - 4		1.45	1.45	1.45	154	68
2 - 5		1.45	1.45	1.45	154	68
2 - 6		1.40	1.40	1.40	152	68
2 - 7		1.40	1.40	1.40	151	69
2 - 8		1.40	1.40	1.40	150	69
AVERAGES:		1.450		1.450	153.38	66.63

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/15/00
RUN NUMBER: 11-P **START:** 16:34 **END:** 17:40

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE DELTA P CALC.	ACTUAL	STACK TEMP F	METER TEMP F
1 - 1	95.56	1.50	1.50	1.50	151	65
1 - 2	88.41	1.50	1.50	1.50	152	65
1 - 3	79.61	1.50	1.50	1.50	152	65
1 - 4	66.83	1.45	1.45	1.45	153	65
1 - 5	31.92	1.45	1.45	1.45	152	65
1 - 6	19.14	1.45	1.45	1.45	151	65
1 - 7	10.34	1.50	1.50	1.50	151	66
1 - 8	3.19	1.50	1.50	1.50	152	66
2 - 1		1.45	1.45	1.45	151	67
2 - 2		1.45	1.45	1.45	152	67
2 - 3		1.50	1.50	1.50	152	67
2 - 4		1.50	1.50	1.50	152	67
2 - 5		1.50	1.50	1.50	153	68
2 - 6		1.45	1.45	1.45	153	68
2 - 7		1.45	1.45	1.45	154	69
2 - 8		1.40	1.40	1.40	152	69
AVERAGES:		1.472		1.472	152.06	66.50

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/16/00
RUN NUMBER: 12-P **START:** 8:33 **END:** 9:40

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP. F	METER TEMP.F
1 - 1	95.56	1.50	1.50	1.50	150	59
1 - 2	88.41	1.50	1.50	1.50	152	59
1 - 3	79.61	1.45	1.45	1.45	152	59
1 - 4	66.83	1.45	1.45	1.45	152	59
1 - 5	31.92	1.50	1.50	1.50	152	59
1 - 6	19.14	1.45	1.45	1.45	153	60
1 - 7	10.34	1.45	1.45	1.45	153	60
1 - 8	3.19	1.50	1.50	1.50	152	61
2 - 1		1.50	1.50	1.50	151	62
2 - 2		1.50	1.50	1.50	152	63
2 - 3		1.50	1.50	1.50	152	64
2 - 4		1.50	1.50	1.50	152	64
2 - 5		1.45	1.45	1.45	152	65
2 - 6		1.45	1.45	1.45	153	66
2 - 7		1.50	1.50	1.50	152	67
2 - 8		1.45	1.45	1.45	153	67
AVERAGES:		1.478		1.478	152.06	62.13

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/16/00
RUN NUMBER: 13-P **START:** 10:35 **END:** 11:42

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP. F	METER TEMP.F
1 - 1	95.56	1.45	1.45	1.45	153	65
1 - 2	88.41	1.45	1.45	1.45	154	65
1 - 3	79.61	1.45	1.45	1.45	153	65
1 - 4	66.83	1.50	1.50	1.50	154	65
1 - 5	31.92	1.50	1.50	1.50	152	65
1 - 6	19.14	1.50	1.50	1.50	153	65
1 - 7	10.34	1.50	1.50	1.50	155	66
1 - 8	3.19	1.45	1.45	1.45	155	67
2 - 1		1.45	1.45	1.45	152	68
2 - 2		1.50	1.50	1.50	154	69
2 - 3		1.50	1.50	1.50	155	69
2 - 4		1.50	1.50	1.50	155	70
2 - 5		1.50	1.50	1.50	156	71
2 - 6		1.50	1.50	1.50	156	72
2 - 7		1.45	1.45	1.45	156	72
2 - 8		1.45	1.45	1.45	156	73
AVERAGES:		1.478		1.478	154.31	67.94

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/16/00
RUN NUMBER: 14-p **START:** 12:19 **END:** 13:26

SOURCE PARAMETER ENTRIES

PORT-POINT			"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP, F	METER TEMP,F
1	-	1	95.56	1.50	1.50	1.50	153	70
1	-	2	88.41	1.50	1.50	1.50	153	70
1	-	3	79.61	1.50	1.50	1.50	153	70
1	-	4	66.83	1.45	1.45	1.45	154	70
1	-	5	31.92	1.45	1.45	1.45	154	71
1	-	6	19.14	1.45	1.45	1.45	154	71
1	-	7	10.34	1.45	1.45	1.45	154	71
1	-	8	3.19	1.50	1.50	1.50	155	71
2	-	1		1.45	1.45	1.45	153	71
2	-	2		1.45	1.45	1.45	154	72
2	-	3		1.50	1.50	1.50	153	72
2	-	4		1.50	1.50	1.50	153	72
2	-	5		1.50	1.50	1.50	154	72
2	-	6		1.50	1.50	1.50	153	73
2	-	7		1.45	1.45	1.45	153	73
2	-	8		1.45	1.45	1.45	153	73
AVERAGES:				1.475	1.475		153.50	71.38

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/16/00
RUN NUMBER: 15-p **START:** 14:00 **END:** 15:07

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP. F	METER TEMP.F
1 - 1	95.56	1.50	1.50	1.50	153	71
1 - 2	88.41	1.50	1.50	1.50	152	71
1 - 3	79.61	1.55	1.55	1.55	151	71
1 - 4	66.83	1.55	1.55	1.55	151	71
1 - 5	31.92	1.50	1.50	1.50	152	71
1 - 6	19.14	1.50	1.50	1.50	151	71
1 - 7	10.34	1.50	1.50	1.50	152	71
1 - 8	3.19	1.45	1.45	1.45	152	71
2 - 1		1.50	1.50	1.50	151	72
2 - 2		1.55	1.55	1.55	151	72
2 - 3		1.55	1.55	1.55	150	72
2 - 4		1.55	1.55	1.55	151	72
2 - 5		1.50	1.50	1.50	152	72
2 - 6		1.50	1.50	1.50	152	73
2 - 7		1.45	1.45	1.45	153	73
2 - 8		1.45	1.45	1.45	152	73
AVERAGES:		1.506	1.506		151.63	71.69

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP.
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/17/00
RUN NUMBER: 1 **START:** 8:45 **END:** 9:50

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP. F	METER TEMP.F
1 - 1	95.56	1.55	1.55	1.55	148	62
1 - 2	88.41	1.55	1.55	1.55	150	62
1 - 3	79.61	1.60	1.60	1.60	152	62
1 - 4	66.83	1.60	1.60	1.60	153	62
1 - 5	31.92	1.60	1.60	1.60	154	63
1 - 6	19.14	1.55	1.55	1.55	154	63
1 - 7	10.34	1.50	1.50	1.50	154	64
1 - 8	3.19	1.50	1.50	1.50	153	65
2 - 1		1.50	1.50	1.50	151	67
2 - 2		1.60	1.60	1.60	152	68
2 - 3		1.60	1.60	1.60	153	68
2 - 4		1.55	1.55	1.55	152	69
2 - 5		1.55	1.55	1.55	152	69
2 - 6		1.55	1.55	1.55	153	70
2 - 7		1.55	1.55	1.55	153	71
2 - 8		1.50	1.50	1.50	153	71
AVERAGES:		1.553		1.553	152.31	66.00

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP.
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/17/00
RUN NUMBER: 2 **START:** 10:44 **END:** 11:50

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP. F	METER TEMP.F
1 - 1	95.56	1.60	1.60	1.60	153	70
1 - 2	88.41	1.60	1.60	1.60	152	70
1 - 3	79.61	1.60	1.60	1.60	152	70
1 - 4	66.83	1.55	1.55	1.55	152	70
1 - 5	31.92	1.55	1.55	1.55	153	71
1 - 6	19.14	1.55	1.55	1.55	153	71
1 - 7	10.34	1.50	1.50	1.50	152	72
1 - 8	3.19	1.50	1.50	1.50	152	72
2 - 1		1.55	1.55	1.55	152	74
2 - 2		1.60	1.60	1.60	152	75
2 - 3		1.60	1.60	1.60	152	75
2 - 4		1.60	1.60	1.60	153	76
2 - 5		1.55	1.55	1.55	153	77
2 - 6		1.55	1.55	1.55	153	78
2 - 7		1.50	1.50	1.50	153	79
2 - 8		1.50	1.50	1.50	152	80
AVERAGES:		1.556		1.556	152.44	73.75

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: UNITED STATES SUGAR CORP.
LOCATION: CLEWISTON, FLORIDA
SOURCE: BOILER # 4
DATE: 11/17/00
RUN NUMBER: 3 **START:** 12:40 **END:** 13:47

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP. F	METER TEMP.F
1 - 1	95.56	1.60	1.60	1.60	154	80
1 - 2	88.41	1.60	1.60	1.60	154	80
1 - 3	79.61	1.60	1.60	1.60	153	79
1 - 4	66.83	1.60	1.60	1.60	152	79
1 - 5	31.92	1.55	1.55	1.55	153	79
1 - 6	19.14	1.55	1.55	1.55	153	79
1 - 7	10.34	1.50	1.50	1.50	152	79
1 - 8	3.19	1.50	1.50	1.50	152	79
2 - 1		1.55	1.55	1.55	152	79
2 - 2		1.60	1.60	1.60	152	79
2 - 3		1.60	1.60	1.60	152	79
2 - 4		1.60	1.60	1.60	154	79
2 - 5		1.60	1.60	1.60	154	79
2 - 6		1.55	1.55	1.55	155	79
2 - 7		1.55	1.55	1.55	155	79
2 - 8		1.50	1.50	1.50	153	79
AVERAGES:		1.566		1.566	153.13	79.13

AIR CONSULTING and ENGINEERING, INC.
SAMPLE CALCULATIONS

UNITED STATES SUGAR CORP
CLEWISTON, FLORIDA
BOILER # 4
11-13-00

RUN NUMBER: 1-P

NOZZLE AREA SQ.FT.:
An=Pi*(Rn)E2 = Pi*(Dn/2)E2 = Pi*[(Dn/2)E2]*[(1ft/12in)E2]
=Pi*(Dn)E2 / (576) = (3.1416)*[(0.21)E2]/(576)
= 0.000241

METER ACTUAL CU. FEET:
Vm = (Vm final) - (Vm initial)
= (354.857) - (313.03)
= 41.827

METER STANDARD CU. FEET:
VMstd=(K1)*(Vm)*(Y)*{(Pbar)+[(DHavg)/(13.6)]}/[(TMavg)+(460)]
= (17.64)*(41.827)*(0.9996)*{(30)+[(1.26)/(13.6)]}/[(67.8)+(460)]
= 42.05

MEASURED SCF MOISTURE:
VWstd=(K2)*(Vlc)
= (0.04707)*(250 + 10)
= 12.238

MEASURED % MOISTURE:
Bwm%={(VWstd)/[(VMstd)+(VWstd)]}*100%
= {(12.238)/[(42.05)+(12.238)]}*100%
= 22.54%

STACK TEMP. Deg C
Tsc=[(TSavg)-32]*5/9
= [(148.9)-32]*5/9
= 65

VAPOR PREASURE (in Hg):
Pv={2.718E[18.6866-0.00244*(273+(Tsc))-4509.47/(273+(Tsc))-
149541/((273+(Tsc))E2)]}/3.375
= {2.718E[18.688-0.00244*(273+(65))-4509.47/(273+(65))-
149541/((273+(65))E2)]}/3.375
= 7.34

SATURATION MOISTURE %:
Bwsat%=(Pv)/(Ps)*100
=(7.34)/(30)*100
= 24.46

PERCENT WATER VAPOR:
Bws% = Bwm% IF Bwm% < Bwsat%
Bws% = Bwsat% IF Bwsat% < Bwm%
= 22.54

GAS MOLECULAR WT.(dry):
Md = [(0.440)*(%CO2)]+[(0.320)*(%O2)]+{(0.280)*[(%N2)+(%CO)]}
= [(0.440)*(%CO2)]+[(0.320)*(%O2)]+{(0.280)*[(100)-(%CO2)-(%O2)]}
= [(0.440)*(9.91)]+[(0.032)*(10.83)]+{(0.280)*(79.26)]}
= 30

GAS MOLECULAR WT.(wet): Ms= {(Md)*[1-(Bws%/100)]}+[(18.0)*(Bws%/100)]
= {(30)*[1-(0.2254)]}+[(18.0)*(0.2254)]
= 27.31

PERCENT EXCESS AIR: %EA={(%O2)/{[(0.264)*(%N2)]-(%O2)}}*(100%)
= {(10.83)/{[(0.264)*(79.26)]-(10.83)}}*(100%)
= 107.28

AVERAGE VELOCITY(FPS): VSavg=(85.48)*(Cp)*(ASRVH)*{[(TSavg)+(460)]/[(Ms)*(Ps)]}E1/2
= (85.48)*(0.84)*(1.17)*{[(148.9)+(460)]/[(27.3)*(30)]}E1/2
= 72.51

PERCENT ISOKINETIC: %Iso={(K4)*(TSavg+460)*(VMstd)/{(Ps)*(Vs)*(An)*(time)*[1-(bws%/100)]}}
*100
={ (0.09450)*(148.9+460)*(42.05)/{(30)*(72.51)*(0.000241)*(64)*[1-(22.54/100)]} }*100%
= 93.3

VOLUMETRIC FLOW(ACFM): QS=(VSavg)*(As)*(60)
= (72.51)*(53.197)*(60)
= 231427.2

VOLUMETRIC FLOW(WVSCFM): WVSCFM=(QS)*(17.64)*(Bws%/100)*(Ps)/(TSavg+460)
= (231427.2)*(17.64)*(22.54/100)*(30)/(148.9+460)
= 45339.2

VOLUMETRIC FLOW(DSCFM): QSstd=(QS)*(17.64)*[1-(Bws%/100)]*(Ps)/(TSavg+460)
= (231427.2)*(17.64)*[1-(22.54/100)]*(30)/(148.9+460)
= 155783.8

OIL USAGE RATE (GPH): OUR=[(Oil met fin) - (Oil met init)] * (Oil met fact) * (60) / (tot min)
= [(0) - (0)] * (1) * (60) / (76.0000000000001)
= 0

STEAM RATE (LB/Hr): SR= [(Stm Int fin) - (Stm Int init)] * (Stm Int Fact) * (60) / (tot min)
= [(95760) - (95482)] * (1000) * (60) / (76.0000000000001)
= 219474

NET STEAM (MMBTU/Hr): NS = [(Stm h) - (Water h)] * (SR) / {(1,000,000) * [(Boiler Eff)/(100)]}
= [(1399.8) - (220.5)] * (219474) / {(1,000,000) * [(55) / (100)]}
= 470.6

HEAT INPUT FROM OIL: HO = (OUR) * (150,000) / (1,000,000)
= (470.6) * (150,000) / (1,000,000)
= 0

HEAT INPUT FROM NON OIL: HNO = (NS) - (HO)
= (470.6) - (0)
= 470.6

ALLOWABLE EMISSION (lb/Hr) = [(HO) * (Allow Oil)] + [(HNO) * (Allow Non Oil)]
= [(0) * (0.1)] + [(470.6) * (0.15)]
= 70.59

ALLOWABLE EMMISION: = (Allow lb/Hr) / (NS)
(lb/MMBTU)
= (70.59) / (470.6)
= 0.15

GAS EMISSIONS

NOx POUNDS PER HOUR	NOx LB/Hr=(K)*(NOxPPM)*(SCFMD)*(60)
NOx POUNDS PER MMBTU	NOx LB/MMBTU=(K)*(NOxPPM)*(F)*(20.9)/[(20.9)-(%O2)]
VOC POUNDS PER HOUR	VOC LB/Hr=(K)*{[(VOC as C3H8 PPM)*(3)]-(PPM CH4)}*(SCFMD)*(60) = (0.00000003114)*{[(16.9)*(3)]-(17)}*(155784)*(60) = 9.8
VOC POUNDS PER MMBTU	VOC LB/MMBTU=(K)*{[(VOC as C3H8 PPM)*(3)]-(PPM CH4)}*(F)*(20.9)/[(20.9)-(%O2)] = (0.00000003114)*{[(16.9)*(3)]-(17)}*(NA)*(20.9)/[(20.9)-(10.83)] = 0.021
CO POUNDS PER HOUR	CO LB/Hr=(K)*(CO PPM)*(SCFMD)*(60) = (0.00000007266)*(638)*(155784)*(60) = 433.3
CO POUNDS PER MMBTU	CO LB/MMBTU=(K)*(CO PPM)*(F)*(20.9)/[(20.9)-(%O2)] = (0.00000007266)*(638)*(NA)*(20.9)/[(20.9)-(10.83)] = 0.9
SO2 POUNDS PER HOUR	SO2 LB/Hr=(K)*(SO2 PPM)*(SCFMD)*(60)
SO2 POUNDS PER MMBTU	SO2 LB/MMBTU=(K)*(SO2 PPM)*(F)*(20.9)/[(20.9)-(%O2)]

APPENDIX B

FIELD DATA SHEETS

PLANT U.S. SUGAR CORP
SOURCE UNIT # 4 BOILER
PLANT LOCATION CLEWISTON, FL.
TYPE OF SAMPLING TRAIN EPA-5
TYPE OF SAMPLES PART.
DATE 11-13-00 RUN NUMBER 1-P
TIME START 1134 TIME END 1240
SAMPLE TIME 4 , 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 28 FDA 0.72
NOMOGRAPH Cf 0.92 PITOT Cf 0.84
Pb ('Hg) 30.00 Ps ('Hg) 30.00
WEATHER CLEAR TEMP (F) 82
METER BOX NO. 2 H 1.6278 Y 0.9996
NOZZLE IDENTIFICATION NO. BOX # 2
NOZZLE CAL .210 , .210 , .210 = 0.210
STACK DIMENSIONS 98.75"
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) >1.5 (DOWNSTREAM) >2.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) ~190' UMBILICAL LENGTH 200'
AGENCY OBSERVER(S)
TEST COORDINATOR(S) DON GRIFFIN, DAVE BUFF
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
GAINESVILLE, FLORIDA 32653
(904) 335-1889 - OFFICE / (904) 335-1891 - FAX

STACK CONFIGURATION

REMARKS:

TEST ID
PAGE 1 OF 2
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 354.857 (FT3)
INITIAL 313.030 (FT3)
NET 41.827 (FT3)
FILTER NO. 9316 IMP. VOL.GAIN 250.0 (ml)
SILICA GEL NO. 457 WT. GAIN 10.0 (ml)
TOTAL CONDENSATE 260.0 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					9.91
%O2					10.83
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER

LEAK CHECKS
PRE 0.00 CFM 15 ('Hg) POST 0.00 CFM 10 ('Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 , 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 , 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATIC-2
BOX OPERATOR RESHARD PROBE HOLDER PROWS

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.('H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ('Hg)
					CALC.	ACTUAL					
1-1		1138	315.570	1.40	1.29	1.29	148	252	62	65	3.0
2		42	318.090	1.40	1.29	1.29	149	255	58	65	3.0
3		46	320.670	1.35	1.24	1.24	149	256	55	65	3.5
4		50	323.365	1.40	1.29	1.29	148	254	53	65	3.5
5		54	326.030	1.35	1.24	1.24	148	258	54	66	4.0
6		58	328.615	1.40	1.29	1.29	149	256	55	66	4.5

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-7		1202	331.220	1.40	1.29	1.29	149	254	56	66	5.0
8		06	333.869	1.40	1.29	1.29	149	256	56	67	5.5
2-1		1212	336.385	1.30	1.20	1.20	150	257	58	68	6.0
2		16	338.975	1.30	1.20	1.20	150	256	57	69	6.5
3		20	341.615	1.30	1.20	1.20	150	254	57	69	7.0
4		24	344.320	1.40	1.29	1.29	149	255	58	70	7.5
5		28	346.960	1.40	1.29	1.29	150	254	58	70	7.5
6		32	349.600	1.40	1.29	1.29	149	256	57	71	8.0
7		36	352.230	1.40	1.29	1.29	148	255	57	71	8.0
8		1240	354.857	1.35	1.24	1.24	148	254	57	72	8.0
END		1240	41.827	1.372		1.264	148.94			67.81	

PLANT U.S. SUGAR CORP.
SOURCE BOILER # 4
PLANT LOCATION CLEWISTON, FL.
TYPE OF SAMPLING TRAIN EPA-5
TYPE OF SAMPLES PART.
DATE 11-13-00 RUN NUMBER 2-P
TIME START 1343 TIME END 1449
SAMPLE TIME 4 / 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 28 FDA 0.72
NOMOGRAPH Cf 1.0 PITOT Cf 0.84
Pb ("Hg) 30.00 Ps ("Hg) 30.00
WEATHER CLEAR TEMP (F) 83 average
METER BOX NO. 2 H 1.6278 Y 0.9978
NOZZLE IDENTIFICATION NO. BOX # 2
NOZZLE CAL .210 / .210 / .210 = 0.210
STACK DIMENSIONS 98.75"
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) >1.5 (DOWNSTREAM) >2.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) ~190' UMBILICAL LENGTH 200'
AGENCY OBSERVER(S)
TEST COORDINATOR(S)
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
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STACK CONFIGURATION

REMARKS:

TEST ID
PAGE 1 OF 2
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 400.472 (FT3)
INITIAL 355.407 (FT3)
NET 45.065 (FT3)
FILTER NO. 9317 IMP. VOL.GAIN 274.0 (ml)
SILICA GEL NO. W WT. GAIN 10.2 (ml)
TOTAL CONDENSATE 284.2 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					9.65
%O2					11.04
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER

LEAK CHECKS
PRE 0.00 CFM 15 ("Hg) POST 0.00 CFM 10 ("Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 / 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 / 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATK-2
BOX OPERATOR RESHARD PROBE HOLDER PRONS

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O) CALC.	METER ORIFICE PRESS. DIFF.("H2O) ACTUAL	STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
1-1		1347	358.135	1.40	1.40	1.40	150	256	63	67	3.0
2		51	360.910	1.40	1.40	1.40	150	254	61	67	3.5
3		55	363.710	1.35	1.35	1.35	149	255	60	67	3.5
4		59	366.490	1.40	1.40	1.40	150	257	58	67	4.0
5		03	369.305	1.40	1.40	1.40	149	255	57	67	4.0
6		07	372.125	1.40	1.40	1.40	149	258	58	67	4.5

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-7		1411	374.940	1.40	1.40	1.40	148	258	58	68	5.0
8		1415	377.754	1.40	1.40	1.40	149	256	58	69	5.5
2-1		1421	380.605	1.45	1.45	1.45	148	253	59	69	6.0
2		25	383.455	1.40	1.40	1.40	148	256	58	70	6.5
3		29	386.270	1.40	1.40	1.40	147	255	58	70	6.5
4		33	389.140	1.40	1.40	1.40	147	252	57	71	7.0
5		37	391.960	1.35	1.35	1.35	147	255	57	71	7.0
6		41	394.780	1.40	1.40	1.40	147	254	58	71	7.5
7		45	397.615	1.40	1.40	1.40	147	253	58	72	8.0
8		1449	400.472	1.45	1.45	1.45	147	254	57	72	8.0
END		1449	45.065	1.400		1.400	148.25			69.06	

PLANT U.S. SUGAR CORP
SOURCE BOILER #4
PLANT LOCATION CLEWISTON, FL.
TYPE OF SAMPLING TRAIN EPA-5
TYPE OF SAMPLES PART.
DATE 11-13-00 RUN NUMBER 3-P
TIME START 1532 TIME END 1639
SAMPLE TIME 4 / 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 23 FDA 0.77
NOMOGRAPH Cf 1.0 PITOT Cf 0.84
Pb ("Hg) 30.00 Ps ("Hg) 30.00
WEATHER Sc. Clouds TEMP (F) 82
METER BOX NO. 2 H 1.6278 Y 0.9996
NOZZLE IDENTIFICATION NO. BOX #2
NOZZLE CAL .210 / .210 / .210 = 0.210
STACK DIMENSIONS 98.75"
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) >1.5 (DOWNSTREAM) >2.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) ~190' UMBILICAL LENGTH 200'
AGENCY OBSERVER(S)
TEST COORDINATOR(S)
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
GAINESVILLE, FLORIDA 32653
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STACK CONFIGURATION

REMARKS:

TEST ID
PAGE 1 OF 2
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 446.352 (FT3)
INITIAL 401.102 (FT3)
NET 45.250 (FT3)
FILTER NO. 9318 IMP. VOL.GAIN 288.0 (ml)
SILICA GEL NO. 128 WT. GAIN 11.8 (ml)
TOTAL CONDENSATE 299.8 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					9.8
%O2					10.98
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER
LEAK CHECKS
PRE 0.00 CFM 15 ("Hg) POST 0.00 CFM 10 ("Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 / 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 / 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATK-2
BOX OPERATOR RESHARD PROBE HOLDER PIZOLUS

PORT & TRAVERSE PT NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O) CALC.	METER ORIFICE PRESS. DIFF.("H2O) ACTUAL	STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
1-1		1536	403.930	1.35	1.35	1.35	148	246	60	69	3.0
2		40	406.760	1.35	1.35	1.35	150	253	58	69	3.5
3		44	409.590	1.40	1.40	1.40	150	255	58	69	3.5
4		48	412.290	1.40	1.40	1.40	149	256	57	69	3.5
5		52	415.100	1.40	1.40	1.40	149	255	57	69	4.0
6		56	417.860	1.40	1.40	1.40	150	253	58	70	4.5

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.('H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ('Hg)
					CALC.	ACTUAL					
1-7		1600	420.795	1.45	1.45	1.45	149	256	58	70	5.0
8		1604	423.574	1.40	1.40	1.40	149	255	57	70	5.5
2-1		1612	426.400	1.45	1.45	1.45	148	256	58	71	6.5
2		15	429.260	1.40	1.40	1.40	149	255	58	71	7.0
3		19	432.160	1.40	1.40	1.40	149	255	57	71	7.0
4		23	435.010	1.35	1.35	1.35	149	254	57	71	7.5
5		27	437.860	1.40	1.40	1.40	148	255	58	72	7.5
6		31	440.720	1.40	1.40	1.40	149	256	58	72	8.6
7		35	443.525	1.45	1.45	1.45	149	258	58	73	8.5
8		1639	446.352	1.40	1.40	1.40	148	256	57	73	9.0
END		1639	45.250	1.400		1.400	148.94			70.56	

PLANT U.S. SUGAR CORP
SOURCE BOILER # 4
PLANT LOCATION CLEWISTON, FL.
TYPE OF SAMPLING TRAIN EPA-5
TYPE OF SAMPLES PART.
DATE 11-14-00 RUN NUMBER 4-P
TIME START 0838 TIME END 0945
SAMPLE TIME 4 / 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 23 FDA 0.77
NOMOGRAPH Cf 1.0 PITOT Cf 0.84
Pb ("Hg) 30.00 Ps ("Hg) 30.00
WEATHER Sc. Clouds TEMP (F) 73
METER BOX NO. 2 H 1.6278 Y 0.9996
NOZZLE IDENTIFICATION NO. BOX # 2
NOZZLE CAL .210 / .210 / .210 = 0.210
STACK DIMENSIONS 98.75"
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) >1.5 (DOWNSTREAM) >2.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) ~190' UMBILICAL LENGTH 200'
AGENCY OBSERVER(S)
TEST COORDINATOR(S) DON GRIFFIN,
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
GAINESVILLE, FLORIDA 32653
(904) 335-1889 - OFFICE / (904) 335-1891 - FAX

STACK CONFIGURATION

REMARKS:

TEST ID
PAGE 1 OF 2
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 490.857 (FT3)
INITIAL 446.898 (FT3)
NET 43.959 (FT3)
FILTER NO. 9319 IMP. VOL.GAIN 265.0 (ml)
SILICA GEL NO. 534 WT. GAIN 11.6 (ml)
TOTAL CONDENSATE 276.6 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					11.10
%O2					9.42
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER
LEAK CHECKS
PRE 0.00 CFM 15 ("Hg) POST 0.00 CFM 10 ("Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 / 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 / 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATK-2
BOX OPERATOR RESHARD PROBE HOLDER PROVIS

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O) CALC.	METER ORIFICE PRESS. DIFF.("H2O) ACTUAL	STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
1-1		0842	449.680	1.40	1.40	1.40	152	253	66	60	3.0
2		46	452.435	1.40	1.40	1.40	153	257	60	60	3.5
3		50	455.180	1.35	1.35	1.35	153	255	57	60	4.0
4		54	457.890	1.35	1.35	1.35	153	256	53	60	4.5
5		58	460.680	1.40	1.40	1.40	153	257	53	61	4.5
6		0902	463.500	1.40	1.40	1.40	153	255	52	61	5.0

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-7		0906	466.295	1.40	1.40	1.40	153	256	53	62	5.5
8		0910	469.073	1.35	1.35	1.35	152	254	53	62	6.0
2-1		0917	471.740	1.40	1.40	1.40	152	255	55	63	7.0
2		21	474.480	1.40	1.40	1.40	153	255	54	64	7.0
3		25	477.265	1.40	1.40	1.40	154	256	54	65	7.5
4		29	480.005	1.35	1.35	1.35	155	255	54	66	8.0
5		33	482.690	1.35	1.35	1.35	154	257	53	66	8.0
6		37	485.390	1.35	1.35	1.35	154	257	53	67	8.5
7		41	488.110	1.35	1.35	1.35	153	259	54	67	8.5
8		45	490.857	1.35	1.35	1.35	153	258	54	68	9.0
END		0945	43.959	1.375		1.375	153.13			63.25	

PLANT U.S. SUGAR CORP.
SOURCE BOILER # 4
PLANT LOCATION CLEWISTON, FL.
TYPE OF SAMPLING TRAIN EPA-5
TYPE OF SAMPLES PART
DATE 11-14-00 RUN NUMBER 5-P
TIME START 1024 TIME END 1130
SAMPLE TIME 4 / 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 23 FDA 0.77
NOMOGRAPH Cf 1.0 PITOT Cf 0.84
Pb ("Hg) 30.00 Ps ("Hg) 30.00
WEATHER Sc. Clds TEMP (F) 78
METER BOX NO. 2 H 1.6278 Y 0.9996
NOZZLE IDENTIFICATION NO. BOX # 2
NOZZLE CAL .210 / .210 / .210 = 0.210
STACK DIMENSIONS 98.75"
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) 71.5 (DOWNSTREAM) 72.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) ~190' UMBILICAL LENGTH 200'
AGENCY OBSERVER(S)
TEST COORDINATOR(S) DON GRIFFIN, DAVE BUFF
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
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STACK CONFIGURATION

162.5

REMARKS:

TEST ID
PAGE 1 OF 2
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 536.269 (FT3)
INITIAL 491.294 (FT3)
NET 44.975 (FT3)
FILTER NO. 9336 IMP. VOL.GAIN 280.0 (ml)
SILICA GEL NO. 8 WT. GAIN 10.6 (ml)
TOTAL CONDENSATE 290.6 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					10.48
%O2					10.34
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER

LEAK CHECKS
PRE 0.00 CFM 13 ("Hg) POST 0.00 CFM 10 ("Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 / 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 / 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATK-2
BOX OPERATOR RESHARD PROBE HOLDER PRDWS

PORT & TRAVERSE PT NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O) CALC.	METER ORIFICE PRESS. DIFF.("H2O) ACTUAL	STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
1-1		1028	494.120	1.40	1.40	1.40	150	257	62	66	3.0
2		32	496.92	1.40	1.40	1.40	150	256	60	66	3.0
3		36	499.740	1.40	1.40	1.40	149	255	60	66	3.5
4		40	502.550	1.35	1.35	1.35	150	254	58	67	4.0
5		44	505.285	1.40	1.40	1.40	150	253	58	67	4.0
6		48	508.010	1.40	1.40	1.40	150	253	57	68	4.5

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.('H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-8		1052	510.850	1.35	1.35	1.35	151	256	57	68	5.0
1-8		56	513.660	1.35	1.35	1.35	152	257	58	69	5.5
2-1		1102	516.505	1.40	1.40	1.40	151	256	58	70	6.0
2		06	519.320	1.35	1.35	1.35	151	256	57	70	6.5
3		10	522.100	1.35	1.35	1.35	150	255	56	71	6.5
4		14	524.920	1.45	1.45	1.45	152	253	57	71	7.0
5		18	527.735	1.40	1.40	1.40	153	254	57	72	7.0
6		22	530.580	1.40	1.40	1.40	153	255	58	73	7.5
7		26	533.430	1.40	1.40	1.40	153	256	58	73	8.0
8		1130	536.269	1.35	1.35	1.35	152	255	59	74	8.0
END		1130	44.975	1.384		1.384	151.06			69.44	

PLANT U.S. SUGAR CORP
SOURCE BOILER # 4
PLANT LOCATION CLEWISTON, FL.
TYPE OF SAMPLING TRAIN EPA-5
TYPE OF SAMPLES PART.
DATE 11-14-00 RUN NUMBER 6-P
TIME START 1407 TIME END 1514
SAMPLE TIME 4 / 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 23 FDA 0.77
NOMOGRAPH Cf 1.0 PITOT Cf 0.84
Pb ("Hg) 30.00 Ps ("Hg) 30.00
WEATHER Sc. Clouds TEMP (F) 80
METER BOX NO. 2 H 1.6778 Y 0.9996
NOZZLE IDENTIFICATION NO. BOX # 2
NOZZLE CAL .210 / .210 / .210 = 0.210
STACK DIMENSIONS 98.75"
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) 71.5 (DOWNSTREAM) >72.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) 190' UMBILICAL LENGTH 200'
AGENCY OBSERVER(S)
TEST COORDINATOR(S)
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
GAINESVILLE, FLORIDA 32653
(904) 335-1889 - OFFICE / (904) 335-1891 - FAX

STACK CONFIGURATION

REMARKS:

TEST ID
PAGE 1 OF 2
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 582.569 (FT3)
INITIAL 536.676 (FT3)
NET 45.893 (FT3)
FILTER NO. 9340 IMP. VOL.GAIN 295.0 (ml)
SILICA GEL NO. 0 WT. GAIN 12.3 (ml)
TOTAL CONDENSATE 307.3 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					~~11.0~~ 10.77
%O2					~~10.0~~ 10.1
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER

LEAK CHECKS
PRE 0.00 CFM 14.5 ("Hg) POST 0.00 CFM 12 ("Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 / 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 / 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATK-2
BOX OPERATOR RESHARD PROBE HOLDER PROVIS

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-1		1411	539.530	1.40	1.40	1.40	151	248	64	72	3.0
2		15	542.310	1.40	1.40	1.40	152	251	62	73	3.0
3		19	545.225	1.45	1.45	1.45	153	256	60	74	3.5
4		23	548.085	1.40	1.40	1.40	152	257	58	75	4.0
5		27	550.930	1.35	1.35	1.35	150	256	57	76	4.5
6		31	553.800	1.40	1.40	1.40	149	254	58	77	4.5

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-7		1435	556.675	1.45	1.45	1.45	150	256	57	78	5.0
8		1439	559.502	1.40	1.40	1.40	152	253	57	79	5.0
2-1		1446	562.335	1.45	1.45	1.45	149	256	58	81	5.5
2		50	565.105	1.40	1.40	1.40	152	255	57	82	6.0
3		54	568.065	1.40	1.40	1.40	153	253	57	83	6.0
4		58	570.980	1.40	1.40	1.40	154	254	56	83	6.5
5		02	573.930	1.45	1.45	1.45	154	256	56	84	7.0
6		06	576.835	1.45	1.45	1.45	154	253	57	84	7.0
7		10	579.645	1.40	1.40	1.40	155	256	57	84	7.5
8		1514	582.569	1.40	1.40	1.40	154	253	58	84	8.0
END		1514	45.893	1.413		1.413	152.13			79.31	

PLANT U.S. SUGAR CORP.
SOURCE BOILER # 4
PLANT LOCATION CLEWISTON, FL.
TYPE OF SAMPLING TRAIN EPA-5
TYPE OF SAMPLES PART.
DATE 11-15 00 RUN NUMBER 7-P
TIME START 0846 TIME END 0953
SAMPLE TIME 4 / 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 23 FDA 0.77
NOMOGRAPH Cf 1.0 PITOT Cf 0.84
Pb ("Hg) 30.00 Ps ("Hg) 30.00
WEATHER Sc. Clouds TEMP (F) 56
METER BOX NO. 2 H 1.6278 Y 0.9996
NOZZLE IDENTIFICATION NO. BOX # 2
NOZZLE CAL .210 / .210 / .210 = 0.210
STACK DIMENSIONS 98.75
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) >1.5 (DOWNSTREAM) >2.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) ~190' UMBILICAL LENGTH 200'
AGENCY OBSERVER(S)
TEST COORDINATOR(S) DON GRIFFIN, DAVE BUFF
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
GAINESVILLE, FLORIDA 32653
(904) 335-1889 - OFFICE / (904) 335-1891 - FAX

STACK CONFIGURATION

REMARKS:

TEST ID
PAGE 1 OF 2
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 628.039 (FT3)
INITIAL 582.919 (FT3)
NET 45.120 (FT3)
FILTER NO. 9341 IMP. VOL.GAIN 270.0 (ml)
SILICA GEL NO. 669 WT. GAIN 8.7 (ml)
TOTAL CONDENSATE 278.7 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					10.37
%O2					10.55
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER

LEAK CHECKS
PRE 0.00 CFM 12 ("Hg) POST 0.00 CFM 10 ("Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 / 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 / 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATIC-2
BOX OPERATOR RESHARD PROBE HOLDER PROWS

PORT & TRAVERSE PT NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-1		0850	585.720	1.45	1.45	1.45	148	251	53	66	3.0
2		54	588.480	1.40	1.40	1.40	148	256	50	67	3.0
3		58	591.400	1.45	1.45	1.45	147	255	49	68	3.5
4		02	594.300	1.45	1.45	1.45	146	252	48	69	3.5
5		06	596.110	1.40	1.40	1.40	148	253	49	70	4.0
6		10	599.885	1.35	1.35	1.35	149	255	48	71	4.0

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-7		0914	602.680	1.40	1.40	1.40	149	253	49	71	4.5
8		18	605.524	1.40	1.40	1.40	148	256	49	72	4.5
2-1		0925	608.485	1.40	1.40	1.40	147	255	48	72	5.0
2		29	611.390	1.40	1.40	1.40	149	254	48	72	5.5
3		33	614.190	1.35	1.35	1.35	150	255	49	72	6.0
4		37	616.970	1.40	1.40	1.40	149	253	50	72	6.5
5		41	619.730	1.40	1.40	1.40	149	254	50	72	6.5
6		45	622.500	1.35	1.35	1.35	149	256	49	73	7.0
7		49	625.290	1.35	1.35	1.35	150	251	50	74	7.0
8		0953	628.039	1.35	1.35	1.35	150	255	50	74	7.5
END		0953	45.120	1.394		1.394	148.50			70.94	

PLANT U.S. SUGAR CORP
SOURCE BOILER # 4
PLANT LOCATION CLEWISTON, FL.
TYPE OF SAMPLING TRAIN EPA-5
TYPE OF SAMPLES PART.
DATE 11-15-00 RUN NUMBER 8-P
TIME START 1036 TIME END 1142
SAMPLE TIME 4 / 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 23 FDA 0.77
NOMOGRAPH Cf 1.10 PITOT Cf 0.84
Pb ("Hg) 30.00 Ps ("Hg) 30.00
WEATHER Sc. Clds TEMP (F) 63
METER BOX NO. 2 H 1.6278 Y 0.9996
NOZZLE IDENTIFICATION NO. BDX
NOZZLE CAL .210 / .210 / .210 = 0.210
STACK DIMENSIONS 98.75"
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) >1.5 (DOWNSTREAM) >2.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) ~190' UMBILICAL LENGTH 200'
AGENCY OBSERVER(S)
TEST COORDINATOR(S)
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
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STACK CONFIGURATION

REMARKS:

TEST ID
PAGE 1 OF 2
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 674.556 (FT3)
INITIAL 628.350 (FT3)
NET 46.206 (FT3)
FILTER NO. 9342 IMP. VOL.GAIN 290.0 (ml)
SILICA GEL NO. 168 WT. GAIN 10.4 (ml)
TOTAL CONDENSATE 300.4 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					10.7
%O2					10.0
%CO					
%N2					

Fo=_____ Fo RANGE=_____ ORSAT ANALYZER _____

LEAK CHECKS
PRE 0.00 CFM 11 ("Hg) POST 0.00 CFM 10 ("Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG ____
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 / 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 / 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATK-2
BOX OPERATOR RESHARD PROBE HOLDER PROWS

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O) CALC.	METER ORIFICE PRESS. DIFF.("H2O) ACTUAL	STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
1-1		1040	631.430	1.45	1.60	1.60	153	253	62	71	4.0
2		44	634.320	1.45	1.60	1.60	153	257	60	71	4.0
3		48	637.100	1.45	1.60	1.60	154	260	57	71	4.5
4		52	639.920	1.45	1.60	1.60	153	258	55	71	4.5
5		56	642.910	1.50	1.65	1.65	152	257	53	71	5.0
6		00	645.865	1.50	1.65	1.65	152	256	52	71	5.5

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-7		04	648.840	1.45	1.60	1.60	152	256	52	71	6.0
8		08	651.717	1.40	1.54	1.54	152	258	53	71	6.0
2-1		1114	654.475	1.40	1.54	1.54	152	257	53	71	6.0
2		18	657.480	1.50	1.65	1.65	153	256	54	72	6.5
3		22	660.440	1.50	1.65	1.65	154	255	54	72	6.5
4		26	663.310	1.45	1.60	1.60	154	253	52	72	7.0
5		30	666.180	1.45	1.60	1.60	155	254	52	72	7.0
6		34	669.010	1.45	1.60	1.60	154	256	51	72	7.5
7		38	671.815	1.40	1.54	1.54	154	257	50	72	8.0
8		1142	674.556	1.40	1.54	1.54	153	256	50	72	8.0
END		1142	46.206	1.450		1.450	153.13			71.44	

PLANT U.S. SUGAR CORP.
SOURCE BOILER # 4
PLANT LOCATION CLEWISTON, FL.
TYPE OF SAMPLING TRAIN EPA-5
TYPE OF SAMPLES PART.
DATE 11-15-00 RUN NUMBER 9-P
TIME START 1307 TIME END 1414
SAMPLE TIME 4 , 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 23 FDA 0.77
NOMOGRAPH Cf 1.0 PITOT Cf 0.84
Pb ('Hg) 30.00 Ps ('Hg) 30.00
WEATHER Sc. Clds TEMP (F) 65
METER BOX NO. 2 H 1.6278 Y 0.9996
NOZZLE IDENTIFICATION NO. BOX # 2
NOZZLE CAL .210 , .210 , .210 = 0.210
STACK DIMENSIONS 98.75"
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) 71.5 (DOWNSTREAM) >72.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) ~190' UMBILICAL LENGTH 200'
AGENCY OBSERVER(S)
TEST COORDINATOR(S)
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
GAINESVILLE, FLORIDA 32653
(904) 335-1889 - OFFICE / (904) 335-1891 - FAX

STACK CONFIGURATION

REMARKS:

TEST ID
PAGE 1 OF 2
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 720.567 (FT3)
INITIAL 674.900 (FT3)
NET 45.667 (FT3)
FILTER NO. 9343 IMP. VOL.GAIN 310.0 (ml)
SILICA GEL NO. 48 WT. GAIN 9.6 (ml)
TOTAL CONDENSATE (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					11.21
%O2					9.37
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER

LEAK CHECKS
PRE 0.00 CFM 12 ('Hg) POST 0.00 CFM 14 ('Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 , 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 , 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATK-2
BOX OPERATOR RESHARD PROBE HOLDER PRDWS

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O) CALC.	METER ORIFICE PRESS. DIFF.("H2O) ACTUAL	STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ('Hg)
1-1		1311	677.660	1.50	1.50	1.50	152	257	58	63	3.0
2		15	680.535	1.50	1.50	1.50	152	261	55	63	3.6
3		19	683.500	1.50	1.50	1.50	152	259	53	63	3.5
4		23	686.435	1.45	1.45	1.45	153	258	52	63	4.0
5		27	689.340	1.45	1.45	1.45	153	254	53	63	4.0
6		31	692.150	1.45	1.45	1.45	153	252	53	64	4.5

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-7		1335	694.890	1.40	1.40	1.40	154	257	53	64	4.5
8		39	697.646	1.40	1.40	1.40	155	256	52	65	5.0
2-1		1341	700.515	1.45	1.45	1.45	152	253	53	65	5.5
2		50	703.330	1.50	1.50	1.50	153	255	54	66	5.5
3		54	706.240	1.50	1.50	1.50	153	258	54	66	6.0
4		58	709.230	1.50	1.50	1.50	152	256	53	66	6.5
5		02	712.155	1.50	1.50	1.50	152	257	53	66	6.5
6		06	715.005	1.45	1.45	1.45	152	255	54	67	7.0
7		10	717.745	1.45	1.45	1.45	153	254	53	67	7.5
8		14	720.567	1.45	1.45	1.45	152	256	53	67	8.0
END		1414	45.667	1.466		1.466	152.69			64.88	

PLANT U.S. SUGAR CORP
SOURCE BOILER # 4
PLANT LOCATION CLEWISTON, FL.
TYPE OF SAMPLING TRAIN EPA-5
TYPE OF SAMPLES PART.
DATE 11-15-00 RUN NUMBER 10-P
TIME START 1446 TIME END 1554
SAMPLE TIME 4 , 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 23 FDA 0.77
NOMOGRAPH Cf 1.0 PITOT Cf 0.84
Pb ("Hg) 30.00 Ps ("Hg) 30.00
WEATHER Sc. Cldy TEMP (F) 72
METER BOX NO. 2 H 1.6278 Y 0.9996
NOZZLE IDENTIFICATION NO. Box # 2
NOZZLE CAL .210 , .210 , .210 = 0.210
STACK DIMENSIONS 98.75"
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) >1.5 (DOWNSTREAM) >2.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) ~190 UMBILICAL LENGTH 200'
AGENCY OBSERVER(S)
TEST COORDINATOR(S)
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
GAINESVILLE, FLORIDA 32653
(904) 335-1889 - OFFICE / (904) 335-1891 - FAX

STACK CONFIGURATION

REMARKS:

TEST ID
PAGE 1 OF 2
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 766.443 (FT3)
INITIAL 721.133 (FT3)
NET 45.310 (FT3)
FILTER NO. 9344 IMP. VOL.GAIN 315 (ml)
SILICA GEL NO. 460 WT. GAIN 10 (ml)
TOTAL CONDENSATE 325.0 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					11.35
%O2					9.08
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER
LEAK CHECKS
PRE 0.00 CFM 15 ("Hg) POST 0.00 CFM 12 ("Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 , 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 , 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATK-2
BOX OPERATOR RESHARD PROBE HOLDER PROVIS

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O) CALC.	METER ORIFICE PRESS. DIFF.("H2O) ACTUAL	STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
1-1		1450	723.970	1.50	1.50	1.50	152	257	59	65	4.0
2		54	726.910	1.50	1.50	1.50	152	256	57	65	4.5
3		58	729.700	1.50	1.50	1.50	153	256	57	65	4.5
4		02	732.520	1.45	1.45	1.45	154	257	55	65	5.0
5		06	735.440	1.45	1.45	1.45	155	256	55	65	5.5
6		10	738.280	1.45	1.45	1.45	155	255	56	66	6.0

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.('H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ('Hg)
					CALC.	ACTUAL					
1-7		1514	741.030	1.45	1.45	1.45	155	257	57	66	6.5
8		18	743.818	1.40	1.40	1.40	154	255	57	66	7.0
2-1		1526	746.545	1.45	1.45	1.45	153	256	58	67	7.5
2		30	749.525	1.50	1.50	1.50	155	255	57	67	8.0
3		34	752.370	1.45	1.45	1.45	155	253	57	67	8.0
4		38	755.140	1.45	1.45	1.45	154	255	58	68	8.5
5		42	758.055	1.45	1.45	1.45	154	253	58	68	9.0
6		46	760.950	1.40	1.40	1.40	152	254	57	68	9.0
7		50	763.715	1.40	1.40	1.40	151	254	57	69	9.5
8		1554	766.443	1.40	1.40	1.40	150	257	58	69	9.5
END		1554	45.310	1.450		1.450	153.38			66.63	

PLANT U.S. SUGAR CORP
SOURCE BOILER # 4
PLANT LOCATION CLEWISTON, FL.
TYPE OF SAMPLING TRAIN EPA-5
TYPE OF SAMPLES PART.
DATE 11-15-00 RUN NUMBER 11-P
TIME START 1634 TIME END 1740
SAMPLE TIME 4 , 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 23 FDA 0.77
NOMOGRAPH Cf 1.0 PITOT Cf 0.84
Pb ("Hg) 30.00 Ps ("Hg) 30.00
WEATHER Sc, Clds TEMP (F) 72
METER BOX NO. 2 H 1.6278 Y 0.9996
NOZZLE IDENTIFICATION NO. BOX # 2
NOZZLE CAL .210 , .210 , .210 = 0.210
STACK DIMENSIONS 98.75
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) 71.5 (DOWNSTREAM) 72.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) ≈190' UMBILICAL LENGTH 200'
AGENCY OBSERVER(S)
TEST COORDINATOR(S)
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
GAINESVILLE, FLORIDA 32653
(904) 335-1889 - OFFICE / (904) 335-1891 - FAX

STACK CONFIGURATION

REMARKS:

TEST ID
PAGE 1 OF 9
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 812.959 (FT3)
INITIAL 766.908 (FT3)
NET 46.051 (FT3)
FILTER NO. 9345 IMP. VOL.GAIN 318.0 (ml)
SILICA GEL NO. 37 WT. GAIN 10 (ml)
TOTAL CONDENSATE 328.0 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					11.33
%O2					9.22
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER
LEAK CHECKS
PRE 0.00 CFM 15 ("Hg) POST 0.00 CFM 13 ("Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 , 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 , 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATK-2
BOX OPERATOR RESHARD PROBE HOLDER PROWS

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O) CALC.	METER ORIFICE PRESS. DIFF.("H2O) ACTUAL	STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
1-1		1638	769.675	1.50	1.50	1.50	151	258	63	65	4.0
2		42	772.600	1.50	1.50	1.50	152	257	60	65	4.5
3		46	775.550	1.50	1.50	1.50	152	256	58	65	5.0
4		50	778.490	1.45	1.45	1.45	153	258	56	65	5.5
5		54	781.430	1.45	1.45	1.45	152	257	56	65	6.0
6		58	784.340	1.45	1.45	1.45	151	258	56	65	6.5

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.('H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-7		1702	787.100	1.50	1.50	1.50	151	254	57	66	6.5
8		06	790.041	1.50	1.50	1.50	152	253	57	66	7.0
2-1		1713	792.910	1.45	1.45	1.45	151	256	58	67	7.0
2		16	795.750	1.45	1.45	1.45	152	254	57	67	7.5
3		20	798.675	1.50	1.50	1.50	152	255	57	67	8.0
4		24	801.580	1.50	1.50	1.50	152	256	57	67	8.5
5		28	804.465	1.50	1.50	1.50	153	258	56	68	9.0
6		32	807.360	1.45	1.45	1.45	152	257	56	68	9.0
7		36	810.200	1.45	1.45	1.45	154	258	56	69	9.5
8		1740	812,959	1.40	1.40	1.40	152	257	56	69	9.5
END		1740	46.051	1.472		1.472	152.06			66.50	

PLANT U.S. SUGAR CORP
SOURCE BOILER # 4
PLANT LOCATION CLEWISTON, FL.
TYPE OF SAMPLING TRAIN EPA-5
TYPE OF SAMPLES PART.
DATE 11-16-00 RUN NUMBER 12-P
TIME START 0833 TIME END 0940
SAMPLE TIME 4 / 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 23 FDA 0.77
NOMOGRAPH Cf 1.0 PITOT Cf 0.84
Pb ("Hg) 30.00 Ps ("Hg) 30.00
WEATHER CLEAR TEMP (F) 72
METER BOX NO. 2 H 1.6278 Y 0.9996
NOZZLE IDENTIFICATION NO. BOX # 2
NOZZLE CAL .210 , .210 , .210 = 0.210
STACK DIMENSIONS 98.75"
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) >1.5 (DOWNSTREAM) >2.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) ~190' UMBILICAL LENGTH 200'
AGENCY OBSERVER(S)
TEST COORDINATOR(S)
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
GAINESVILLE, FLORIDA 32653
(904) 335-1889 - OFFICE / (904) 335-1891 - FAX

STACK CONFIGURATION

REMARKS:

TEST ID
PAGE 1 OF 2
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 859.394 (FT3)
INITIAL 813.502 (FT3)
NET 45.892 (FT3)
FILTER NO. 9346 IMP. VOL.GAIN 334.0 (ml)
SILICA GEL NO. 606 WT. GAIN 9.6 (ml)
TOTAL CONDENSATE (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					11.39
%O2					9.48
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER
LEAK CHECKS
PRE 0.00 CFM 15 ("Hg) POST 0.00 CFM 12 ("Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 , 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 , 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATK-2
BOX OPERATOR RESHARD PROBE HOLDER PROWS

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-1		0837	816.250	1.50	1.50	1.50	150	256	60	59	3.0
2		41	819.155	1.50	1.50	1.50	152	258	57	59	3.5
3		45	822.020	1.45	1.45	1.45	152	254	56	59	4.0
4		49	824.930	1.45	1.45	1.45	152	255	56	59	4.5
5		53	827.830	1.50	1.50	1.50	152	258	57	59	5.0
6		57	830.720	1.45	1.45	1.45	153	257	57	60	5.5

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-7		0901	833.575	1.45	1.45	1.45	153	253	57	60	5.5
8		05	836.469	1.50	1.50	1.50	152	254	56	61	6.0
2-1		0912	839.320	1.50	1.50	1.50	151	253	56	62	6.5
2		16	842.280	1.50	1.50	1.50	152	257	57	63	7.0
3		20	845.185	1.50	1.50	1.50	152	255	57	64	7.5
4		24	848.030	1.50	1.50	1.50	152	256	57	64	8.0
5		28	850.865	1.45	1.45	1.45	152	255	58	65	8.5
6		32	853.725	1.45	1.45	1.45	153	253	57	66	9.0
7		36	856.580	1.50	1.50	1.50	152	258	58	67	9.5
8		0940	859.394	1.45	1.45	1.45	153	257	58	67	9.5
END		0940	45.892	1.478		1.478	152.06			62.13	

PLANT U.S. SUGAR CORP.
SOURCE BOILER # 4
PLANT LOCATION CLEWISTON, FL.
TYPE OF SAMPLING TRAIN EPA-5
TYPE OF SAMPLES PART.
DATE 11-16-00 RUN NUMBER 13-P
TIME START 1035 TIME END 1142
SAMPLE TIME 4 / 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 23 FDA 0.77
NOMOGRAPH Cf 1.0 PITOT Cf 0.84
Pb ("Hg) 30.00 Ps ("Hg) 30.00
WEATHER CLEAR TEMP (F) 76
METER BOX NO. 2 H 1.6278 Y 0.9996
NOZZLE IDENTIFICATION NO. BOX # 2
NOZZLE CAL .210 / .210 / .210 = 0.210
STACK DIMENSIONS 98.75"
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) >1.5 (DOWNSTREAM) >2.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) ~190' UMBILICAL LENGTH 200'
AGENCY OBSERVER(S)
TEST COORDINATOR(S)
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
GAINESVILLE, FLORIDA 32653
(904) 335-1889 - OFFICE / (904) 335-1891 - FAX

STACK CONFIGURATION

REMARKS:

TEST ID
PAGE 1 OF 2
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 906.148 (FT3)
INITIAL 859.905 (FT3)
NET 46.243 (FT3)
FILTER NO. 9347 IMP. VOL.GAIN 352.0 (ml)
SILICA GEL NO. 609 WT. GAIN 10.2 (ml)
TOTAL CONDENSATE 362.2 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					11.16
%O2					9.29
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER
LEAK CHECKS
PRE 0.00 CFM 15 ("Hg) POST 0.00 CFM 12 ("Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 / 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 / 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATK-2
BOX OPERATOR RESHARD PROBE HOLDER PROWS

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O) CALC.	METER ORIFICE PRESS. DIFF.("H2O) ACTUAL	STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
1-1		1039	862.775	1.45	1.45	1.45	153	257	66	65	4.0
2		43	865.630	1.45	1.45	1.45	154	256	60	65	4.0
3		47	868.450	1.45	1.45	1.45	153	257	57	65	4.5
4		51	871.355	1.50	1.50	1.50	154	254	56	65	5.0
5		55	874.220	1.50	1.50	1.50	152	255	54	65	5.0
6		59	877.135	1.50	1.50	1.50	153	254	54	65	5.5

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-7		1103	880.030	1.50	1.50	1.50	155	256	53	66	6.0
8		07	882.872	1.45	1.45	1.45	155	254	53	67	6.0
2-1		1114	885.650	1.45	1.45	1.45	152	257	55	68	7.0
2		18	888.650	1.50	1.50	1.50	154	256	54	69	7.5
3		22	891.600	1.50	1.50	1.50	155	258	54	69	7.5
4		26	894.560	1.50	1.50	1.50	155	259	55	70	8.0
5		30	897.540	1.50	1.50	1.50	156	261	55	71	8.5
6		34	900.445	1.50	1.50	1.50	156	259	54	72	9.0
7		38	903.275	1.45	1.45	1.45	156	257	54	72	9.0
8		1142	906.148	1.45	1.45	1.45	156	257	55	73	9.5
END		1142	46.243	1.478		1.478	154.31			67.94	

PLANT U.S. Sugar Corp.
SOURCE Boiler # 4
PLANT LOCATION Clewiston, FL.
TYPE OF SAMPLING TRAIN EPA-5
TYPE OF SAMPLES PART.
DATE 11-16-00 RUN NUMBER 14-P
TIME START 1219 TIME END 1326
SAMPLE TIME 4 / 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 23 FDA 0.77
NOMOGRAPH Cf 1.0 PITOT Cf 0.84
Pb ("Hg) 30.00 Ps ("Hg) 30.00
WEATHER CLEAR TEMP (F) 73
METER BOX NO. 2 H 1.6278 Y 0.9996
NOZZLE IDENTIFICATION NO. Box # 2
NOZZLE CAL .210 / .210 / .210 = 0.210
STACK DIMENSIONS 98.75"
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) >1.5 (DOWNSTREAM) >2.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) ~190' UMBILICAL LENGTH 200'
AGENCY OBSERVER(S)
TEST COORDINATOR(S)
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
GAINESVILLE, FLORIDA 32653
(904) 335-1889 - OFFICE / (904) 335-1891 - FAX

STACK CONFIGURATION

REMARKS:

TEST ID
PAGE 1 OF 2
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 953.243 (FT3)
INITIAL 907.381 (FT3)
NET 45.862 (FT3)
FILTER NO. 9348 IMP. VOL.GAIN 330.0 (ml)
SILICA GEL NO. Q WT. GAIN 9.5 (ml)
TOTAL CONDENSATE 339.5 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					11.04
%O2					9.35
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER

LEAK CHECKS
PRE 0.00 CFM 15 ("Hg) POST 0.00 CFM 11 ("Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 / 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 / 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATK-2
BOX OPERATOR RESHARD PROBE HOLDER PROWS

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O) CALC.	METER ORIFICE PRESS. DIFF.("H2O) ACTUAL	STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
1-1		1223	910.266	1.50	1.50	1.50	153	253	64	70	3.0
2		27	913.205	1.50	1.50	1.50	153	256	61	70	3.5
3		31	916.110	1.50	1.50	1.50	153	254	59	70	4.0
4		35	919.045	1.45	1.45	1.45	154	256	58	70	4.5
5		39	921.905	1.45	1.45	1.45	154	257	57	71	4.5
6		43	924.730	1.45	1.45	1.45	154	256	57	71	5.0

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-7		1247	927.750	1.45	1.45	1.45	154	256	57	71	5.5
8		51	930.634	1.50	1.50	1.50	155	254	56	71	6.0
2-1		1258	933.490	1.45	1.45	1.45	153	255	57	71	7.0
2		02	936.300	1.45	1.45	1.45	154	254	56	72	7.5
3		06	939.170	1.50	1.50	1.50	153	255	57	72	8.0
4		10	941.950	1.50	1.50	1.50	153	256	57	72	8.0
5		14	944.710	1.50	1.50	1.50	154	257	57	72	8.5
6		18	947.680	1.50	1.50	1.50	153	256	58	73	8.5
7		22	950.510	1.45	1.45	1.45	153	256	58	73	9.0
8		1326	953.243	1.45	1.45	1.45	153	252	58	73	9.0
END		1326	45.862	1.475		1.475	153.50			71.38	

PLANT U.S. SUGAR CORP
SOURCE BOILER # 4
PLANT LOCATION CLEWISTON, FL.
TYPE OF SAMPLING TRAIN EPA-5
TYPE OF SAMPLES PART
DATE 11-16-00 RUN NUMBER 15-P
TIME START 1400 TIME END 1507
SAMPLE TIME 4 / 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 23 FDA 0.77
NOMOGRAPH Cf 1.0 PITOT Cf 0.84
Pb ("Hg) 30.00 Ps ("Hg) 30.00
WEATHER CLEAR TEMP (F) 74
METER BOX NO. 2 H 1.6278 Y 0.9996
NOZZLE IDENTIFICATION NO. BOX # 2
NOZZLE CAL .210 , .210 , .210 = 0.210
STACK DIMENSIONS 98.75"
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) 71.5 (DOWNSTREAM) 72.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) ~190' UMBILICAL LENGTH 200'
AGENCY OBSERVER(S)
TEST COORDINATOR(S)
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
GAINESVILLE, FLORIDA 32653
(904) 335-1889 - OFFICE / (904) 335-1891 - FAX

STACK CONFIGURATION

REMARKS:

TEST ID
PAGE 1 OF 2
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 999.618 (FT3)
INITIAL 953.704 (FT3)
NET 45.914 (FT3)
FILTER NO. 9349 IMP. VOL.GAIN 310.0 (ml)
SILICA GEL NO. 538 WT. GAIN 9.2 (ml)
TOTAL CONDENSATE 319.2 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					10.56
%O2					10.11
%CO					
%N2					

Fo=_____ Fo RANGE=_____ ORSAT ANALYZER _____
LEAK CHECKS
PRE 0.00 CFM 15 ("Hg) POST 0.00 CFM 13 ("Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG ___
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 , 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 , 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATK-2
BOX OPERATOR RESHARD PROBE HOLDER PROWS

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O) CALC.	METER ORIFICE PRESS. DIFF.("H2O) ACTUAL	STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
1-1		1404	956.650	1.50	1.50	1.50	153	254	64	71	3.0
2		08	959.500	1.50	1.50	1.50	152	255	61	71	3.5
3		12	962.365	1.55	1.55	1.55	151	254	60	71	4.0
4		16	965.245	1.55	1.55	1.55	151	257	58	71	4.0
5		20	968.100	1.50	1.50	1.50	152	255	58	71	4.5
6		24	970.855	1.50	1.50	1.50	151	253	58	71	5.0

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.('H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ('Hg)
					CALC.	ACTUAL					
1-7		1428	973.710	1.50	1.50	1.50	152	257	58	71	5.0
8		32	976.573	1.45	1.45	1.45	152	256	57	71	5.0
2-1		1439	979.420	1.50	1.50	1.50	151	256	58	72	6.0
2		43	982.370	1.55	1.55	1.55	151	254	57	72	6.5
3		47	985.325	1.55	1.55	1.55	150	255	58	72	6.5
4		51	988.265	1.55	1.55	1.55	151	256	58	72	7.0
5		55	991.130	1.50	1.50	1.50	152	257	57	72	7.5
6		59	994.010	1.50	1.50	1.50	152	256	57	73	8.0
7		03	996.795	1.45	1.45	1.45	153	255	56	73	8.5
8		07	999.618	1.45	1.45	1.45	152	254	56	73	8.5
END		1507	45.914	1.506		1.506	151.63			71.69	

PLANT U.S. SUGAR CORP.
SOURCE BOILER # 4
PLANT LOCATION CLEWISTON, FL.
TYPE OF SAMPLING TRAIN EPA-5/6/8
TYPE OF SAMPLES PART, SO2, Acid Mist
DATE 11-17-00 RUN NUMBER 1
TIME START 0845 TIME END 0950
SAMPLE TIME 4 / 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 23 FDA 0.77
NOMOGRAPH Cf 1.0 PITOT Cf 0.84
Pb ("Hg) 30.00 Ps ("Hg) 30.00
WEATHER Sc. Clds TEMP (F) 70
METER BOX NO. 2 H 1.6278 Y 0.9996
NOZZLE IDENTIFICATION NO. BOX # 2
NOZZLE CAL .210 / .210 / .210 = 0.210
STACK DIMENSIONS 98.75"
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) >1.5 (DOWNSTREAM) >2.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) ~190' UMBILICAL LENGTH
AGENCY OBSERVER(S)
TEST COORDINATOR(S) DON GRIFFIN
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
GAINESVILLE, FLORIDA 32653
(904) 335-1889 - OFFICE / (904) 335-1891 - FAX

STACK CONFIGURATION

REMARKS:
15 MIN. PURGE @ END OF TEST.

TEST ID

MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 047.243 (FT3)
INITIAL 000.130 (FT3)
NET 47.113 (FT3)
FILTER NO. 9350 IMP. VOL.GAIN 320.0 (ml)
SILICA GEL NO. 110 WT. GAIN 11.8 (ml)
TOTAL CONDENSATE 331.8 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					10.41
%O2					9.51
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER
LEAK CHECKS
PRE 0.00 CFM 16 ("Hg) POST 0.00 CFM 13 ("Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 / 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 / 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATK-2
BOX OPERATOR RESHARD PROBE HOLDER PROINS

PORT & TRAVERSE PT NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-1		0849	003.040	1.55	1.55	1.55	148	256	56	62	5.0
2		53	005.990	1.55	1.55	1.55	150	257	53	62	5.5
3		57	009.020	1.60	1.60	1.60	152	255	52	62	6.0
4		01	012.010	1.60	1.60	1.60	153	258	50	62	6.0
5		05	014.930	1.60	1.60	1.60	154	256	50	63	6.0
6		09	017.880	1.55	1.55	1.55	154	255	51	63	6.5

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-7		0913	020.800	1.50	1.50	1.50	154	258	51	64	7.0
8		17	023.669	1.50	1.50	1.50	153	256	52	65	7.0
2-1		0922	026.515	1.50	1.50	1.50	151	253	56	67	7.5
2		26	029.530	1.60	1.60	1.60	152	254	55	68	8.0
3		30	032.560	1.60	1.60	1.60	153	256	55	68	8.5
4		34	035.525	1.55	1.55	1.55	152	257	54	69	8.5
5		38	038.450	1.55	1.55	1.55	152	258	54	69	9.0
6		42	041.430	1.55	1.55	1.55	153	258	55	70	9.5
7		46	044.280	1.55	1.55	1.55	153	254	54	71	10.0
8		0950	047.243	1.50	1.50	1.50	153	256	55	71	10.0
END		0950	47.113	1.553		1.553	152.31			66.00	

PLANT U.S. SUGAR CORP.
SOURCE BOILER # 4
PLANT LOCATION CLEWISTON, FL.
TYPE OF SAMPLING TRAIN EPA 5/6/8
TYPE OF SAMPLES PART, SO2, Acid Mist
DATE 11-17-00 RUN NUMBER 2
TIME START 1044 TIME END 1150
SAMPLE TIME 4 / 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 23 FDA 0.77
NOMOGRAPH Cf 1.0 PITOT Cf 0.84
Pb ("Hg) 30.00 Ps ("Hg) 30.00
WEATHER Sc. Clouds TEMP (F) 81
METER BOX NO. 2 H 1.6278 Y 0.9996
NOZZLE IDENTIFICATION NO. BOX # 2
NOZZLE CAL .210, .210, .210 = 0.210
STACK DIMENSIONS 98.75
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) >1.5 (DOWNSTREAM) >2.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) ~190' UMBILICAL LENGTH 200'
AGENCY OBSERVER(S)
TEST COORDINATOR(S)
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
GAINESVILLE, FLORIDA 32653
(904) 335-1889 - OFFICE / (904) 335-1891 - FAX

STACK CONFIGURATION

REMARKS:
15 MIN. PURGE @ END of test.

TEST ID
PAGE 1 OF 2
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 100.038 (FT3)
INITIAL 54.212 (FT3)
NET 45.826 (FT3)
FILTER NO. 9351 IMP. VOL.GAIN 317.0 (ml)
SILICA GEL NO. 533 WT. GAIN 14.0 (ml)
TOTAL CONDENSATE 331.0 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					10.65
%O2					9.69
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER
LEAK CHECKS.
PRE 0.100 CFM 15 ("Hg) POST 0.00 CFM 16 ("Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 / 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 / 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATK-2
BOX OPERATOR RESHARD PROBE HOLDER PROWS

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O) CALC.	METER ORIFICE PRESS. DIFF.("H2O) ACTUAL	STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
1-1		1048	57.125	1.60	1.60	1.60	153	258	60	70	5.0
2		52	60.010	1.60	1.60	1.60	152	256	58	70	5.0
3		56	62.965	1.60	1.60	1.60	152	257	56	70	5.5
4		00	65.885	1.55	1.55	1.55	152	253	53	70	5.5
5		04	68.810	1.55	1.55	1.55	153	254	53	71	6.0
6		08	71.695	1.55	1.55	1.55	153	258	54	71	6.0

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-7		1112	74.550	1.50	1.50	1.50	152	257	55	72	6.5
8		16	77.212	1.50	1.50	1.50	152	254	55	72	6.5
2-1		1122	80.050	1.55	1.55	1.55	152	256	57	74	7.5
2		26	83.090	1.60	1.60	1.60	152	255	56	75	8.0
3		30	86.110	1.60	1.60	1.60	152	256	56	75	8.0
4		34	89.100	1.60	1.60	1.60	153	257	55	76	8.5
5		38	91.940	1.55	1.55	1.55	153	257	55	77	8.5
6		42	94.760	1.55	1.55	1.55	153	256	54	78	9.0
7		46	97.380	1.50	1.50	1.50	153	253	55	79	9.5
8		1150	100.030	1.50	1.50	1.50	152	254	55	80	9.5
END		1150	45.826	1.556		1.556	152.44			73.75	

PLANT U.S. Sugar Corp.
SOURCE Boiler # 4
PLANT LOCATION Clewiston, FL.
TYPE OF SAMPLING TRAIN EPA 5/6/8
TYPE OF SAMPLES Part, SO2, Acid Mist
DATE 11-17-00 RUN NUMBER 3
TIME START 1240 TIME END 1347
SAMPLE TIME 4 / 16 (MIN/PT)= 64 TOTAL MIN
ASSUMED MOISTURE(%) 23 FDA 0.77
NOMOGRAPH Cf 1.0 PITOT Cf 0.84
Pb ("Hg) 30.00 Ps ("Hg) 30.00
WEATHER Sc. Clouds TEMP (F) 82
METER BOX NO. 2 H 1.6278 Y 0.9996
NOZZLE IDENTIFICATION NO. Box # 2
NOZZLE CAL 0.210, .210, .210 = 0.210
STACK DIMENSIONS 98.75"
STACK AREA (FT2) 53.197 EFFECTIVE (FT2) 53.197
STACK DIAMETERS:(UPSTREAM) >1.5 (DOWNSTREAM) >2.0
PORT SIZE 6" NIPPLE LENGTH 6"
STACK HEIGHT (FT) ≈190' UMBILICAL LENGTH 200'
AGENCY OBSERVER(S)
TEST COORDINATOR(S)
V. E. OBSERVER

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
GAINESVILLE, FLORIDA 32653
(904) 335-1889 - OFFICE / (904) 335-1891 - FAX

STACK CONFIGURATION

REMARKS:
15 min. Purge @ End of test.

TEST ID
PAGE 1 OF 2
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 153.708 (FT3)
INITIAL 107.102 (FT3)
NET 46.606 (FT3)
FILTER NO. 9353 IMP. VOL.GAIN 307.6 (ml)
SILICA GEL NO. 53 WT. GAIN 12.3 (ml)
TOTAL CONDENSATE 319.3 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					10.58
%O2					9.66
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER
LEAK CHECKS
PRE 0.00 CFM 20 ("Hg) POST 0.0 CFM 14 ("Hg)
METER BOX/PUMP ✓ GAS SYSTEM ✓ ORSAT BAG
PITOT TUBE NO. 109 PRE-TEST LEAK CHECK OK
POST TEST (+) 9.0 / 0.0 "H20 (15 SECONDS)
POST TEST (-) 8.0 / 0.0 "H20 (15 SECONDS)
PYROMETER NUMBER ATK-2
BOX OPERATOR Reshard PROBE HOLDER Prows

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O) CALC.	METER ORIFICE PRESS. DIFF.("H2O) ACTUAL	STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
1-1		1244	110.100	1.60	1.60	1.60	154	248	67	80	5.0
2		48	112.970	1.60	1.60	1.60	154	253	62	80	5.0
3		52	115.915	1.60	1.60	1.60	153	256	59	79	5.5
4		56	118.915	1.60	1.60	1.60	152	258	58	79	5.5
5		00	121.810	1.55	1.55	1.55	153	257	58	79	6.0
6		04	124.735	1.55	1.55	1.55	153	254	58	79	6.0

ACE AIR CONSULTING & ENGINEERING, INC.

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-7		1308	127.620	1.50	1.50	1.50	152	257	57	79	6.5
8		12	130.498	1.50	1.50	1.50	152	256	58	79	6.5
2-1		1319	133.330	1.55	1.55	1.55	152	254	59	79	7.5
2		23	136.200	1.60	1.60	1.60	152	256	59	79	8.0
3		27	139.140	1.60	1.60	1.60	152	257	58	79	8.5
4		31	142.090	1.60	1.60	1.60	154	256	58	79	9.0
5		35	145.020	1.60	1.60	1.60	154	257	58	79	9.0
6		39	147.950	1.55	1.55	1.55	155	253	58	79	9.5
7		43	150.840	1.55	1.55	1.55	155	256	57	79	10.0
8		1347	153.708	1.50	1.50	1.50	153	255	57	79	10.0
END		1347	46.606	1.566		1.566	153.13			79.13	

APPENDIX C

GASEOUS EMISSION SUMMARY

GASEOUS EMISSION SUMMARY
NUMBER 4 BOILER
U.S. SUGAR CORPORATION
CLEWISTON, FLORIDA
NOVEMBER 13, 2000

RUN NUMBER:	1P	2P	3P
TIME:	1134-1240	1343-1449	1532-1639
DATA LOGGER O2%:	11.03	11.32	11.22
DATA LOGGER CO2%:	9.94	9.65	9.82
DATA LOGGER CO PPM:	508.00	356.00	427.00
DATA LOGGER C3H8:	13.28	5.85	12.26
O2 INITIAL BIAS:	5.13	5.19	5.2
O2 FINAL BIAS:	5.19	5.2	5.19
O2 AVERAGE BIAS:	5.16	5.195	5.195
CO2 INITIAL BIAS:	14.96	14.87	14.87
CO2 FINAL BIAS:	14.87	14.87	14.97
CO2 AVERAGE BIAS:	14.915	14.87	14.92
CO INITIAL BIAS:	3032	3082	3072
CO FINAL BIAS:	3082	3072	3033
CO AVERAGE BIAS:	3057	3077	3052.5
C3H8 INITIAL BIAS:	50.66	47.04	45.87
C3H8 FINAL BIAS:	47.04	45.87	50.32
C3H8 AVERAGE BIAS:	48.85	46.455	48.095
O2 INITIAL ZERO:	0.2	0.2	0.2
O2 FINAL ZERO:	0.2	0.2	0.2
O2 AVERAGE ZERO:	0.2	0.2	0.2
CO2 INITIAL ZERO:	0.27	0.25	0.2
CO2 FINAL ZERO:	0.25	0.2	0.2
CO2 AVERAGE ZERO:	0.26	0.225	0.2
CO INITIAL ZERO:	2	8	28
CO FINAL ZERO:	8	28	16
CO AVERAGE ZERO:	5	18	22
C3H8 INITIAL ZERO:	2	0.06	0.11
C3H8 FINAL ZERO:	0.06	0.11	0.01
C3H8 AVERAGE ZERO:	1.03	0.085	0.06
O2 CAL. GAS VALUE:	4.96	4.96	4.96
CO2 CAL. GAS VALUE:	15	15	15
CO CAL. GAS VALUE:	3000	3000	3000
C3H8 CAL. GAS VALUE:	51.1	51.1	51.1
DRY O2 CORRECTED AVERAGE:	**10.83**	**11.04**	**10.94**
DRY CO2 CORRECTED AVERAGE:	**9.91**	**9.65**	**9.80**
WET CO CORRECTED AVERAGE:	494.43	331.48	400.92
WET C3H8 CORRECTED AVERAGE:	13.1	6.35	12.98
CH4 PPM DRY:	**17**	**9**	**12**
STACK H2O %:	**22.50**	**22.83**	**23.8**
DRY BASIS CO PPM:	**638.0**	**429.5**	**525.9**
DRY BASIS C3H8 PPM:	**16.9**	**8.2**	**17.0**
VOLUMETRIC FLOW (DSCFM):	**155784**	**157058**	**155345**
CO LB/HR:	433.324	294.142	356.175
VOC LB/HR as PROPANE::	11.98	5.63	13.86
CO LB/MMBTU:	0.921	0.631	0.750
VOC LB/MMBTU(as propane).	0.025	0.012	0.029
LB/HR STEAM:	**219474**	**217600**	**221167**
MMBTUH:	**470.6**	**465.93**	**474.68**
GPH OIL:	0	0	0

INITIAL GAS CALIBRATIONS
NUMBER 4 BOILER
U.S. SUGAR CORPORATION
CLEWISTON, FLORIDA
NOVEMBER 13, 2000

CALIBRATION ERROR:

CALIBRATION GAS		READING	RANGE	% RANGE
3000	CO	3082	40000	0.205
796	CO	832	40000	0.09
0	CO	8	40000	0.02
51.1	C3H8	50.32	1000	-0.078
30.5	C3H8	30.21	1000	-0.029
244.4	C3H8	240.54	1000	-0.386
0	C3H8	9	1000	0.9
15	CO2	14.84	20	-0.8
5	CO2	5.14	20	0.7
0	CO2	0.03	20	0.15
50.2	CH4	50.2	100	0
30	CH4	30.1	100	0.1
0	CH4	0	100	0
15	O2	15.09	25	0.36
4.96	O2	5.12	25	0.64
0	O2	0.07	25	0.28

GASEOUS EMISSION SUMMARY
NUMBER 4 BOILER
U.S. SUGAR CORPORATION
CLEWISTON, FLORIDA
NOVEMBER 14, 2000

RUN NUMBER:	4P	5P	6P
TIME:	0838-0945	1024-1130	1412-1514
DATA LOGGER O2%:	9.42	10.10	9.80
DATA LOGGER CO2%:	11.12	10.32	10.60
DATA LOGGER CO PPM:	1865.00	793.00	1630.00
DATA LOGGER C3H8:	90.26	30.82	69.81
O2 INITIAL BIAS:	5.15	4.96	4.94
O2 FINAL BIAS:	4.96	4.94	4.88
O2 AVERAGE BIAS:	5.055	4.95	4.91
CO2 INITIAL BIAS:	15.04	14.83	14.6
CO2 FINAL BIAS:	14.83	14.6	14.85
CO2 AVERAGE BIAS:	14.935	14.715	14.725
CO INITIAL BIAS:	3001	2963	3072
CO FINAL BIAS:	2963	2972	3011
CO AVERAGE BIAS:	2982	2967.5	3041.5
C3H8 INITIAL BIAS:	242.96	244.87	242.87
C3H8 FINAL BIAS:	244.87	241.33	226.24
C3H8 AVERAGE BIAS:	243.915	243.1	234.555
O2 INITIAL ZERO:	0.2	0.2	0.2
O2 FINAL ZERO:	0.2	0.2	0.2
O2 AVERAGE ZERO:	0.2	0.2	0.2
CO2 INITIAL ZERO:	0.27	0.25	0.084
CO2 FINAL ZERO:	0.25	-0.02	0.08
CO2 AVERAGE ZERO:	0.26	0.115	0.082
CO INITIAL ZERO:	6	4	7
CO FINAL ZERO:	4	6	6
CO AVERAGE ZERO:	5	5	6.5
C3H8 INITIAL ZERO:	0.13	0.21	0.05
C3H8 FINAL ZERO:	0.21	0.14	-14
C3H8 AVERAGE ZERO:	0.17	0.175	-6.975
O2 CAL. GAS VALUE:	4.96	4.96	4.96
CO2 CAL. GAS VALUE:	15	15	15
CO CAL. GAS VALUE:	3000	3000	3000
C3H8 CAL. GAS VALUE:	244.4	244.4	244.4
DRY O2 CORRECTED AVERAGE:	**9.42**	**10.34**	**10.11**
DRY CO2 CORRECTED AVERAGE:	**11.10**	**10.48**	**10.77**
WET CO CORRECTED AVERAGE:	1874.37	797.97	1604.78
WET C3H8 CORRECTED AVERAGE:	90.3	30.83	77.70
CH4 PPM DRY:	**105**	**30**	**90.0**
STACK H2O %:	**22.60**	**23.28**	**24.26**
DRY BASIS CO PPM:	**2421.7**	**1040.1**	**2118.8**
DRY BASIS C3H8 PPM:	**116.7**	**40.2**	**102.6**
VOLUMETRIC FLOW (DSCFM):	**155049**	**154844**	**154535**
CO LB/HR:	1637.080	702.201	1427.588
VOC LB/HR as PROPANE::	86.79	32.02	76.85
CO LB/MMBTU:	3.031	1.360	2.802
VOC LB/MMBTU(as propane).	0.161	0.062	0.151
LB/HR STEAM:	**249730**	**238356**	**235068**
MMBTUH:	**540.07**	**516.45**	**509.56**
GPH OIL:	0	0	0

INITIAL GAS CALIBRATIONS
NUMBER 4 BOILER
U.S. SUGAR CORPORATION
CLEWISTON, FLORIDA
NOVEMBER 14, 2000

CALIBRATION ERROR:

CALIBRATION GAS		READING	RANGE	% RANGE
3000	CO	3001	10000	0.01
796	CO	861	10000	0.65
0	CO	6	10000	0.06
51.1	C3H8	51.9	1000	0.08
30.5	C3H8	31.39	1000	0.089
244.4	C3H8	242.96	1000	-0.144
0	C3H8	0.13	1000	0.013
15	CO2	14.95	20	-0.25
4.93	CO2	5.15	20	1.1
0	CO2	0.03	20	0.15
250	CH4	250	500	0
85	CH4	85	100	0
50.2	CH4	49.4	100	-0.8
30	CH4	29.5	100	-0.5
0	CH4	0	100	0
15.1	O2	15.04	25	-0.24
4.96	O2	5.08	25	0.48
0	O2	0.07	25	0.28

GASEOUS EMISSION SUMMARY
NUMBER 4 BOILER
U.S. SUGAR CORPORATION
CLEWISTON, FLORIDA
NOVEMBER 15, 2000

RUN NUMBER:	7P	8P	9P	10P	11P
TIME.	0846-0953	1036-1142	1307-1414	1446-1554	1634-1740
DATA LOGGER O2%:	10.59	10.13	9.55	9.27	9.35
DATA LOGGER CO2%:	10.33	10.82	11.40	11.53	11.49
DATA LOGGER CO PPM:	504.00	1284.00	2731.00	4643.00	3233.00
DATA LOGGER C3H8:	25.34	59.71	192.84	397.23	185.30
O2 INITIAL BIAS:	4.97	5.04	5.06	5.1	5.07
O2 FINAL BIAS:	5.04	5.06	5.1	5.07	5.04
O2 AVERAGE BIAS:	5.005	5.05	5.08	5.085	5.055
CO2 INITIAL BIAS:	14.97	15.01	15.26	15.2	15.23
CO2 FINAL BIAS:	15.01	15.26	15.2	15.23	15.14
CO2 AVERAGE BIAS:	14.99	15.135	15.23	15.215	15.185
CO INITIAL BIAS:	848	3016	2919	2900	8232
CO FINAL BIAS:	834	2919	2900	2910	8279
CO AVERAGE BIAS:	841	2967.5	2909.5	2905	8255.5
C3H8 INITIAL BIAS:	35.77	57.28	239.32	240.27	243.95
C3H8 FINAL BIAS:	40.72	57.94	240.27	243.95	235.59
C3H8 AVERAGE BIAS:	38.245	57.61	239.795	242.11	239.77
O2 INITIAL ZERO:	0.054	0.05	0.05	0.05	0.05
O2 FINAL ZERO:	0.05	0.05	0.05	0.05	0.05
O2 AVERAGE ZERO:	0.052	0.05	0.05	0.05	0.05
CO2 INITIAL ZERO:	0.083	0.08	0.08	0.08	0.08
CO2 FINAL ZERO:	0.08	0.08	0.08	0.08	0.08
CO2 AVERAGE ZERO:	0.0815	0.08	0.08	0.08	0.08
CO INITIAL ZERO:	5	7	5	7	9
CO FINAL ZERO:	7	5	7	9	5
CO AVERAGE ZERO:	6	6	6	8	7
C3H8 INITIAL ZERO:	3	3.76	0.29	6.91	6.77
C3H8 FINAL ZERO:	3.76	5.54	6.91	6.77	0.21
C3H8 AVERAGE ZERO:	3.38	4.65	3.6	6.84	3.49
O2 CAL. GAS VALUE:	4.96	4.96	4.96	4.96	4.96
CO2 CAL. GAS VALUE:	15	15	15	15	15
CO CAL. GAS VALUE:	796	3000	3000	3000	8230
C3H8 CAL. GAS VALUE:	30.5	51.1	244.4	244.4	244.4
DRY O2 CORRECTED AVERAGE:	**10.55**	**10.00**	**9.37**	**9.08**	**9.22**
DRY CO2 CORRECTED AVERAGE:	**10.31**	**10.70**	**11.21**	**11.35**	**11.33**
WET CO CORRECTED AVERAGE:	474.74	1294.61	2815.57	4799 79	3218.76
WET C3H8 CORRECTED AVERAGE:	19.2	53.13	195.81	405.54	188.06
CH4 PPM DRY:	**15**	**66**	**237.5**	**407.5**	**240.0**
STACK H2O %:	**22.53**	**23.44**	**24.57**	**25.09**	**24.95**
DRY BASIS CO PPM:	**612.8**	**1691.0**	**3732.7**	**6407.4**	**4288.8**
DRY BASIS C3H8 PPM:	**24.8**	**69.4**	**259.6**	**541.4**	**250.6**
VOLUMETRIC FLOW (DSCFM):	**156986**	**157865**	**156710**	**154864**	**156431**
CO LB/HR:	419.440	1163.887	2550.381	4326.330	2925.148
VOC LB/HR as PROPANE::	21.29	51.26	193.71	430.26	182.81
CO LB/MMBTU:	0.843	2.147	4.402	8.272	5.173
VOC LB/MMBTU(as propane):	0.043	0.095	0.334	0.823	0.323
LB/HR STEAM:	**230833**	**249041**	**263200**	**241622**	**261370**
MMBTUH:	**497.45**	**542.03**	**579.4**	**523.02**	**565.5**
GPH OIL:	0	0	0	0	0
					0.120

INITIAL GAS CALIBRATIONS
NUMBER 4 BOILER
U.S. SUGAR CORPORATION
CLEWISTON, FLORIDA
NOVEMBER 15, 2000

CALIBRATION ERROR:

CALIBRATION GAS		READING	RANGE	% RANGE
3000	CO	3016	10000	0.16
796	CO	848	10000	0.52
0	CO	5	10000	0.05
51.1	C3H8	57.28	1000	0.618
30.5	C3H8	35.77	1000	0.527
244.4	C3H8	242.14	1000	-0.226
0	C3H8	3	1000	0.3
15	CO2	14.97	20	-0.15
4.93	CO2	NA	20	#VALUE!
0	CO2	0.054	20	0.27
250	CH4	250	500	0
85	CH4	NA	500	#VALUE!
50.2	CH4	NA	500	#VALUE!
30	CH4	30	500	0
0	CH4	0	500	0
15.1	O2	NA	25	#VALUE!
4.96	O2	4.97	25	0.04
0	O2	0.083	25	0.332

GASEOUS EMISSION SUMMARY
NUMBER 4 BOILER
U.S. SUGAR CORPORATION
CLEWISTON, FLORIDA
NOVEMBER 16, 2000

RUN NUMBER:	12P		13P	14P	15P
TIME:	0833-0940		1035-1142	1219-1326	1400-1507
DATA LOGGER O2%:	9.29	GO TO	9.40	9.21	9.89
DATA LOGGER CO2%:	11.51	DIL. FOR	8.06	7.97	8.00
DATA LOGGER CO PPM:	3295.00	CO2	4578.00	3986.00	1554.00
DATA LOGGER C3H8:	251.72		328.57	280.77	112.47
O2 INITIAL BIAS:	5.08		5.04	14.89	14.79
O2 FINAL BIAS:	5.04			14.79	14.71
O2 AVERAGE BIAS:	5.06		5.04	14.84	14.75
CO2 INITIAL BIAS:	15.15		15.11	14.98	15.38
CO2 FINAL BIAS:	15.11		14.38	14.25	14.82
CO2 AVERAGE BIAS:	15.13		14.745	14.615	15.1
CO INITIAL BIAS:	3354		3017	2919	2907
CO FINAL BIAS:	2334		2839	2907	2808
CO AVERAGE BIAS:	2844		2928	2913	2857.5
C3H8 INITIAL BIAS:	241.62		241.31	241.51	230.85
C3H8 FINAL BIAS:	190.46		252.67	230.85	226.68
C3H8 AVERAGE BIAS:	216.04		246.99	236.18	228.765
O2 INITIAL ZERO:	0.087		0.05	0.05	0.05
O2 FINAL ZERO:			0.05	0.05	0.05
O2 AVERAGE ZERO:	0.087		0.05	0.05	0.05
CO2 INITIAL ZERO:	0.075		0.08	-0.05	-0.05
CO2 FINAL ZERO:			0.08	0.02	0.02
CO2 AVERAGE ZERO:	0.075		0.08	-0.015	-0.015
CO INITIAL ZERO:	5		2	5	7
CO FINAL ZERO:	2		5	7	-3
CO AVERAGE ZERO:	3.5		3.5	6	2
C3H8 INITIAL ZERO:	0.15		8.16	0.5	0.13
C3H8 FINAL ZERO:	8.16		25.05	0.13	-7
C3H8 AVERAGE ZERO:	4.155		16.605	0.315	-3.435
O2 CAL. GAS VALUE:	4.96		4.96	15.1	15.1
CO2 CAL. GAS VALUE:	15		15	15	15
CO CAL. GAS VALUE:	3000		3000	3000	3000
C3H8 CAL. GAS VALUE:	244.4		244.4	244.4	244.4
WET CO2 CORRECTED:			**8.16**	**8.19**	**7.95**
DRY O2 CORRECTED AVERAGE:	**9.18**		**9.29**	**9.35**	**10.11**
DRY CO2 CORRECTED AVERAGE:	**11.39**		**11.16**	**11.04**	**10.56**
WET.CO CORRECTED AVERAGE:	3476.32		4692.60	4107.33	1630.54
WET C3H8 CORRECTED AVERAGE:	285.6		330.94	290.60	121.99
CH4 PPM DRY:	**387.5**		**405**	**350.0**	**140.0**
STACK H2O %:	**25.74**		**26.83**	**25.86**	**24.68**
DRY BASIS CO PPM:	**4681.3**		**6413.3**	**5540.0**	**2164.8**
DRY BASIS C3H8 PPM:	**384.5**		**452.3**	**392.0**	**162.0**
VOLUMETRIC FLOW (DSCFM):	**155381**		**153267**	**154932**	**158969**
CO LB/HR:	3171.391		4285.637	3742.263	1500.443
VOC LB/HR as PROPANE::	271.84		333.17	292.21	125.57
CO LB/MMBTU:	5.478		7.893	6.622	2.742
VOC LB/MMBTU(as propane):	0.470		0.614	0.517	0.229
LB/HR STEAM:	**267042**		**250685**	**260548**	**252500**
MMBTUH:	**578.89**		**542.94**	**565.1**	**547.24**
GPH OIL:	0		0	0	0

INITIAL GAS CALIBRATIONS
NUMBER 4 BOILER
U.S. SUGAR CORPORATION
CLEWISTON, FLORIDA
NOVEMBER 16, 2000

CALIBRATION ERROR:

CALIBRATION GAS		READING	RANGE	% RANGE
8230	CO	8259	10000	0.29
3000	CO	3354	10000	3.54
796	CO	NA	10000	#VALUE!
0	CO	5	10000	0.05
51.1	C3H8	50.68	1000	-0.042
30.5	C3H8	29.11	1000	-0.139
244.4	C3H8	242.14	1000	-0.226
0	C3H8	3	1000	0.3
15	CO2	15.15	20	0.75
4.93	CO2	5.31	20	1.9
0	CO2	0.075	20	0.375
250	CH4	250	500	0
85	CH4	85	500	0
50.2	CH4	50	500	-0.04
30	CH4	29	500	-0.2
0	CH4	0	500	0
15.1	O2	15.09	25	-0.04
4.96	O2	5.08	25	0.48
0	O2	0.087	25	0.348

GASEOUS EMISSION SUMMARY
NUMBER 4 BOILER
U.S. SUGAR CORPORATION
CLEWISTON, FLORIDA CO2,C3H8,CO ON EPM DILUTION PROBE(20:1)
NOVEMBER 17, 2000 NOx,CH4,O2 ON DRY BASIS:

RUN NUMBER:	1	2	3
TIME:	0845-0950	1044-1150	1240-1347
DATA LOGGER NOx PPM:	45.53	51.21	58.59
DATA LOGGER O2%:	9.46	9.51	9.40
DATA LOGGER CO2%:	7.71	7.30	8.13
DATA LOGGER CO PPM:	2360.00	1834.00	2175.00
DATA LOGGER C3H8:	183.79	110.14	178.53
NOx INITIAL BIAS:	86.15	86.46	84.02
NOx FINAL BIAS:	86.46	84.02	87.04
NOx AVERAGE BIAS:	86.305	85.24	85.53
O2 INITIAL BIAS:	15.07	14.9	14.64
O2 FINAL BIAS:	14.9	14.64	14.65
O2 AVERAGE BIAS:	14.985	14.77	14.645
CO2 INITIAL BIAS:	15.04	14.81	15.09
CO2 FINAL BIAS:	14.81	13.62	15.16
CO2 AVERAGE BIAS:	14.925	14.215	15.125
CO INITIAL BIAS:	2938	3026	2943
CO FINAL BIAS:	2830	2943	2888
CO AVERAGE BIAS:	2884	2984.5	2915.5
C3H8 INITIAL BIAS:	244.82	242.9	244.21
C3H8 FINAL BIAS:	258.36	255.44	229.25
C3H8 AVERAGE BIAS:	251.59	249.17	236.73
NOx INITIAL ZERO:	0.38	0.33	0.14
NOx FINAL ZERO:	0.33	0.14	0.18
NOx AVERAGE ZERO:	0.355	0.235	0.16
O2 INITIAL ZERO:	0.04	0.096	0.081
O2 FINAL ZERO:	0.096	0.081	0.07
O2 AVERAGE ZERO:	0.068	0.0885	0.0755
CO2 INITIAL ZERO:	0.048	-0.02	0.093
CO2 FINAL ZERO:	-0.02	-0.175	0.3
CO2 AVERAGE ZERO:	0.014	-0.175	0.1965
CO INITIAL ZERO:	6	6	6
CO FINAL ZERO:	6	6	6
CO AVERAGE ZERO:	6	6	6
C3H8 INITIAL ZERO:	0.1	0.15	0 1
C3H8 FINAL ZERO:	23.51	-12	-4
C3H8 AVERAGE ZERO:	11.805	-5.925	-1.95
NOx CAL. GAS VALUE:	85.7	85.7	85 7
O2 CAL. GAS VALUE:	15.1	15.1	15 1
CO2 CAL. GAS VALUE.	15	15	15
CO CAL. GAS VALUE:	3000	3000	3000
C3H8 CAL. GAS VALUE:	244.4	244.4	244.4
WET CO2 CORRECTED:	**7.74**	**7.79**	**7.97**
DRY O2 CORRECTED AVERAGE:	**9.51**	**9.69**	**9.66**
DRY CO2 CORRECTED AVERAGE:	**10.41**	**10.45**	**10.58**
WET CO CORRECTED AVERAGE:	2453.79	1841.20	2236.47
WET C3H8 CORRECTED AVERAGE:	175.3	111 20	184.81
CH4 PPM DRY:	**202.5**	**116**	**156.0**
STACK H2O %:	**25.62**	**25.47**	**24.66**
DRY BASIS CO PPM:	**3299.0**	**2470.4**	**2968.5**
DRY BASIS C3H8 PPM:	**235.7**	**149.2**	**245.3**
VOLUMETRIC FLOW (DSCFM):	**161372**	**160074**	**161936**
CO LB/HR:	2321.108	1724.154	2095.882
VOC LB/HR as PROPANE::	185.93	121.22	214.45
CO LB/MMBTU:	4.159	3.108	3.697
VOC LB/MMBTU(as propane):	0.333	0.219	0.378
LB/HR STEAM:	**258400**	**256667**	**262192**
MMBTUH:	**558.16**	**554.74**	**566.87**
GPH OIL:	0	0	0
DRY CORRECTED NOx PPM:	**45.04**	**51.39**	**58.66**

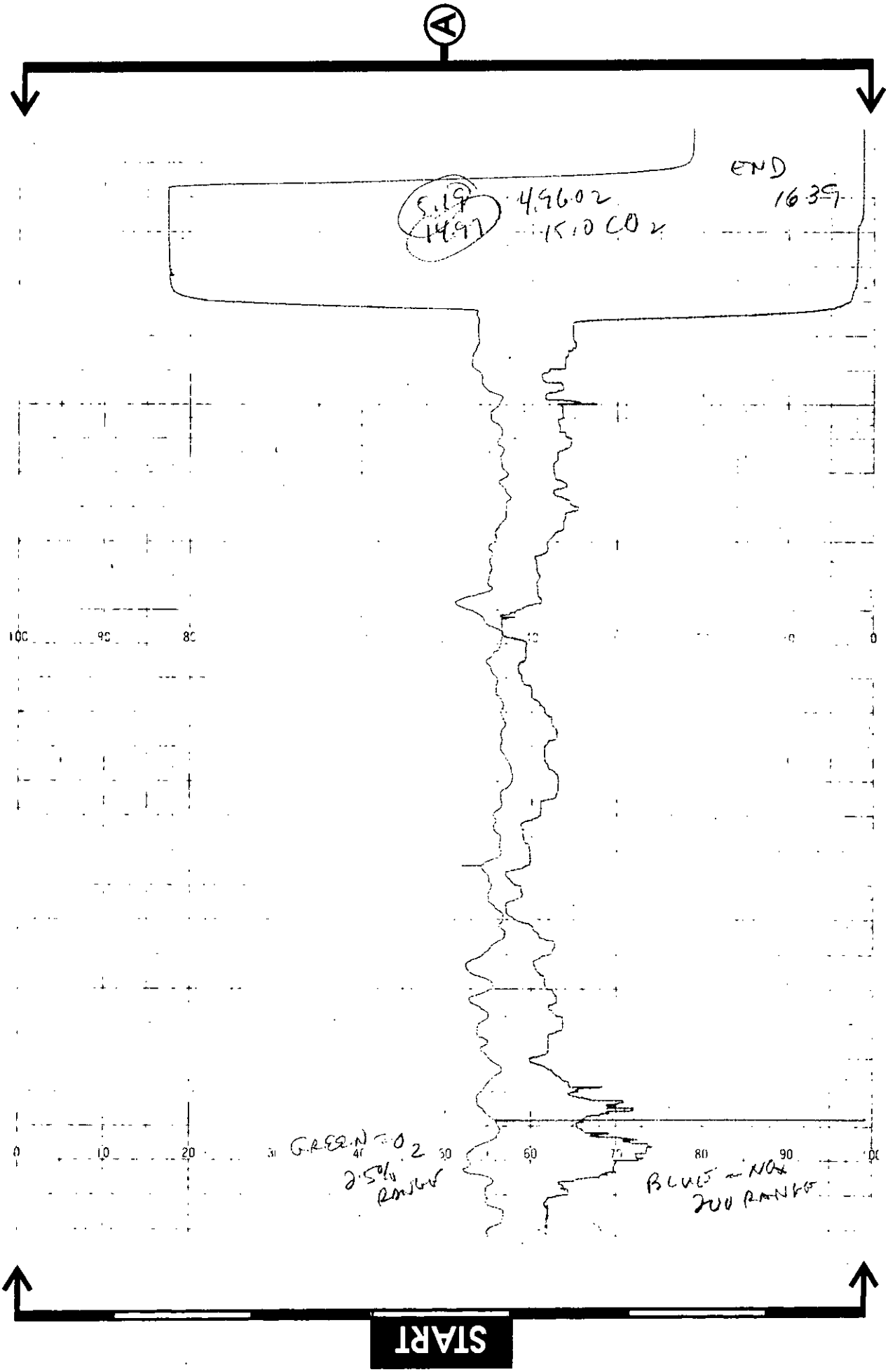
NUMBER 4 BOILER
U.S. SUGAR CORPORATION
CLEWISTON, FLORIDA
NOVEMBER 17, 2000

CALIBRATION ERROR:

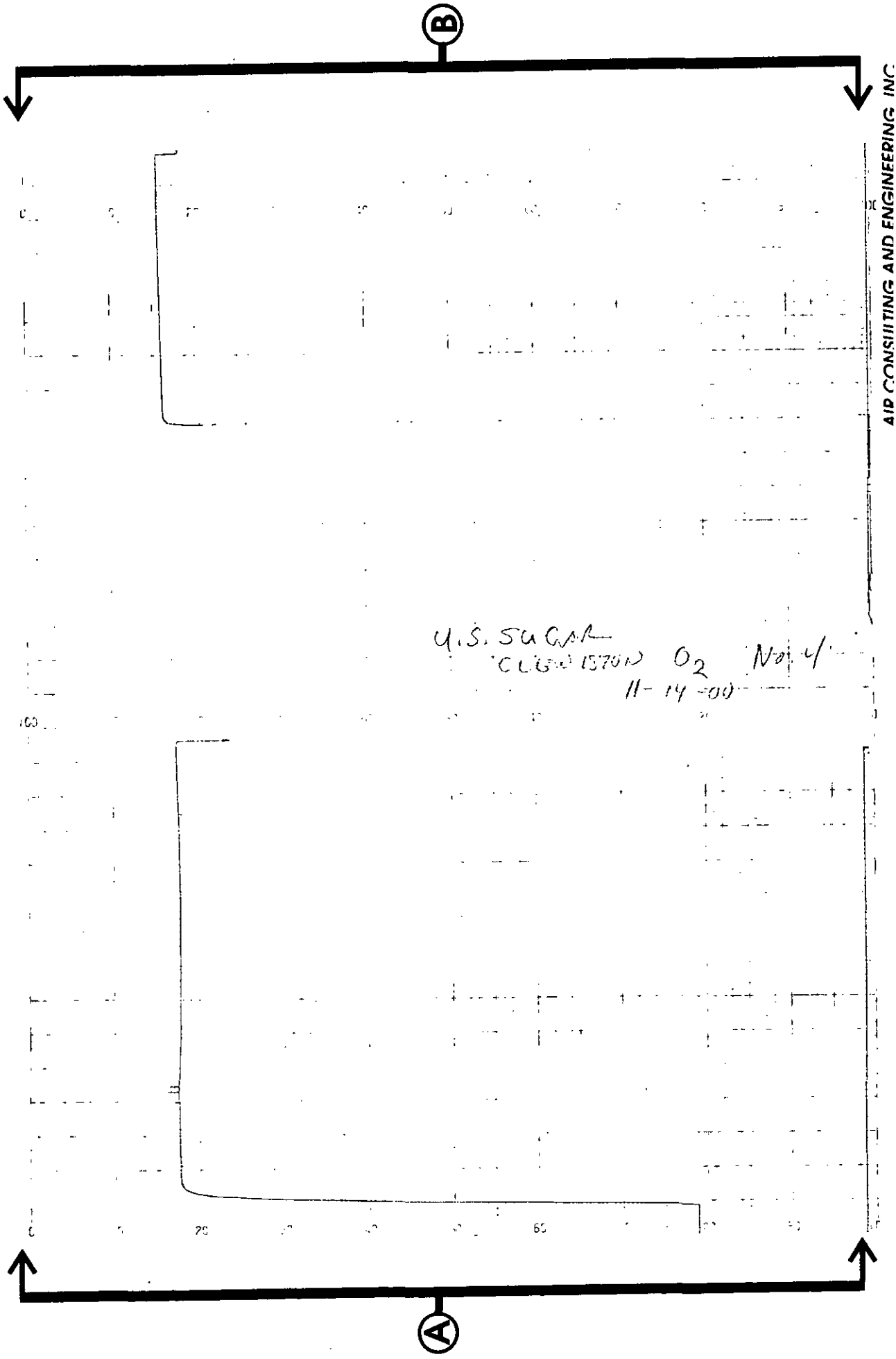
CALIBRATION GAS		READING	RANGE	% RANGE
8230	CO	8259	10000	0.29
3000	CO	3354	10000	3.54
796	CO	NA	10000	#VALUE!
0	CO	5	10000	0.05
88	C3H8	90.07	1000	0.207
30.5	C3H8	31.35	1000	0.085
244.4	C3H8	244.82	1000	0.042
0	C3H8	0.1	1000	0.01
15	CO2	15.04	20	0.2
4.93	CO2	4.64	20	-1.45
0	CO2	0.048	20	0.24
250	CH4	250	500	0
85	CH4	85	500	0
50.2	CH4	50	500	-0.04
30	CH4	28	500	-0.4
0	CH4	0	500	0
15.1	O2	15.07	25	-0.12
4.96	O2	5.07	25	0.44
0	O2	0.04	25	0.16
166	NOx	166.1	200	0.05
85.7	NOx	86.15	200	0.225
0	NOx	0.38	200	0.19

APPENDIX D

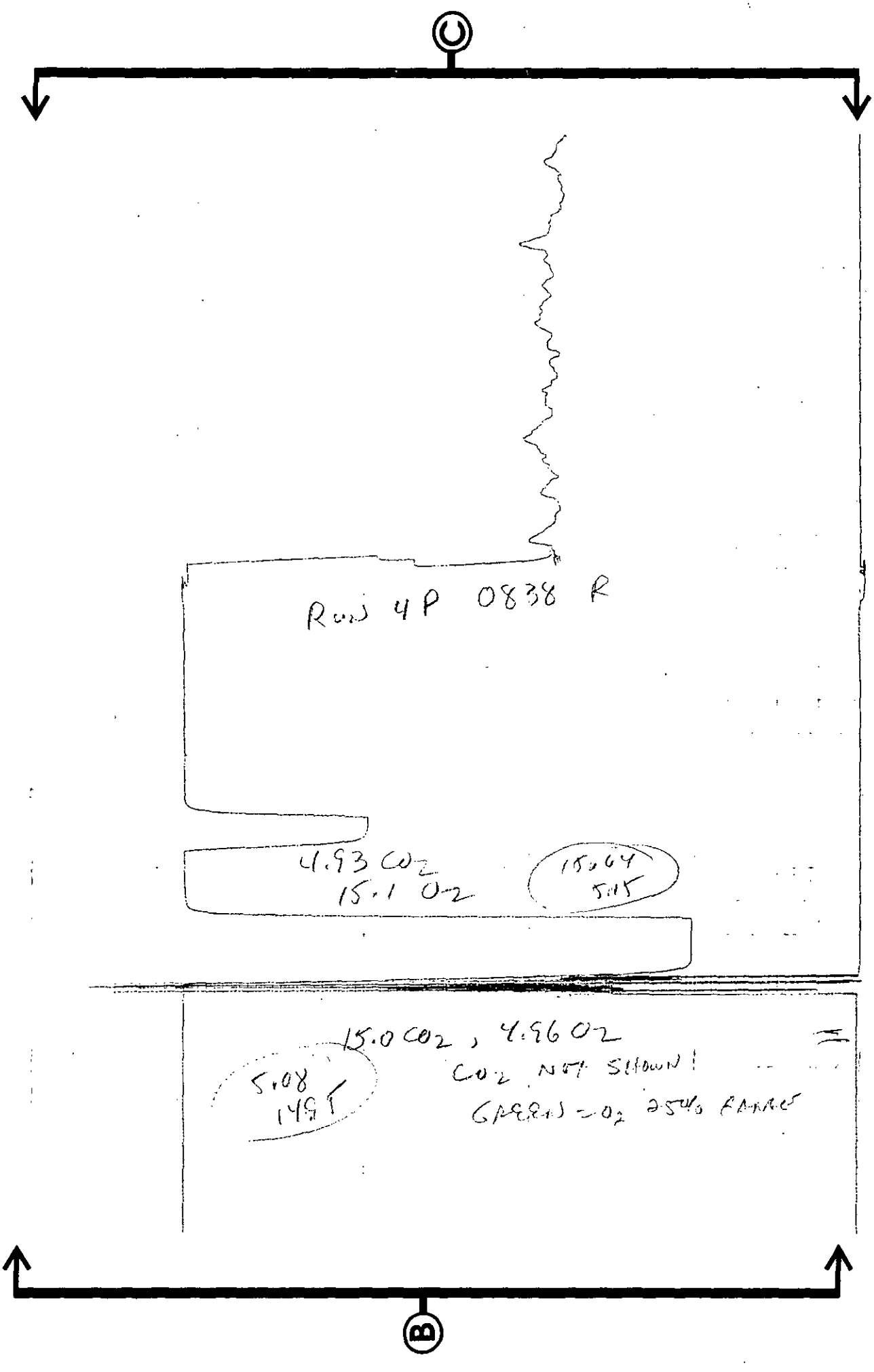
STRIP CHART
AND
DATA LOGGER COPIES

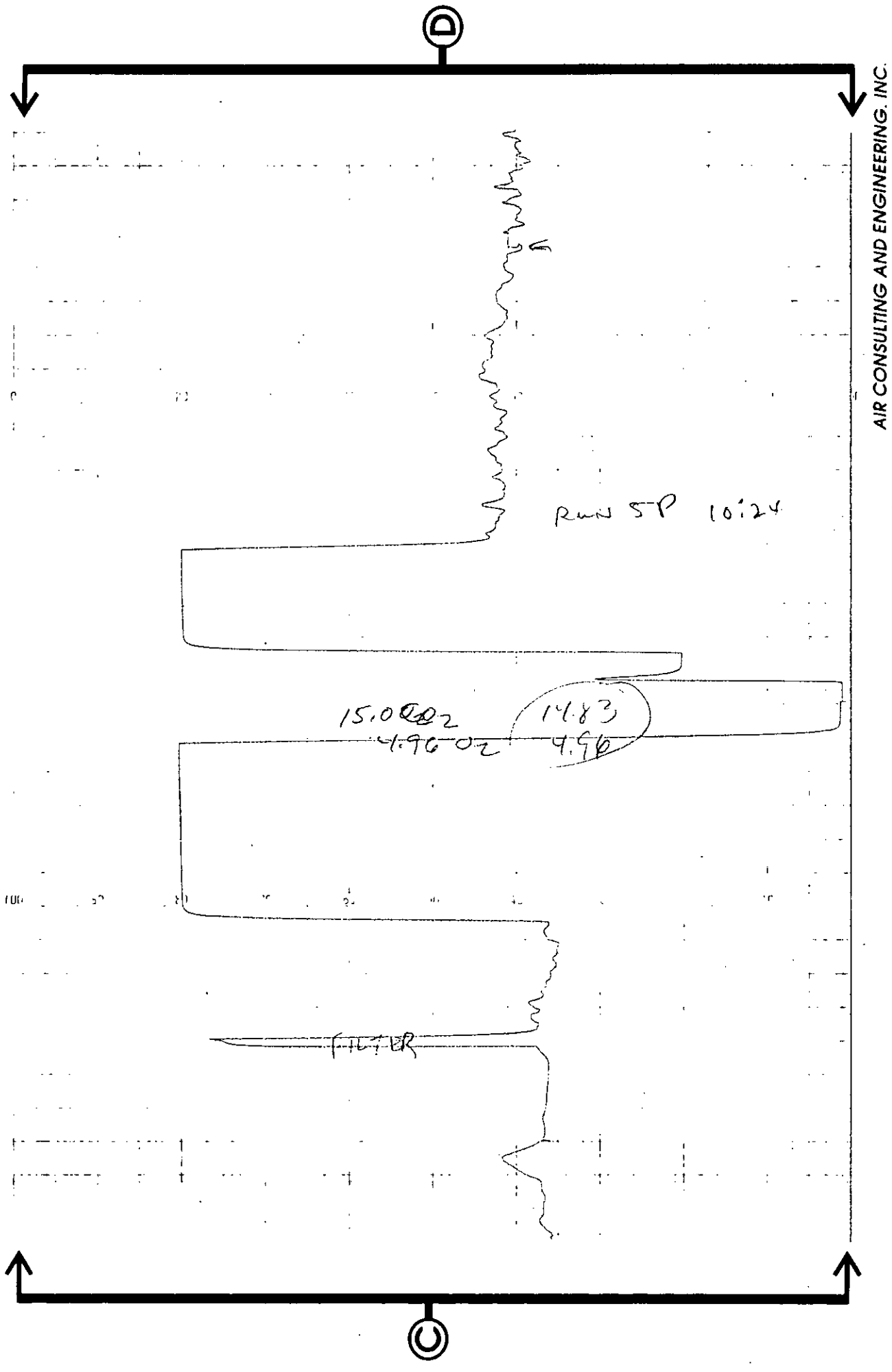


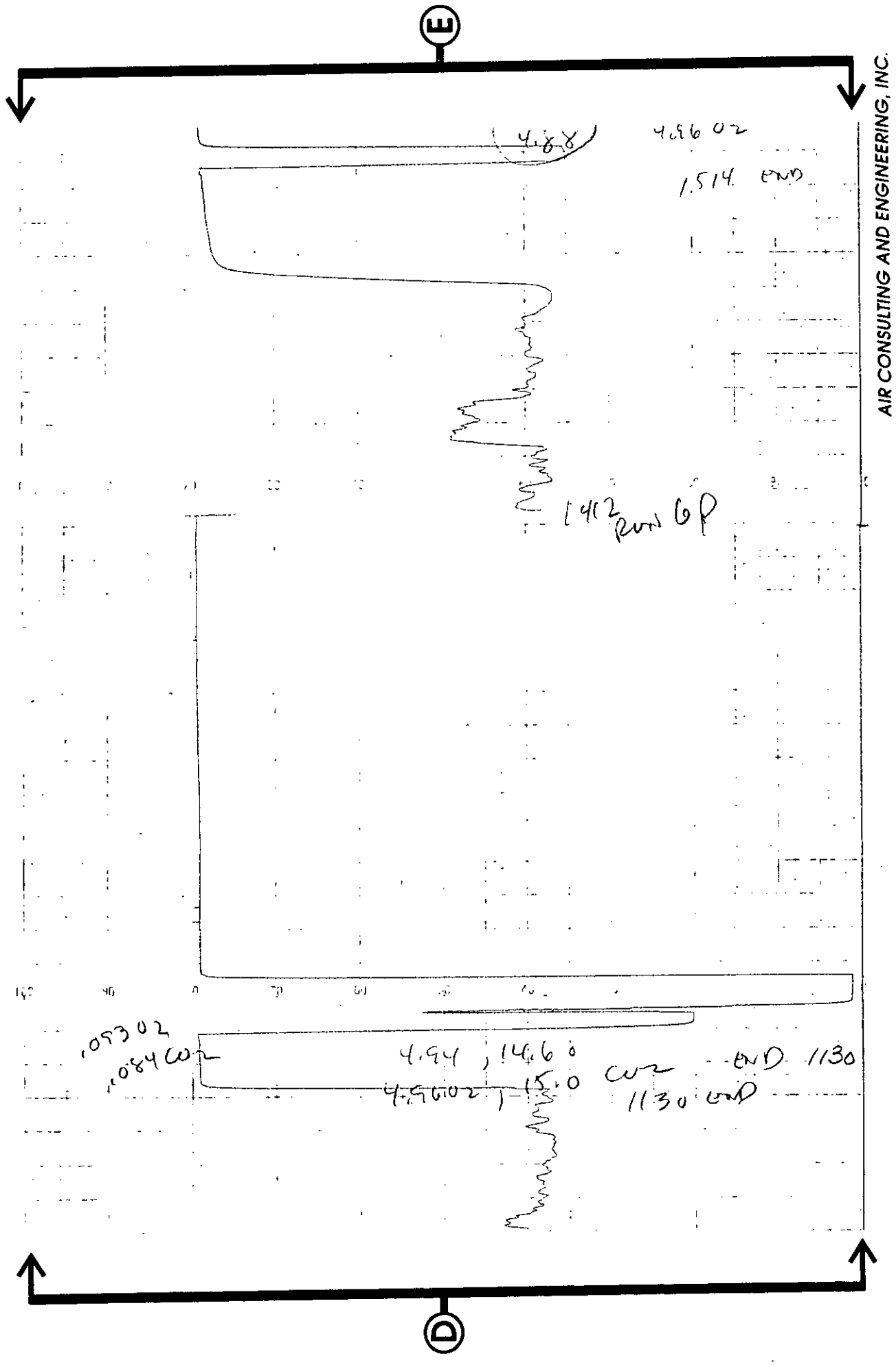
AIR CONSULTING AND ENGINEERING, INC.



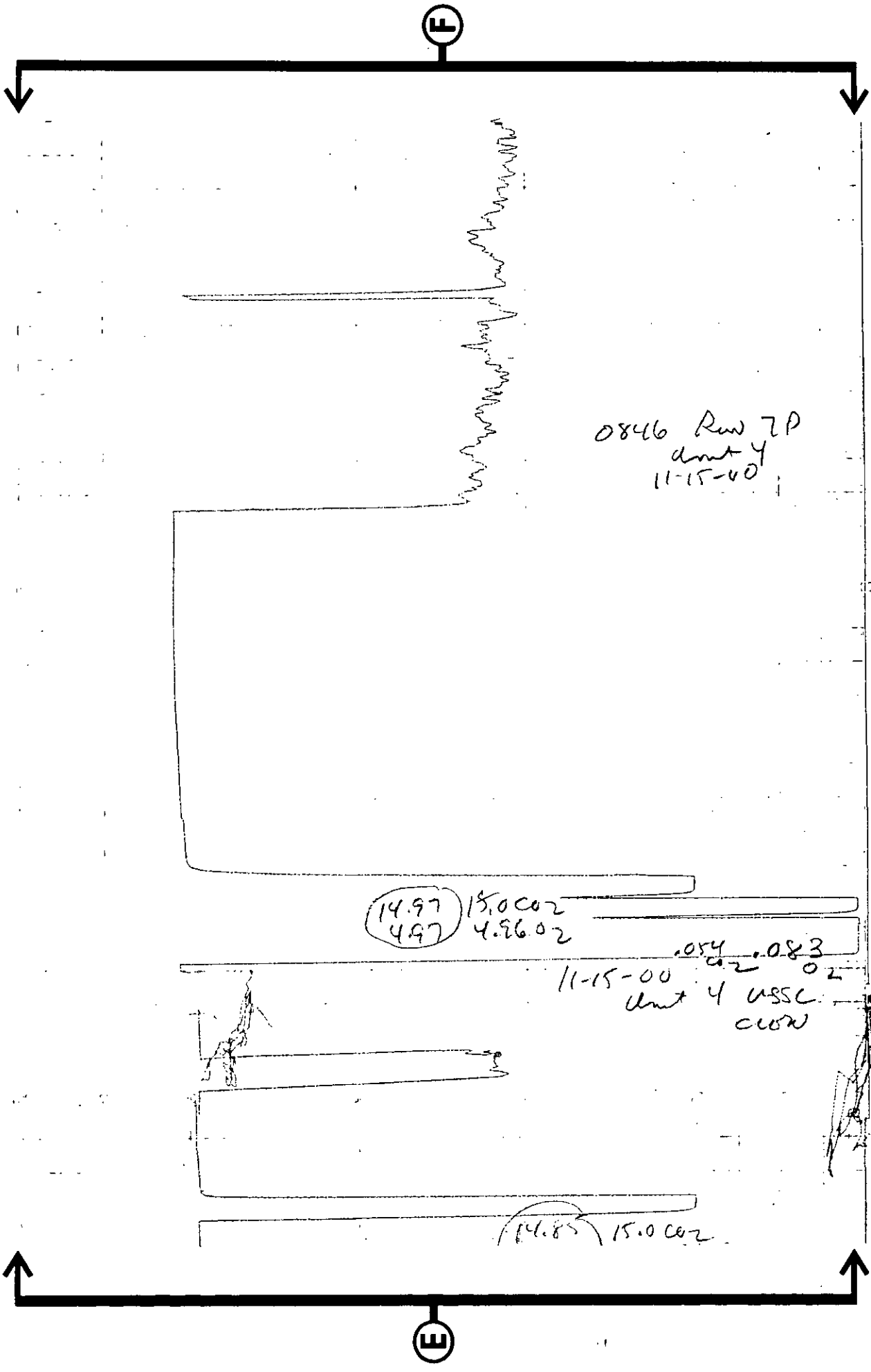
AIR CONSULTING AND ENGINEERING INC

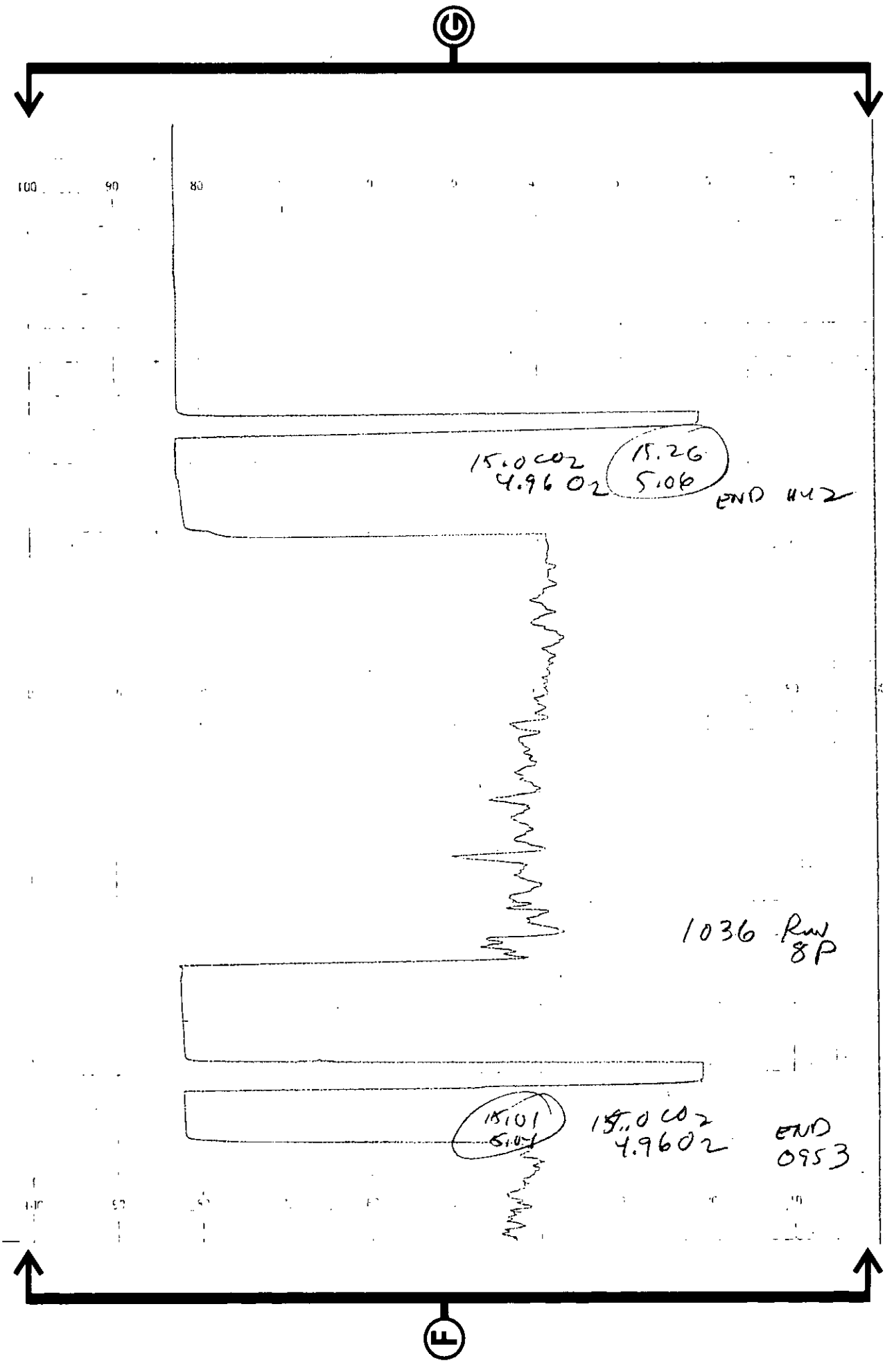


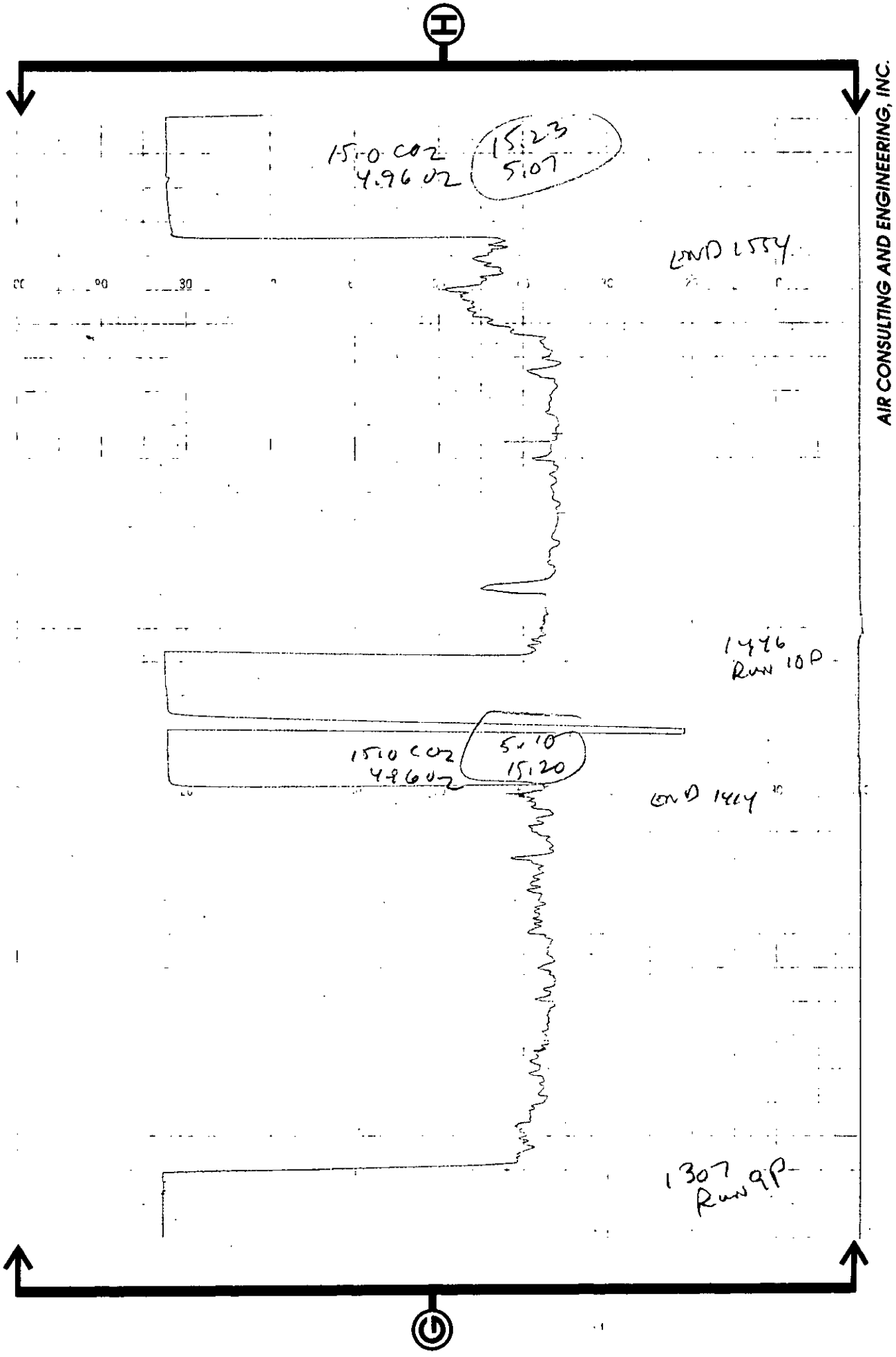


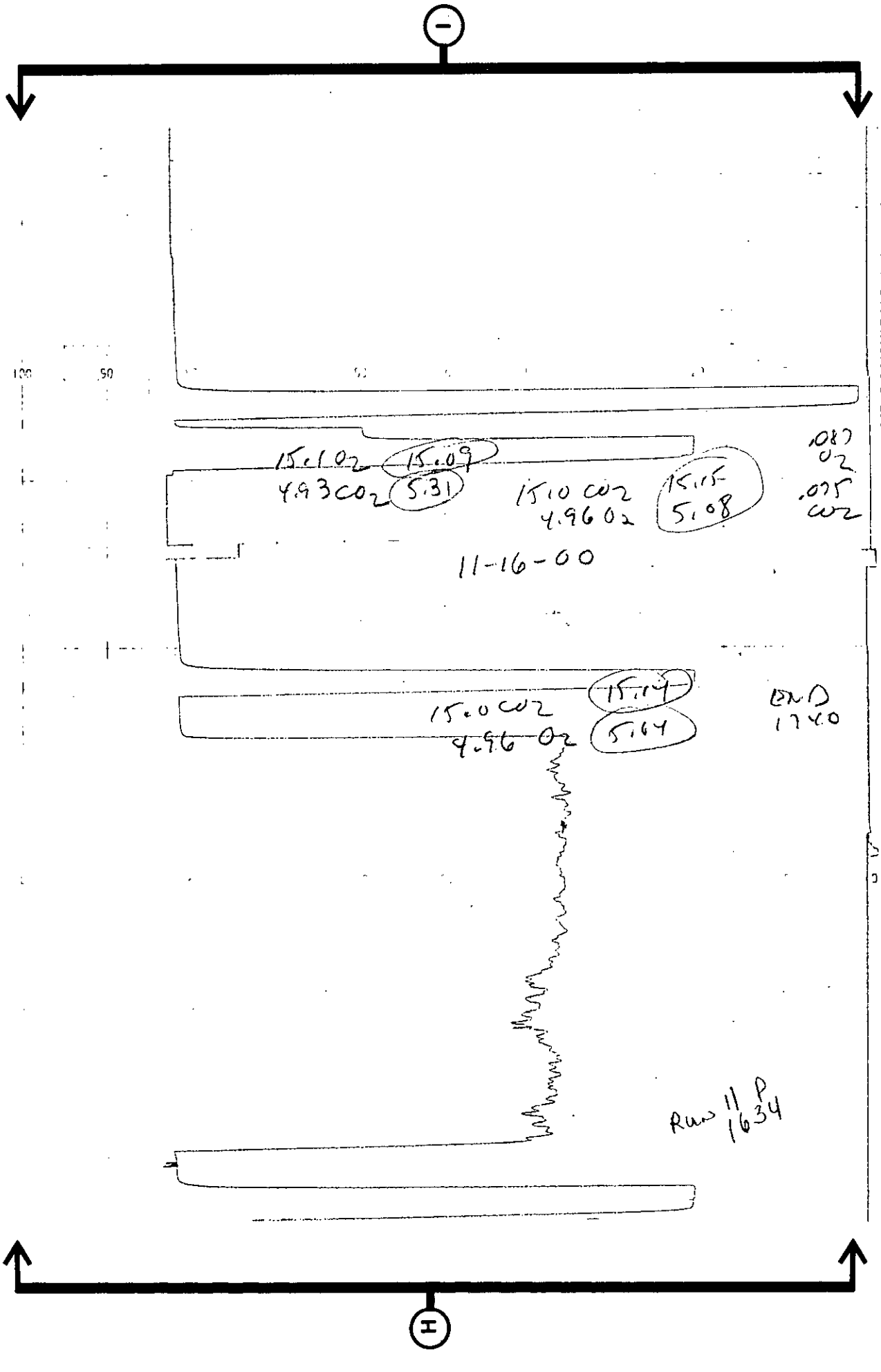


AIR CONSULTING AND ENGINEERING, INC.

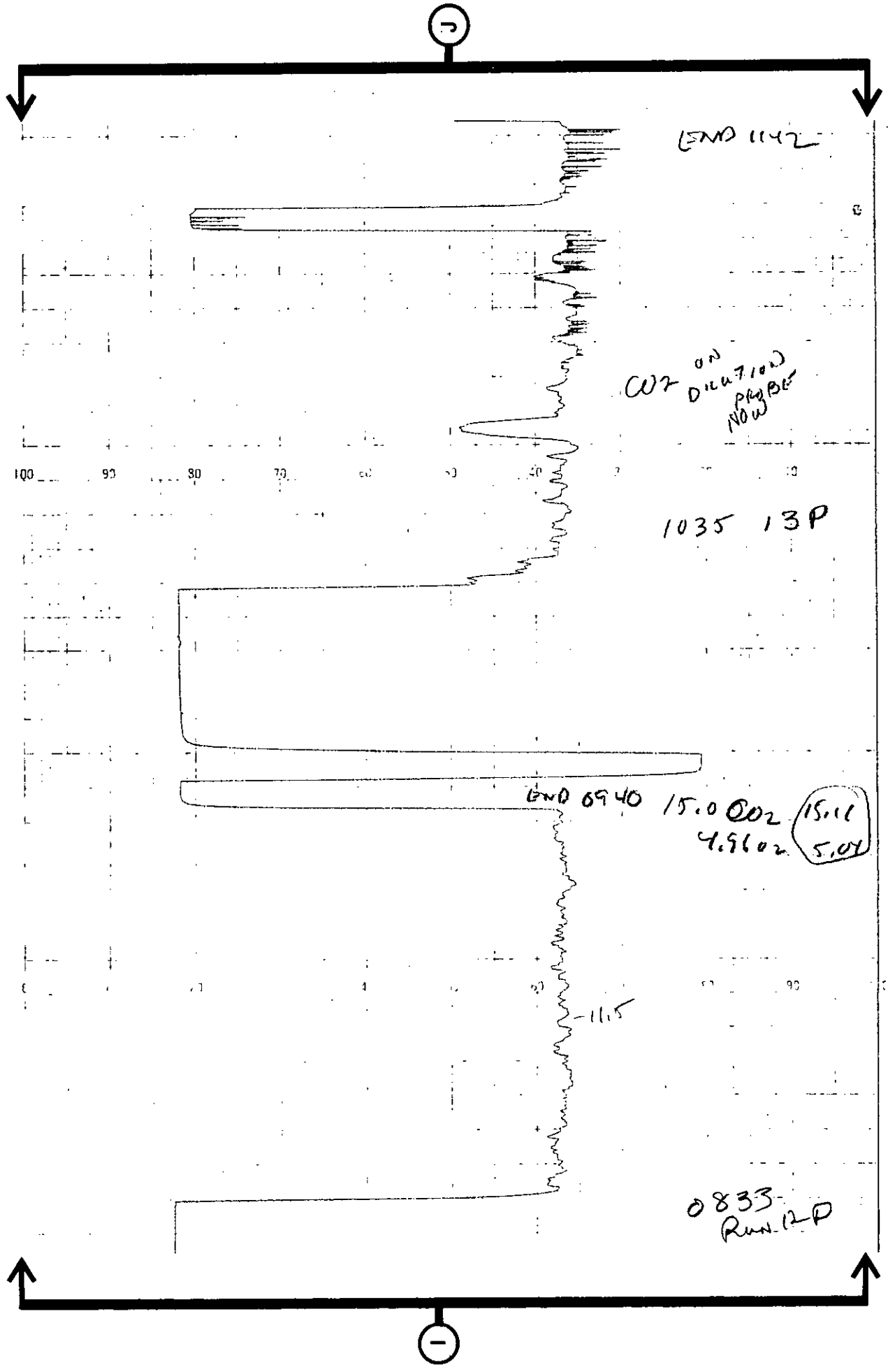




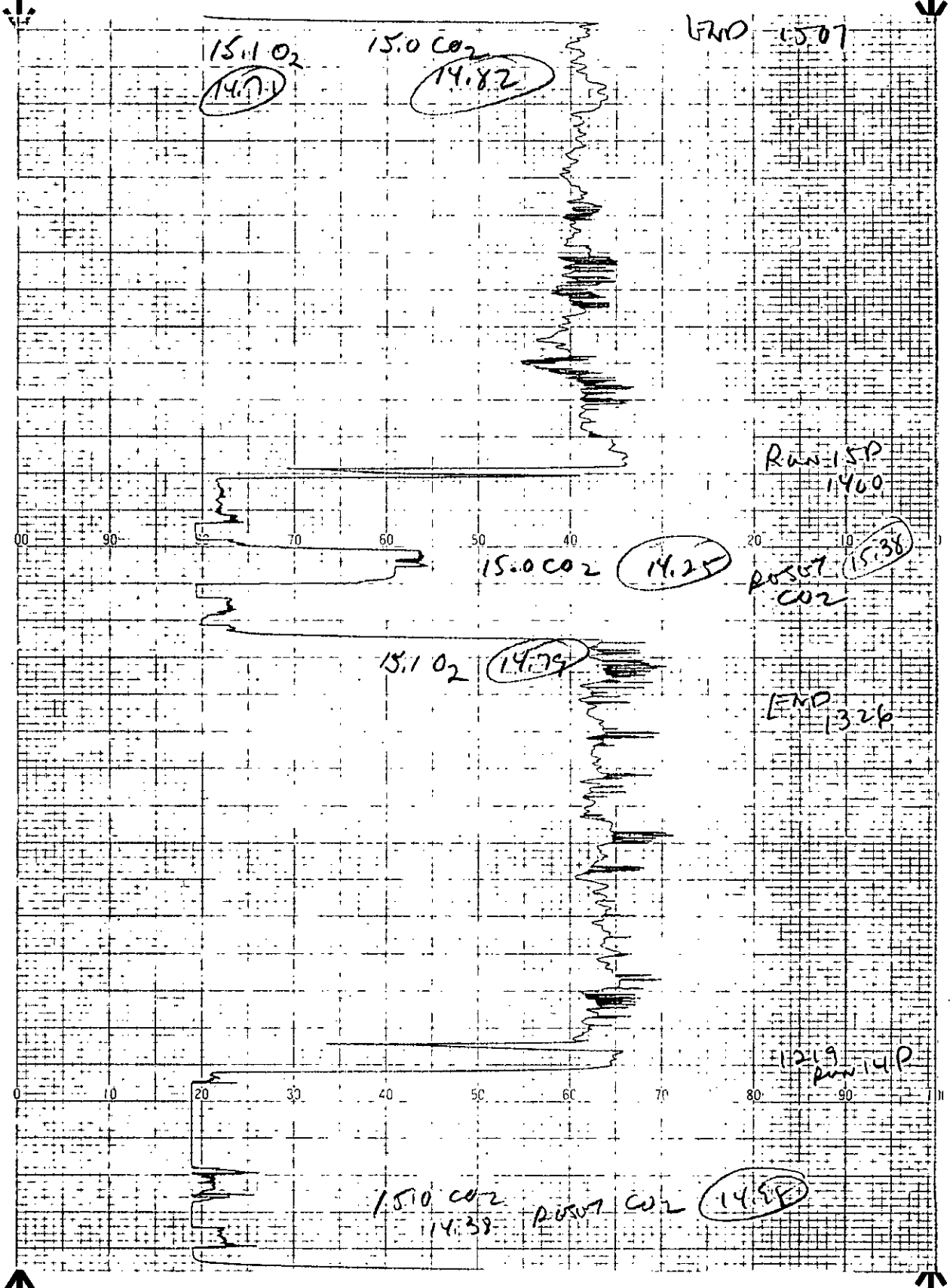




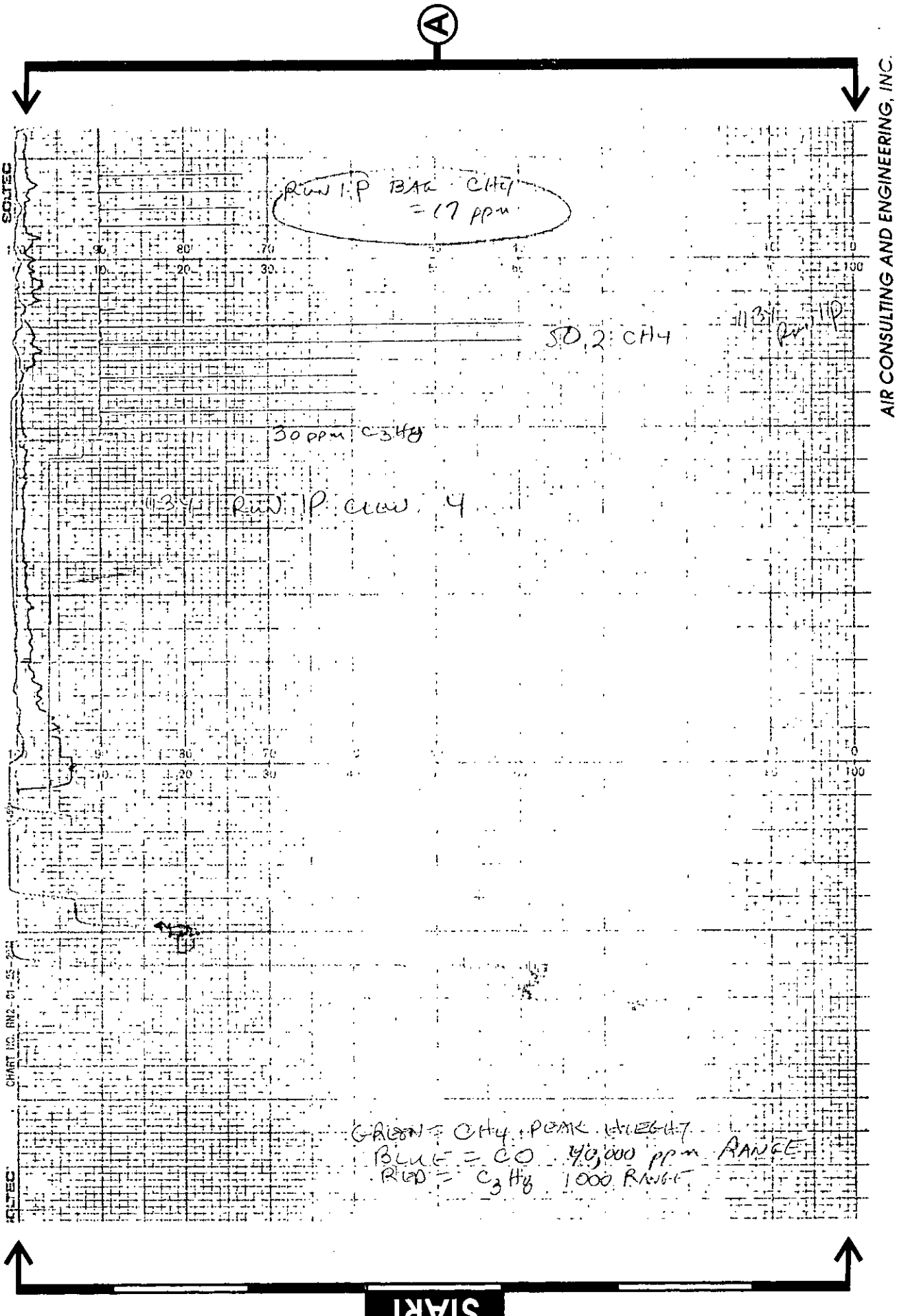
AIR CONSULTING AND ENGINEERING, INC.



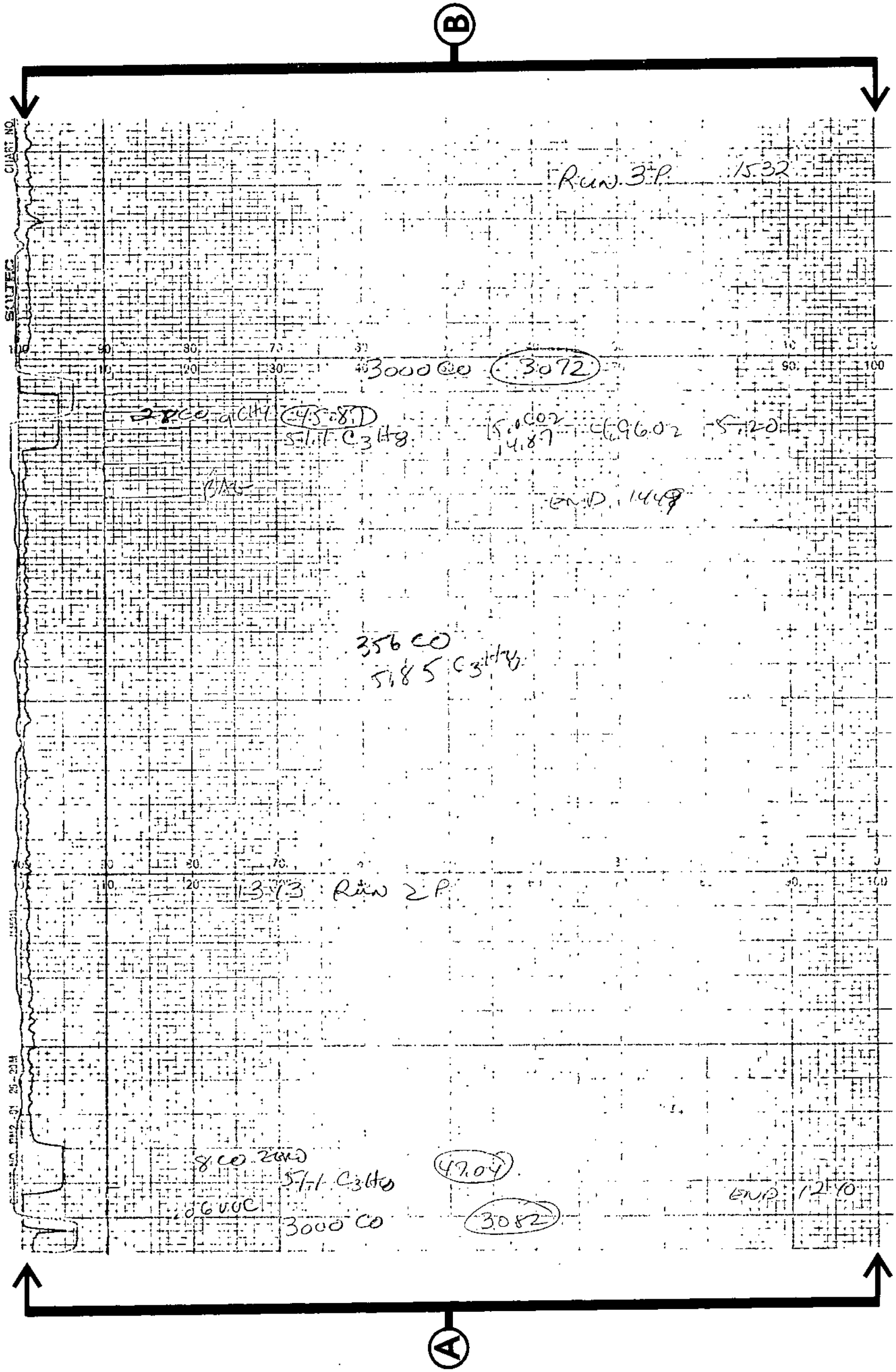
END



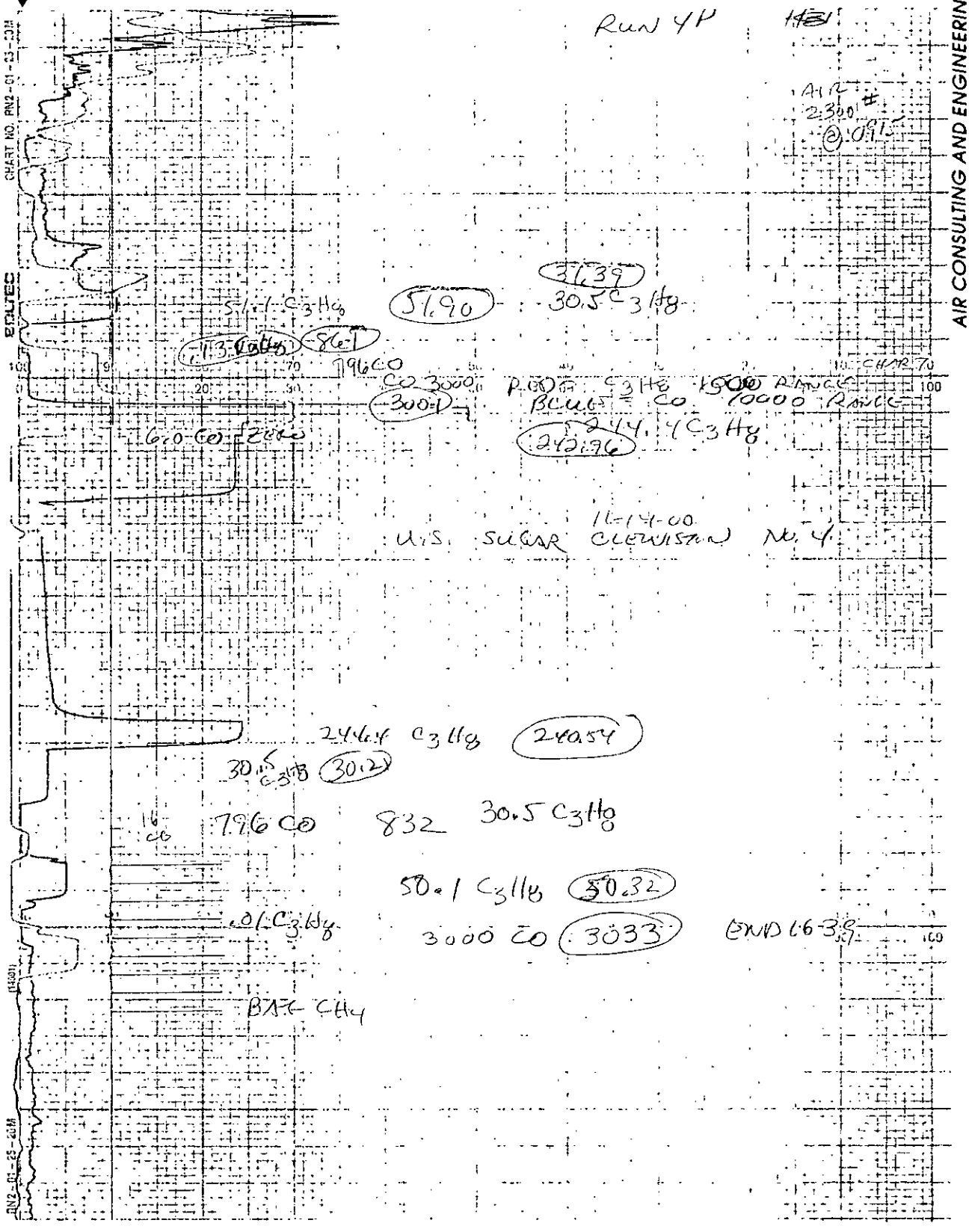
AIR CONSULTING AND ENGINEERING, INC.

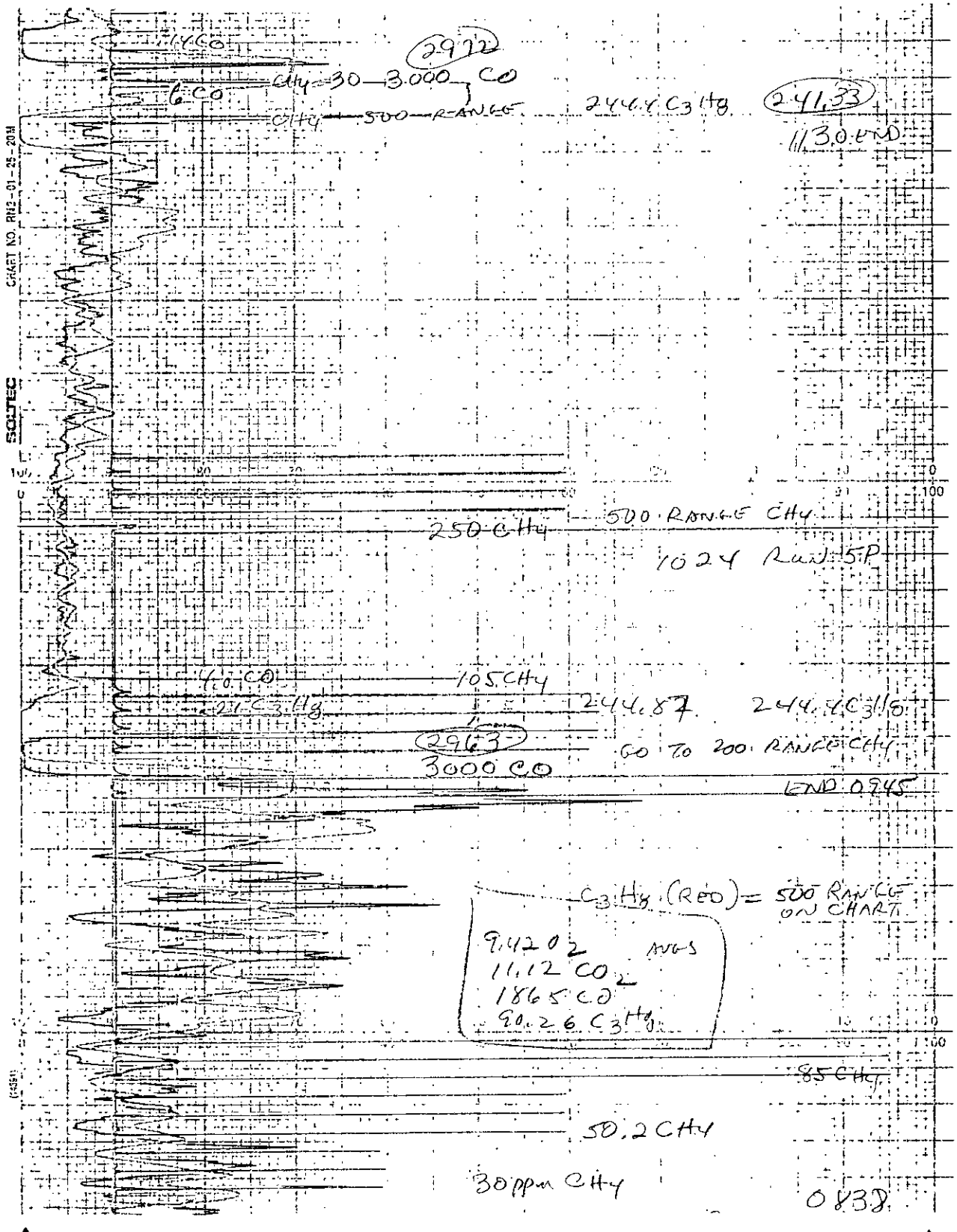


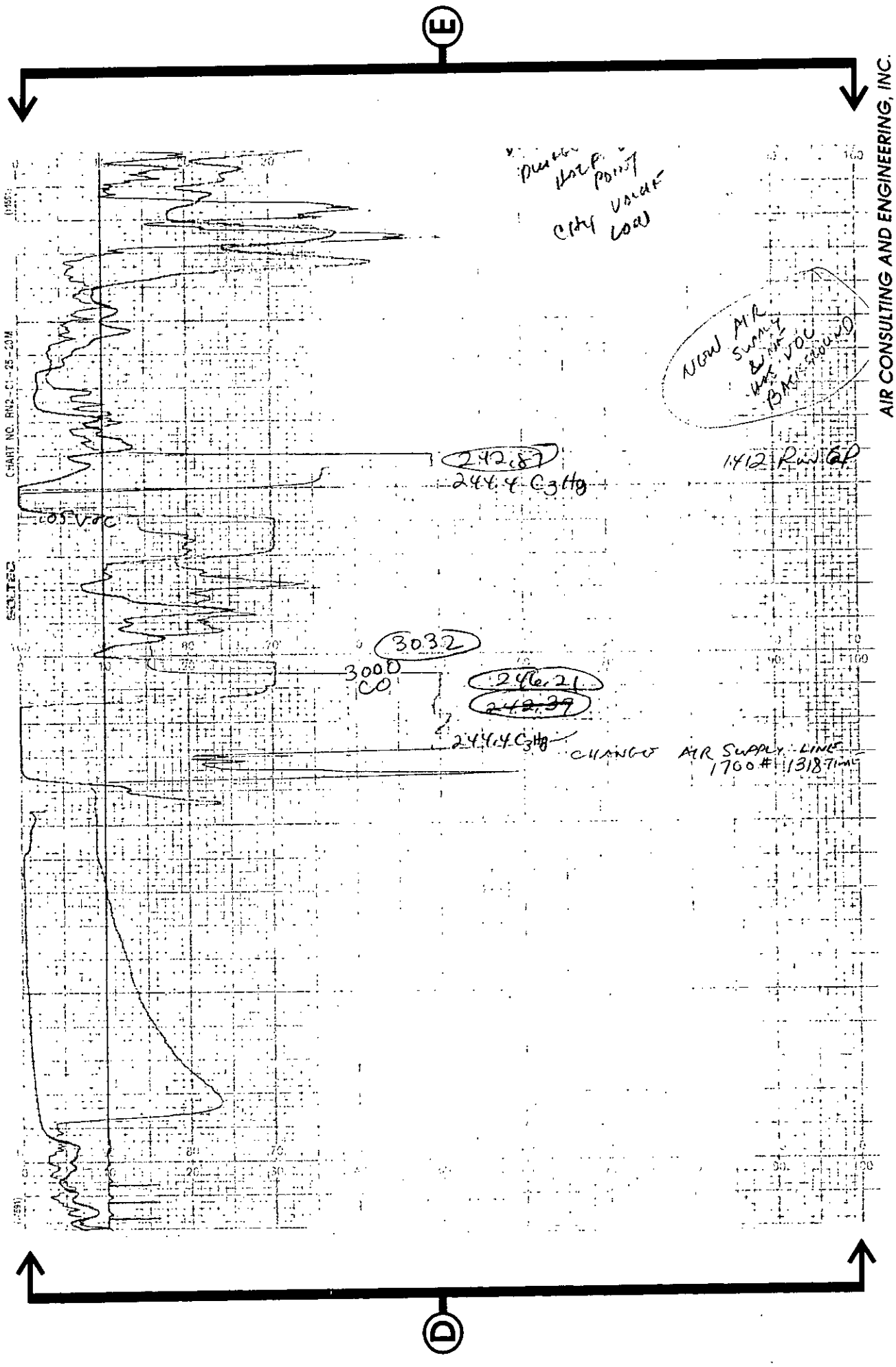
AIR CONSULTING AND ENGINEERING, INC.



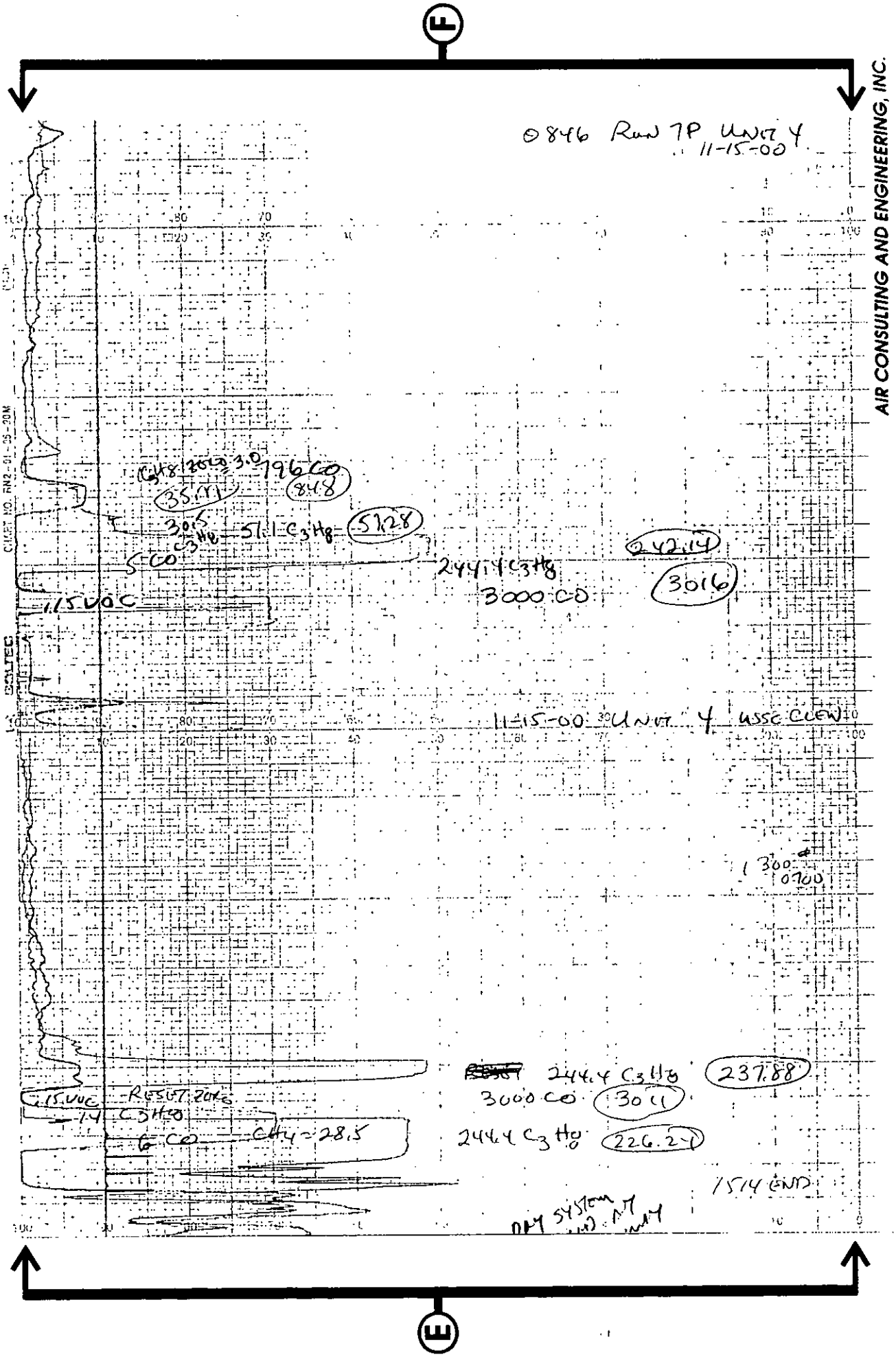
AIR CONSULTING AND ENGINEERING, INC



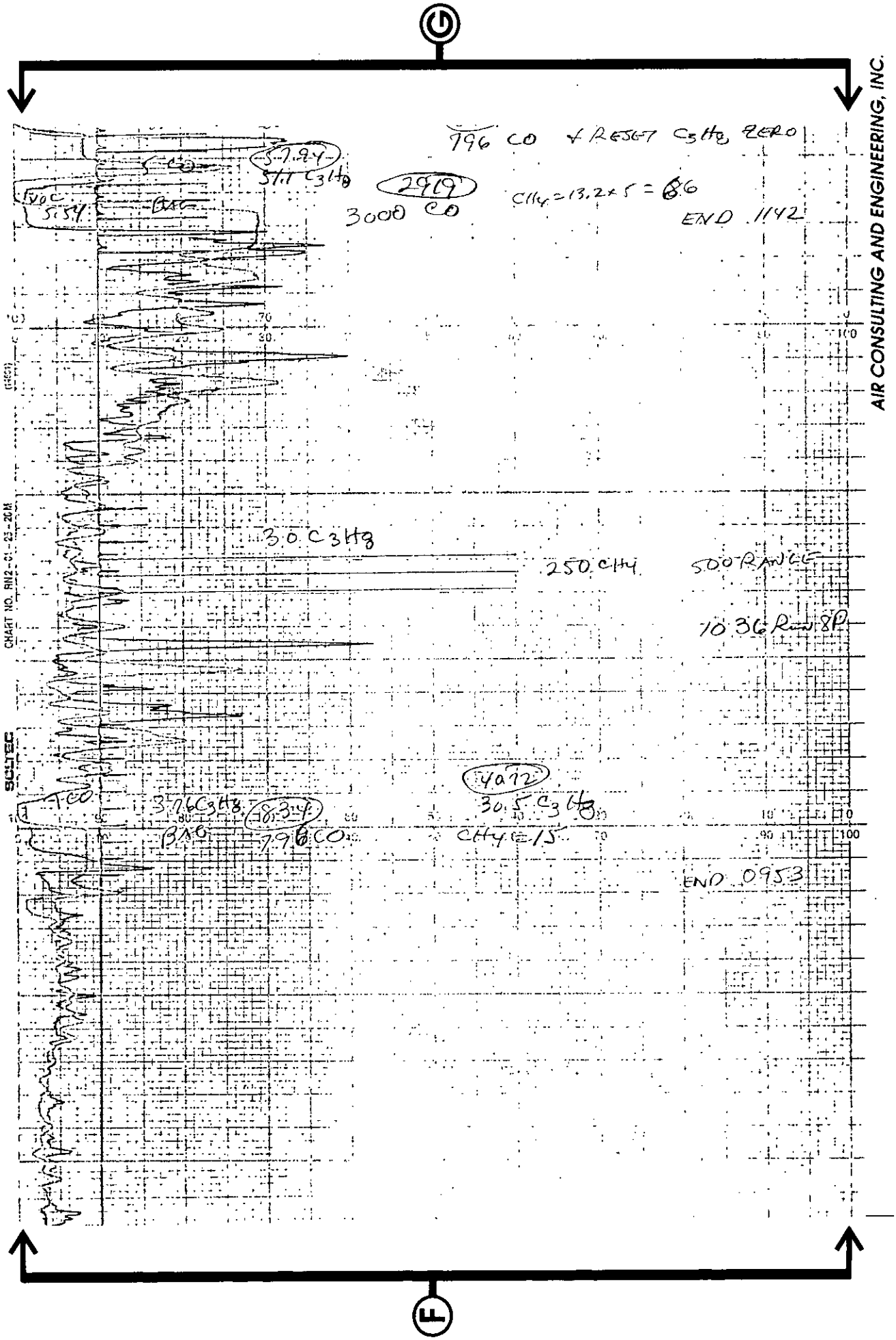


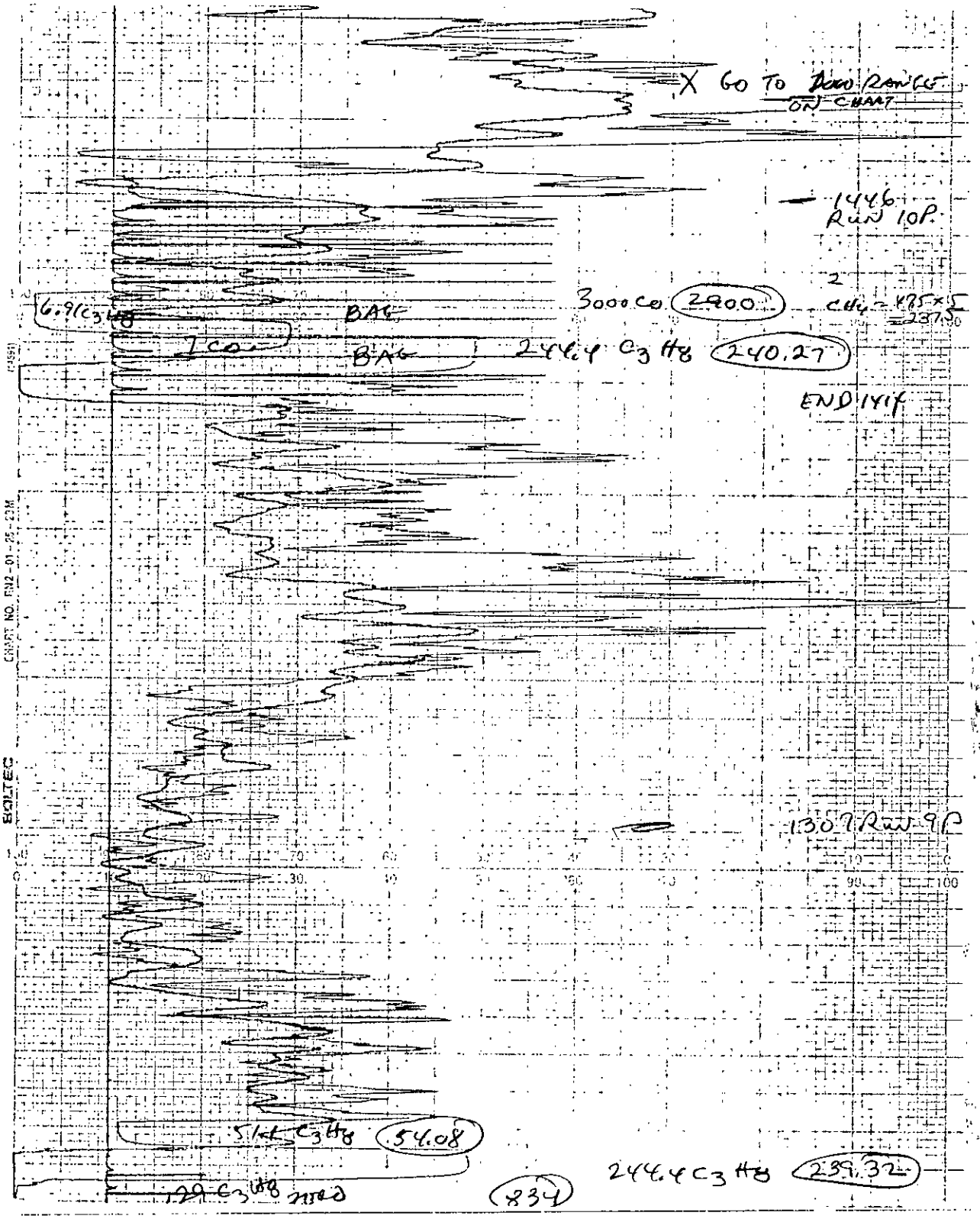


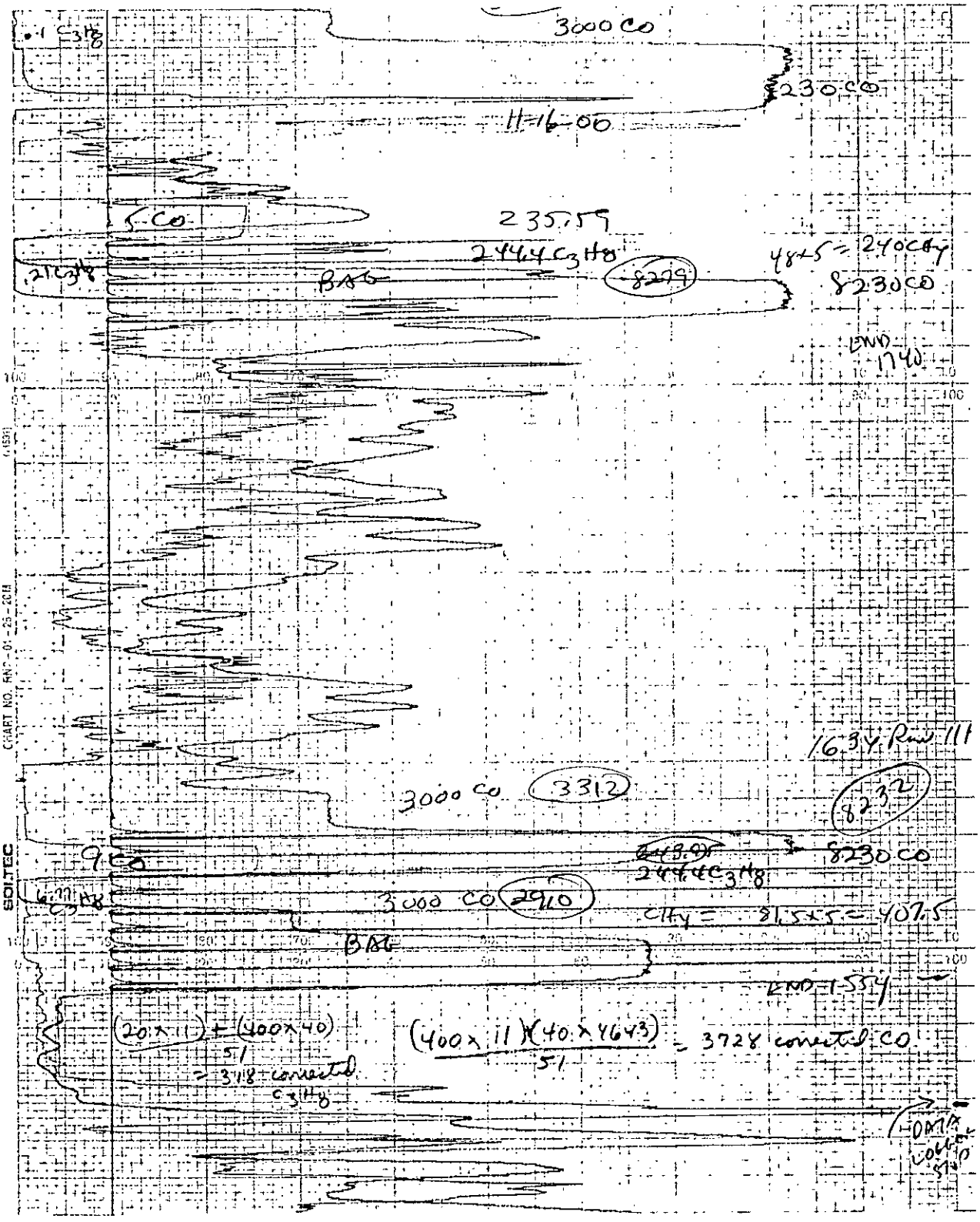
AIR CONSULTING AND ENGINEERING, INC.



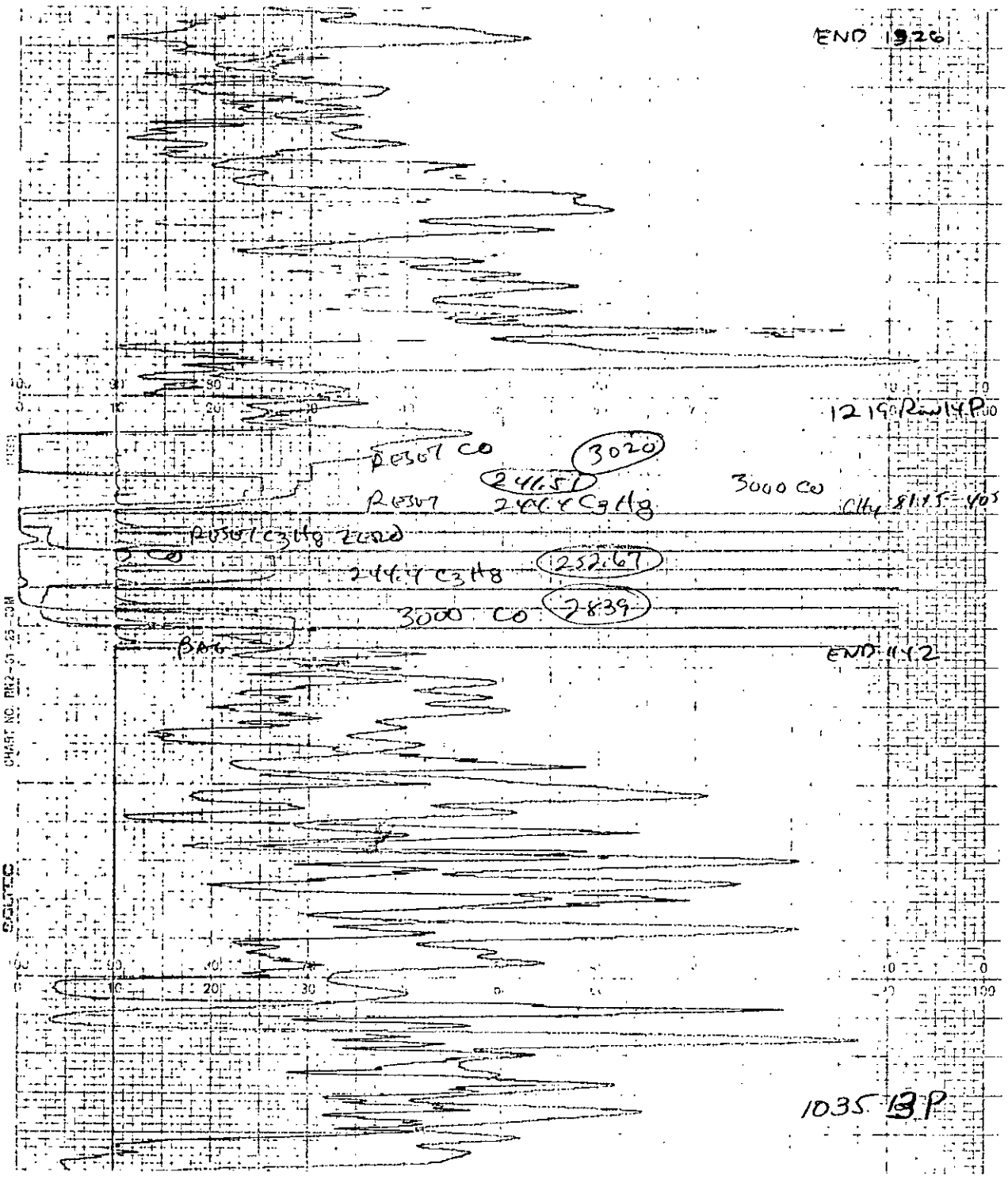
AIR CONSULTING AND ENGINEERING, INC.

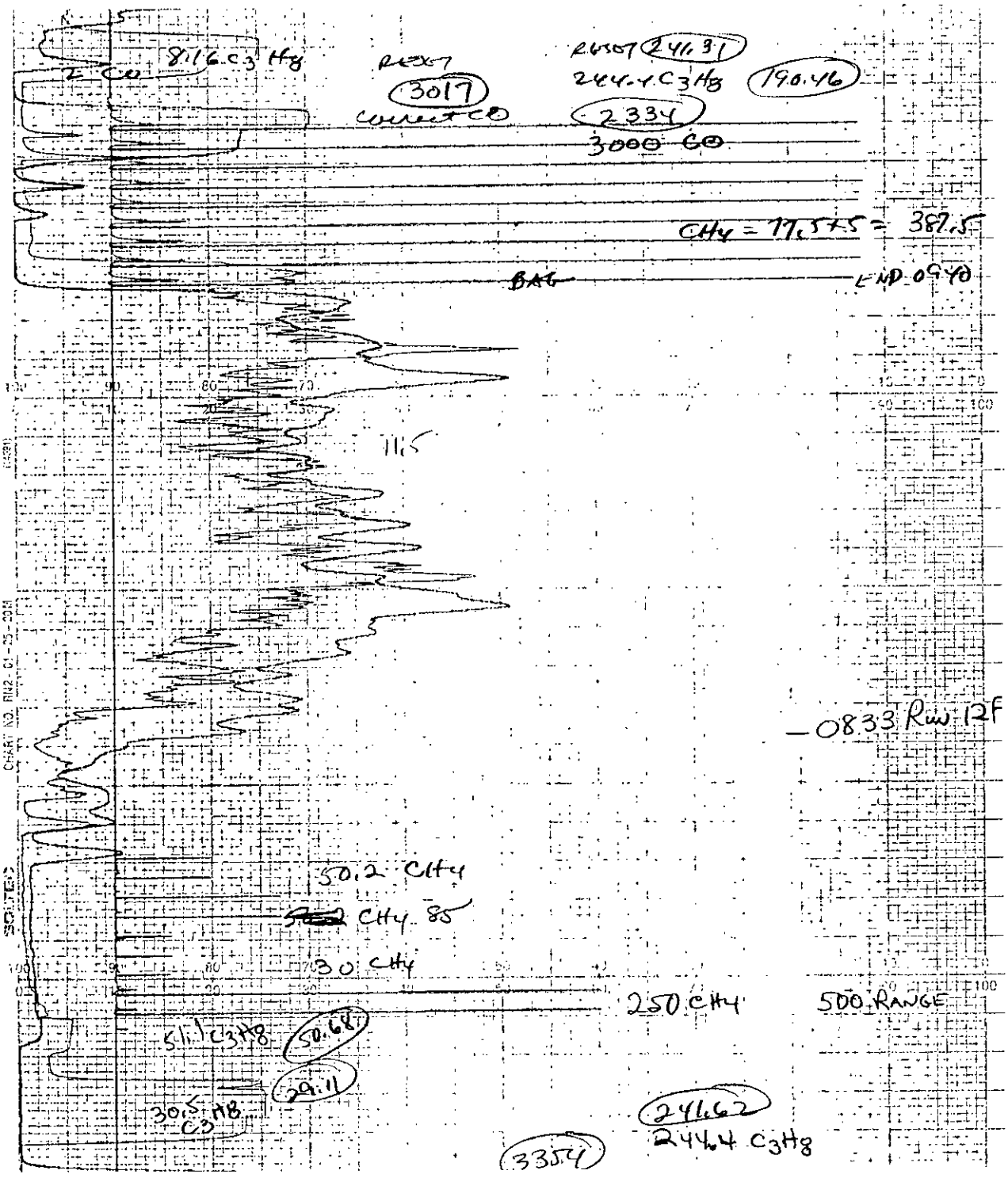

796 CO & RESET C3H8 ZERO
5.7.24
5.11 C3H8
2909
3000 CO
CH4 = 13.2 x 5 = 66
END 1142
30 C3H8
250 CH4
500 RANGE
1036 RESET
4072
30.5 C3H8
CH4 = 15
796 CO
END 0953
SOLTEC
CHART NO. RN2-01-23-20M
AIR CONSULTING AND ENGINEERING, INC.



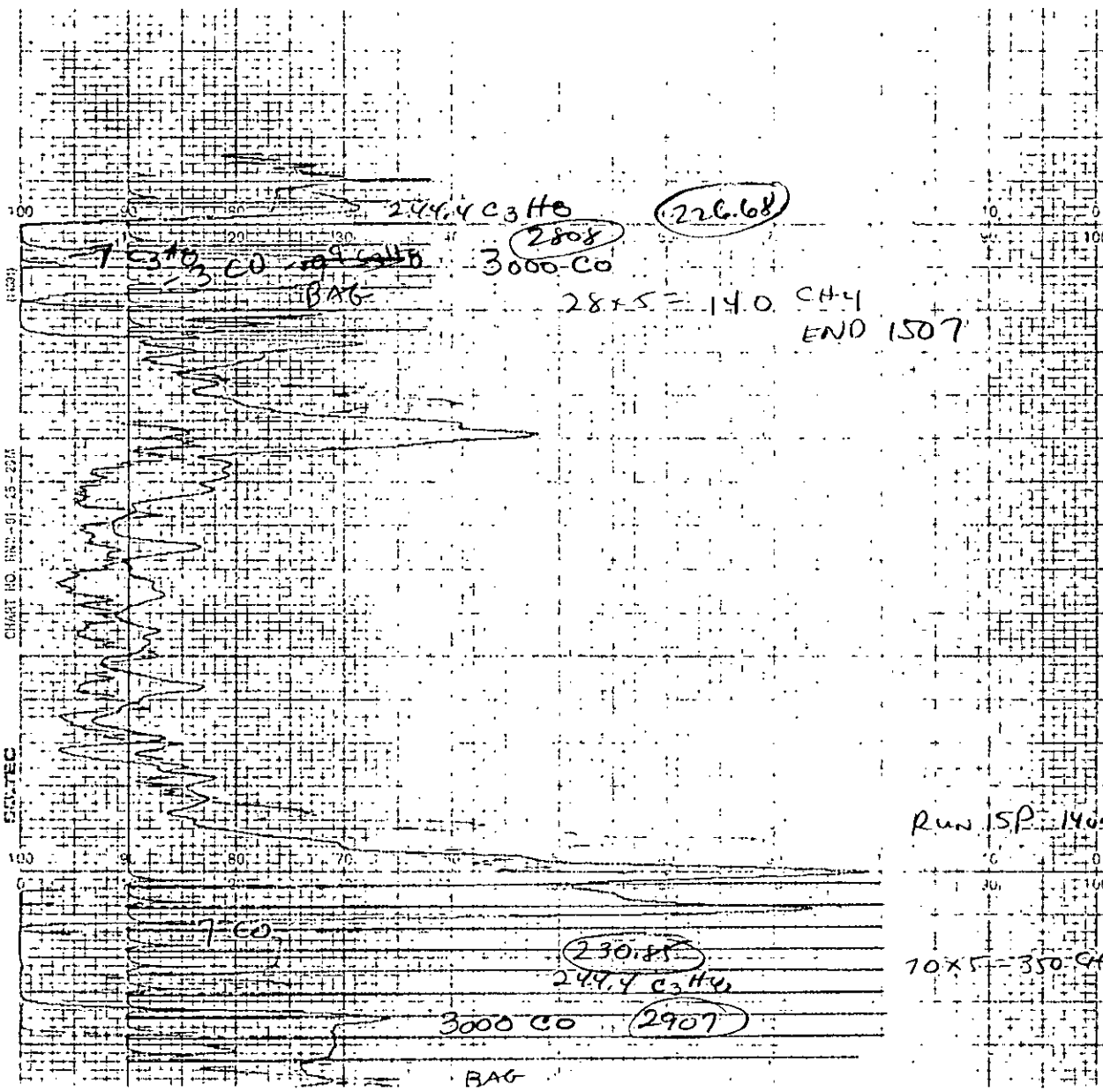


AIR CONSULTING AND ENGINEERING, INC.





END


244.4 C3H8
226.68
2808
3000-CO
28×5 = 140 CH4
END 1507
BAG
RUN 15P 1400
7 CO2
230.85
244.4 C3H8
3000 CO
2907
10×5 = 350 CH4
BAG

```
******** OFF ********

******** ON ********
   09:37:51  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming
******** RUN ********
   09:37:52  11/13/00

******** STOP ********
   09:38:07  11/13/00
Run statistics   N=00002
    Min     Avg     Max
1  00.415 00.435 00.455
2  00.276 00.281 00.286
3  00012. 00018. 00024.
4  164.48 164.66 164.84
5  031.90 032.07 032.25

   09:38:08  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF ********

******** ON ********
******** RUN ********
   09:56:09  11/13/00

******** STOP ********
   09:56:23  11/13/00
Run statistics   N=00003
    Min     Avg     Max
1  00.242 00.254 00.267
2  00.266 00.269 00.270
3  00012. 00012. 00012.
4  166.38 166.58 166.96
5  029.30 029.83 030.10

   09:56:25  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** STOP ********
   09:57:05  11/13/00
Run statistics   N=00003
    Min     Avg     Max
1  00.242 00.254 00.267
2  00.266 00.269 00.270
3  00012. 00012. 00012.
4  166.38 166.58 166.96
5  029.30 029.83 030.10

   09:57:07  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming
******** RUN ********
   09:57:08  11/13/00

******** STOP ********
   10:01:26  11/13/00
Run statistics   N=00049
    Min     Avg     Max
1  00.188 13.846 23.133
2  00.262 00.339 00.390
3  00016. 00063. 00092.
4  000.97 068.15 168.15
5  032.00 034.15 035.45

   10:01:27  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF ********

******** ON ********
******** RUN ********
   10:14:44  11/13/00

******** STOP ********
   10:14:55  11/13/00
Run statistics   N=00002
    Min     Avg     Max
1  05.118 05.129 05.140
2  14.962 14.962 14.962
3  00524. 00532. 00540.
4  000.11 000.12 000.12
5  041.70 041.80 041.90

   10:14:56  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF ********

******** ON ********
******** RUN ********
   10:22:52  11/13/00

******** STOP ********
   10:23:14  11/13/00
Run statistics   N=00004
    Min     Avg     Max
1  11.100 11.306 11.582
2  09.446 09.664 09.864
3  00352. 00368. 00400.
4  062.90 063.45 063.98
5  021.35 021.62 021.75

   10:23:15  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** STOP ********
   10:23:45  11/13/00
Run statistics   N=00004
    Min     Avg     Max
1  11.100 11.306 11.582
2  09.446 09.664 09.864
3  00352. 00368. 00400.
4  062.90 063.45 063.98
5  021.35 021.62 021.75

   10:23:47  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF ********

******** ON ********
******** RUN ********
   10:37:27  11/13/00

******** STOP ********
   10:37:40  11/13/00
Run statistics   N=00002
    Min     Avg     Max
1  20.670 20.674 20.678
2  00.192 00.194 00.196
3  03028. 03032. 03036.
4  000.91 000.92 000.92
5  000.25 000.28 000.30

   10:37:42  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF ********

******** ON ********
******** RUN ********
   10:41:44  11/13/00

******** STOP ********
   10:42:05  11/13/00
Run statistics   N=00004
    Min     Avg     Max
1  20.665 20.673 20.685
2  00.186 00.196 00.212
3  00096. 00123. 00144.
4  001.14 001.18 001.23
5  063.70 063.82 063.95
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

ACE AIR CONSULTING & ENGINEERING, INC.

```
   10:42:06  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   10:45:42  11/13/00

********  STOP  ********
   10:46:24  11/13/00
Run statistics   N=00008
    Min     Avg     Max
1  20.720 20.746 20.778
2  00.188 00.199 00.210
3  00016. 00024. 00036.
4  000.69 000.76 000.85
5  050.40 050.66 050.80

   10:46:26  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   11:33:09  11/13/00

********  STOP  ********
   12:39:45  11/13/00
Run statistics   N=00799
    Min     Avg     Max
1  10.122 11.030 11.953
2  09.060 09.937 10.758
3  00208. 00508. 01004.
4  047.40 065.71 083.91
5  004.65 013.28 032.15

   12:39:46  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   12:45:10  11/13/00

********  STOP  ********
   12:45:35  11/13/00
Run statistics   N=00005
    Min     Avg     Max
1  20.618 20.659 20.693
2  00.256 00.266 00.274
3  03076. 03082. 03088.
4  001.15 001.29 001.43
5  000.00 000.06 000.15

   12:45:37  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   12:50:54  11/13/00

********  STOP  ********
   12:51:44  11/13/00
Run statistics   N=00010
    Min     Avg     Max
1  05.135 05.188 05.270
2  14.852 14.867 14.878
3  00012. 00031. 00048.
4  000.42 000.56 000.65
5  046.35 047.04 047.60

   12:51:46  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   12:53:08  11/13/00

********  STOP  ********
   12:53:24  11/13/00
Run statistics   N=00003
    Min     Avg     Max
1  05.135 05.158 05.200
2  14.870 14.881 14.890
3  00024. 00028. 00036.
4  000.34 000.42 000.46
5  047.40 047.60 047.90

   12:53:25  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  RUN   ********
   12:54:03  11/13/00

********  STOP  ********
   12:54:14  11/13/00
Run statistics   N=00002
    Min     Avg     Max
1  05.135 05.178 05.220
2  14.874 14.876 14.878
3  00008. 00014. 00020.
4  000.34 000.39 000.44
5  046.35 046.98 047.60

   12:54:16  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  RUN   ********
   12:54:37  11/13/00

********  STOP  ********
   12:57:28  11/13/00
Run statistics   N=00034
    Min     Avg     Max
1  05.088 13.144 20.520
2  00.340 07.563 14.894
3  00008. 00046. 00176.
4  000.32 000.46 000.61
5  012.80 035.71 047.95

   12:57:29  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   13:42:19  11/13/00

********  STOP  ********
   14:30:26  11/13/00
Run statistics   N=00577
    Min     Avg     Max
1  10.360 11.563 20.463
2  08.674 09.511 10.602
3  00208. 00347. 00608.
4  052.12 071.95 098.32
5  000.80 005.76 012.05

   14:30:28  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   14:32:32  11/13/00
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

```
******** STOP ********
   14:48:42  11/13/00
Run statistics   N=00194
    Min     Avg     Max
1  10.705 11.322 11.885
2  09.126 09.654 10.222
3  00260. 00382. 00492.
4  066.65 081.00 093.00
5  003.65 006.13 009.05

   14:48:43  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF  ********

******** ON   ********
******** RUN  ********
   15:01:29  11/13/00

******** STOP ********
   15:01:55  11/13/00
Run statistics   N=00005
    Min     Avg     Max
1  05.185 05.201 05.215
2  14.860 14.871 14.880
3  00024. 00036. 00044.
4  000.32 000.43 000.46
5  045.60 045.87 046.55

   15:01:57  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF  ********

******** ON   ********
******** RUN  ********
   15:03:07  11/13/00

******** STOP ********
   15:03:48  11/13/00
Run statistics   N=00008
    Min     Avg     Max
1  05.150 05.207 05.238
2  14.840 14.863 14.899
3  00008. 00017. 00044.
4  000.35 000.40 000.43
5  045.25 045.52 046.45

   15:03:50  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** RUN  ********
   15:04:38  11/13/00
```

```
******** STOP ********
   15:04:44  11/13/00
Run statistics   N=00001
    Min     Avg     Max
1  10.338 10.338 10.338
2  13.622 13.622 13.622
3  00028. 00028. 00028.
4  000.00 000.00 000.00
5  045.70 045.70 045.70

   15:04:45  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF  ********

******** ON   ********
******** RUN  ********
   15:10:00  11/13/00

******** STOP ********
   15:10:20  11/13/00
Run statistics   N=00004
    Min     Avg     Max
1  20.745 20.759 20.783
2  00.240 00.246 00.252
3  03024. 03026. 03032.
4  000.49 000.51 000.55
5  000.05 000.11 000.30

   15:10:21  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF  ********

******** ON   ********
******** RUN  ********
   15:12:34  11/13/00

******** STOP ********
   15:12:50  11/13/00
Run statistics   N=00003
    Min     Avg     Max
1  20.760 20.771 20.788
2  00.226 00.229 00.232
3  03068. 03072. 03076.
4  000.51 000.53 000.56
5  000.00 000.13 000.30

   15:12:52  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming
```

```
******** OFF  ********

******** ON   ********
******** RUN  ********
 Log Interval=00:00:05
 Stop in 0000:01:56:40
Print data? (Yes/No)
   15:21:08  11/13/00

******** STOP ********
   15:21:17  11/13/00
Run statistics   N=00001
    Min     Avg     Max
1  20.910 20.910 20.910
2  00.200 00.200 00.200
3  00400. 00400. 00400.
4  000.41 000.41 000.41
5  014.80 014.80 014.80

   15:21:18  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF  ********

******** ON   ********
******** RUN  ********
   15:31:21  11/13/00

******** STOP ********
   16:38:07  11/13/00
Run statistics   N=00801
    Min     Avg     Max
1  10.433 11.223 12.343
2  08.798 09.819 10.522
3  00204. 00427. 00796.
4  000.00 074.17 089.41
5  004.80 012.26 028.55

   16:38:08  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF  ********

******** ON   ********
******** RUN  ********
   16:43:43  11/13/00

******** STOP ********
   16:44:23  11/13/00
Run statistics   N=00008
    Min     Avg     Max
1  20.835 20.858 20.893
2  00.234 00.244 00.258
3  03024. 03033. 03036.
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

ACE AIR CONSULTING & ENGINEERING, INC.

```
4  001.13 001.28 001.41
5 -000.05 000.01 000.10

   16:44:25  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   16:49:19  11/13/00

********  STOP  ********
   16:49:40  11/13/00
Run statistics   N=00004
    Min     Avg     Max
1  05.155 05.188 05.205
2  14.960 14.969 14.974
3  00416. 00636. 00880.
4  000.52 000.58 000.63
5  049.75 050.32 050.80

   16:49:41  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   16:52:19  11/13/00

********  STOP  ********
   16:52:27  11/13/00
Run statistics   N=00001
    Min     Avg     Max
1  20.695 20.695 20.695
2  00.346 00.346 00.346
3  00016. 00016. 00016.
4  000.69 000.69 000.69
5  050.80 050.80 050.80

   16:52:28  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming
********  RUN   ********
   16:52:39  11/13/00

********  STOP  ********
   16:52:53  11/13/00
Run statistics   N=00002
    Min     Avg     Max
1  20.793 20.804 20.815
2  00.278 00.279 00.280
3  00028. 00036. 00044.
4  000.83 000.84 000.84
5  050.35 050.53 050.70

   16:52:54  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   17:00:44  11/13/00

********  STOP  ********
   17:01:15  11/13/00
Run statistics   N=00006
    Min     Avg     Max
1  20.743 20.755 20.768
2  00.216 00.221 00.228
3  00804. 00832. 00860.
4  000.48 000.52 000.57
5 -000.05 000.15 000.30

   17:01:17  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   17:09:25  11/13/00

********  STOP  ********
   17:10:35  11/13/00
Run statistics   N=00014
    Min     Avg     Max
1  20.740 20.776 20.813
2  00.202 00.214 00.224
3  00012. 00021. 00036.
4  000.29 000.38 000.46
5  029.05 030.21 030.90

   17:10:36  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
   17:14:22  11/13/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  RUN   ********
   17:14:22  11/13/00

********  STOP  ********
   17:15:18  11/13/00
Run statistics   N=00010
    Min     Avg     Max
1  20.788 20.813 20.843
2  00.198 00.208 00.222
3  00012. 00022. 00040.
4  000.32 000.37 000.45
5  239.15 240.54 241.50

   17:15:20  11/13/00
RUN  starts logging
STOP stops logging
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

ACE CONSULTING & ENGINEERING, Inc.

```
******** OFF ********

******** ON ********
   07:16:56  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming
******** RUN ********
   07:16:57  11/14/00

******** STOP ********
   07:17:17  11/14/00
Run statistics   N=00003
    Min     Avg     Max
1  00.005 00.019 00.045
2  00.202 00.205 00.210
3  40192. 40196. 40204.
4 -000.04 000.00 000.03
5  233.90 234.10 234.45

   07:17:18  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** PROG ********
 Program volts  mX+b
 m polarity = -
 m = -4.00000
******** EXIT ********
   07:17:39  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming
******** PROG ********
 Program volts  mX+b
 m polarity = -
 m = -1.00000
******** EXIT ********
******** RUN ********
   07:17:49  11/14/00

******** STOP ********
   07:18:42  11/14/00
Run statistics   N=00010
    Min     Avg     Max
1 -00.078 04.160 21.102
2  00.194 00.203 00.216
3  10044. 10047. 10053.
4 -000.05 000.00 000.06
5  234.10 234.37 235.10

   07:18:43  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming
```

```
******** PROG ********
CH3 Type(J,K,T,E,V,SKIP)
 Program volts  mX+b
 m polarity = -
 m = -1.00000
b Positive? (Yes/No)
 b polarity = +
b Val? (000000-999999)
 b = +000050
******** EXIT ********
******** RUN ********
   07:19:26  11/14/00

******** STOP ********
   07:19:37  11/14/00
Run statistics   N=00002
    Min     Avg     Max
1  21.285 21.304 21.323
2  00.200 00.204 00.208
3  10093. 10093. 10093.
4 -000.02-000.01 000.00
5  233.85 234.25 234.65

   07:19:38  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** PROG ********
 Program volts  mX+b
 m polarity = -
 m = -1.00000
b Positive? (Yes/No)
 b polarity = -
b Val? (000000-999999)
 b = -000090
Units?(00-64,99 to list)
******** EXIT ********
******** RUN ********
   07:20:47  11/14/00

******** STOP ********
   07:21:19  11/14/00
Run statistics   N=00006
    Min     Avg     Max
1  21.303 21.331 21.348
2  00.192 00.195 00.204
3  09950. 09956. 09963.
4 -000.04-000.03 000.01
5  233.70 234.08 234.80

   07:21:20  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming
```

```
******** PROG ********
 Program volts  mX+b
 m polarity = -
 m = -1.00000
b Positive? (Yes/No)
 b polarity = -
b Val? (000000-999999)
 b = -000050
******** EXIT ********
******** RUN ********
   07:21:54  11/14/00

******** STOP ********
   07:22:18  11/14/00
Run statistics   N=00005
    Min     Avg     Max
1  21.323 21.333 21.343
2  00.182 00.186 00.192
3  09989. 09992. 09995.
4 -000.03-000.02 000.00
5  233.80 234.13 234.75

   07:22:20  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** RUN ********
   07:22:39  11/14/00

******** STOP ********
   07:23:59  11/14/00
Run statistics   N=00016
    Min     Avg     Max
1  21.305 21.346 21.432
2  00.190 00.198 00.206
3 -00049.-00043.-00039.
4 -000.06 000.01 000.05
5  232.85 328.67 992.05

   07:24:00  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** PROG ********
CH3 Type(J,K,T,E,V,SKIP)
 Program volts  mX+b
 m polarity = -
m Val? (0.00000-9.99999)
 m = -1.00000
b Positive? (Yes/No)
******** EXIT ********
   07:24:50  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

ACE ARCONSULTING & ENGINEERING, Inc.

```
******** RUN ********
   07:25:16  11/14/00

******** STOP ********
   07:25:32  11/14/00
Run statistics   N=00003
    Min     Avg     Max
1  21.335 21.363 21.395
2  00.182 00.188 00.194
3 -00045.-00043.-00040.
4 -000.06-000.01 000.04
5  242.20 242.40 242.50

   07:25:33  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** PROG ********
 Program volts  mX+b
 m polarity = -
 m = -1.00000
b Positive? (Yes/No)
 b polarity = -
b Val? (000000-999999)
 b = -000000
******** EXIT ********
******** RUN ********
   07:26:08  11/14/00

******** STOP ********
   07:26:48  11/14/00
Run statistics   N=00008
    Min     Avg     Max
1  21.323 21.356 21.368
2  00.192 00.199 00.206
3  00002. 00006. 00011.
4 -000.03 000.01 000.05
5  242.00 242.96 243.35

   07:26:49  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF ********

******** ON ********
******** RUN ********
   07:30:43  11/14/00
******** STOP ********
   07:30:47  11/14/00
Run statistics   N=00008
    Min     Avg     Max
1  21.323 21.356 21.368
2  00.192 00.199 00.206
3  00002. 00006. 00011.
4 -000.03 000.01 000.05
5  242.00 242.96 243.35

   07:30:48  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF ********

******** ON ********
******** RUN ********
   07:32:09  11/14/00

******** STOP ********
   07:32:40  11/14/00
Run statistics   N=00006
    Min     Avg     Max
1  21.398 21.415 21.428
2  00.192 00.196 00.206
3  02981. 03001. 03021.
4 -000.02-000.01-000.01
5  003.50 003.74 004.20

   07:32:41  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF ********

******** ON ********
******** RUN ********
   07:38:53  11/14/00

******** STOP ********
   07:39:54  11/14/00
Run statistics   N=00012
    Min     Avg     Max
1  20.682 20.712 20.743
2  00.068 00.078 00.092
3  00857. 00861. 00870.
4 -000.07-000.03 000.04
5  000.00 000.13 000.25

   07:39:55  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF ********

******** ON ********
******** RUN ********
   07:44:48  11/14/00

******** OFF ********

******** ON ********
   07:45:29  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming
******** STOP ********
   07:45:30  11/14/00
 Log Interval exceeded!
Run statistics   N=00005
    Min     Avg     Max
1  20.705 20.734 20.775
2  00.088 00.098 00.102
3  00028. 00053. 00070.
4  000.02 000.04 000.05
5  051.65 051.90 052.55

   07:45:32  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF ********

******** ON ********
******** RUN ********
   07:49:24  11/14/00

******** STOP ********
   07:49:45  11/14/00
Run statistics   N=00004
    Min     Avg     Max
1  20.723 20.745 20.768
2  00.086 00.092 00.102
3  00005. 00014. 00019.
4 -000.05-000.01 000.05
5  031.05 031.39 032.00

   07:49:46  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF ********

******** ON ********
******** RUN ********
   07:53:23  11/14/00

******** STOP ********
   07:53:49  11/14/00
Run statistics   N=00005
    Min     Avg     Max
1  05.100 05.120 05.165
2  14.628 14.632 14.634
3  01006. 01050. 01070.
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

```
4 -000.05-000.04 000.00
5  029.00 030.44 032.25

   07:53:51  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   07:54:44  11/14/00

********  STOP  ********
   07:55:00  11/14/00
Run statistics   N=00003
    Min     Avg     Max
1  05.080 05.085 05.092
2  14.948 14.951 14.954
3  01241. 01266. 01279.
4 -000.05-000.02 000.00
5  033.80 034.72 035.20

   07:55:01  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   08:04:36  11/14/00

********  STOP  ********
   08:05:23  11/14/00
Run statistics   N=00009
    Min     Avg     Max
1  15.008 15.043 15.073
2  05.140 05.151 05.162
3  00144. 00152. 00158.
4 -000.06-000.01 000.03
5  011.50 012.07 012.95

   08:05:24  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
   08:36:47  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  RUN   ********
 Log Interval=00:00:05
 Stop in 0000:01:56:40
Print data? (Yes/No)
   08:36:49  11/14/00

********  STOP  ********
   09:08:50  11/14/00
Run statistics   N=00383
    Min     Avg     Max
1  09.115 09.565 10.380
2  10.276 11.093 11.494
3  00593. 01383. 02391.
4 -000.08-000.01 000.05
5  018.30 059.08 146.20

   09:08:51  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   09:12:08  11/14/00

********  STOP  ********
   09:33:21  11/14/00
Run statistics   N=00254
    Min     Avg     Max
1  08.978 09.334 10.495
2  10.102 11.131 11.492
3  00906. 02288. 03356.
4 -000.08-000.01 000.05
5  024.65 102.17 225.35

   09:33:23  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
   09:34:43  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming
********  RUN   ********
   09:34:44  11/14/00

********  STOP  ********
   09:44:06  11/14/00
Run statistics   N=00111
    Min     Avg     Max
1  08.733 09.177 09.695
2  10.832 11.262 11.588
3  01346. 02560. 03870.
4 -000.07-000.01 000.05
5  051.80 170.63 334.45

   09:44:07  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   09:49:04  11/14/00

********  STOP  ********
   09:50:00  11/14/00
Run statistics   N=00011
    Min     Avg     Max
1  20.190 20.213 20.240
2  00.182 00.189 00.198
3  02958. 02963. 02969.
4 -000.06-000.04 000.01
5 -000.10 000.21 000.35

   09:50:01  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   09:55:33  11/14/00



********  STOP  ********
   09:58:53  11/14/00
Run statistics   N=00040
    Min     Avg     Max
1  20.213 20.253 20.298
2  00.134 00.154 00.178
3 -00003. 00004. 00009.
4 -000.09-000.02 000.05
5  243.50 244.87 245.30

   09:58:55  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
   10:06:14  11/14/00
RUN  starts logging
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

```
STOP stops logging
PROG starts programming
********  RUN   ********
   10:06:14  11/14/00

********  STOP  ********
   10:06:24  11/14/00
Run statistics   N=00001
    Min     Avg     Max
1  01.105 01.105 01.105
2 -00.020-00.020-00.020
3  00642. 00642. 00642.
4  000.03 000.03 000.03
5  022.30 022.30 022.30

   10:06:25  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   10:07:54  11/14/00

********  STOP  ********
   10:08:14  11/14/00
Run statistics   N=00004
    Min     Avg     Max
1  04.940 04.959 04.975
2  14.814 14.830 14.844
3  00410. 00415. 00423.
4 -000.06 000.02 000.05
5  017.40 018.04 018.55

   10:08:16  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   10:23:04  11/14/00

********  STOP  ********
   11:30:38  11/14/00
Run statistics   N=00811
    Min     Avg     Max
1  09.165 10.099 11.238
2  09.360 10.324 11.126
3  00292. 00793. 01754.
4 -000.09-000.01 000.06
5  014.55 030.82 074.05

   11:30:39  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   11:36:23  11/14/00

********  STOP  ********
   11:37:20  11/14/00
Run statistics   N=00011
    Min     Avg     Max
1  19.910 19.952 19.977
2  00.212 00.231 00.248
3  00003. 00006. 00009.
4 -000.09-000.01 000.05
5  240.75 241.33 242.10

   11:37:22  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   11:44:15  11/14/00

********  STOP  ********
   11:44:35  11/14/00
Run statistics   N=00004
    Min     Avg     Max
1  04.925 04.942 04.953
2  14.594 14.602 14.610
3  02829. 02864. 02893.
4 -000.03-000.03-000.03
5  000.45 000.78 001.55

   11:44:37  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   11:46:24  11/14/00

********  STOP  ********
   11:46:45  11/14/00
Run statistics   N=00004
    Min     Avg     Max
1  00.140 00.217 00.308
2  00.000 00.010 00.022
3  02964. 02972. 02983.
4 -000.05-000.03 000.00
5 -000.15 000.14 000.45

   11:46:46  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  STOP  ********
   11:47:08  11/14/00
Run statistics   N=00004
    Min     Avg     Max
1  00.140 00.217 00.308
2  00.000 00.010 00.022
3  02964. 02972. 02983.
4 -000.05-000.03 000.00
5 -000.15 000.14 000.45

   11:47:09  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   11:49:04  11/14/00

********  STOP  ********
   11:49:27  11/14/00
Run statistics   N=00004
    Min     Avg     Max
1  00.075 00.093 00.113
2 -00.028-00.019-00.016
3  01813. 01960. 02107.
4  000.02 000.03 000.04
5  022.55 025.41 028.25

   11:49:29  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   11:50:33  11/14/00

********  STOP  ********
   11:50:54  11/14/00
Run statistics   N=00004
    Min     Avg     Max
1  00.068 00.091 00.110
2  00.078 00.084 00.092
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

ACE AIR CONSULTING & ENGINEERING, Inc.

```
3  00846. 00863. 00881.
4 -000.05-000.01 000.04
5  024.45 024.97 025.45

   11:50:56  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   13:19:53  11/14/00

********  STOP  ********
   13:20:29  11/14/00
Run statistics   N=00007
    Min     Avg     Max
1  19.888 19.901 19.930
2  00.148 00.165 00.178
3  00005. 00006. 00008.
4 -000.09-000.03 000.03
5  246.55 247.65 248.50

   13:20:31  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   13:23:05  11/14/00

********  STOP  ********
   13:24:02  11/14/00
Run statistics   N=00011
    Min     Avg     Max
1  19.875 19.917 19.968
2  00.150 00.164 00.180
3 -00001. 00004. 00008.
4 -000.09-000.02 000.05
5  242.05 242.37 243.15

   13:24:04  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   13:26:12  11/14/00

********  STOP  ********
   13:27:38  11/14/00
Run statistics   N=00017
    Min     Avg     Max
1  19.848 19.883 19.923
2  00.152 00.167 00.180
3  00000. 00005. 00009.
4 -000.10-000.03 000.05
5  245.85 246.21 247.20

   13:27:39  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   13:34:34  11/14/00

********  STOP  ********
   13:35:04  11/14/00
Run statistics   N=00006
    Min     Avg     Max
1  19.810 19.852 19.885
2  00.184 00.189 00.198
3  03023. 03032. 03038.
4 -000.08-000.03 000.02
5  075.80 076.11 076.90

   13:35:06  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   14:01:13  11/14/00

********  STOP  ********
   14:01:25  11/14/00
Run statistics   N=00002
    Min     Avg     Max
1  19.690 19.704 19.718
2  00.186 00.191 00.196
3  03032. 03033. 03033.
4 -000.05-000.03 000.00
5 -000.15 000.05 000.25

   14:01:26  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   14:07:41  11/14/00

********  STOP  ********
   14:08:01  11/14/00
Run statistics   N=00004
    Min     Avg     Max
1  09.960 10.264 10.523
2  09.814 10.058 10.268
3  00001. 00007. 00011.
4 -000.07-000.05-000.04
5  242.30 242.87 243.45

   14:08:02  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   14:11:08  11/14/00

********  STOP  ********
   15:13:48  11/14/00
Run statistics   N=00752
    Min     Avg     Max
1  08.540 13.126 19.805
2  00.326 08.444 11.556
3  00193. 01630. 04210.
4 -000.12-000.03 000.06
5  015.50 069.81 254.55

   15:13:49  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   15:20:59  11/14/00

********  STOP  ********
   15:21:20  11/14/00
Run statistics   N=00004
    Min     Avg     Max
1  19.810 19.834 19.858
2  00.234 00.244 00.258
3  00004. 00006. 00008.
4 -000.05 000.00 000.05
5  226.00 226.24 226.35

   15:21:21  11/14/00
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

ACE AIR CONSULTING & ENGINEERING, Inc.

```
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   15:25:05  11/14/00

********  STOP  ********
   15:25:28  11/14/00
Run statistics   N=00004
    Min     Avg     Max
1  04.842 04.877 04.915
2  14.848 14.851 14.856
3  01576. 01772. 01961.
4 -000.05-000.01 000.03
5 -000.10 000.01 000.25

   15:25:29  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   15:27:06  11/14/00

********  STOP  ********
   15:27:44  11/14/00
Run statistics   N=00007
    Min     Avg     Max
1  13.768 17.280 19.268
2  00.970 03.377 07.336
3  03000. 03011. 03026.
4 -000.08-000.03 000.00
5 -000.25-000.09 000.10

   15:27:45  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   15:28:47  11/14/00

********  STOP  ********
   15:29:15  11/14/00
Run statistics   N=00005
    Min     Avg     Max
1  19.795 19.819 19.835
2  00.250 00.258 00.272
3  03034. 03036. 03039.
4 -000.08-000.07-000.05
5  000.00 000.15 000.35

   15:29:17  11/14/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   15:32:15  11/14/00

********  STOP  ********
   15:32:26  11/14/00
Run statistics   N=00002
    Min     Avg     Max
1  19.835 19.851 19.868
2  00.232 00.237 00.242
3  00196. 00196. 00196.
4  000.00 000.00 000.01
5  237.70 237.88 238.05

   15:32:28  11/14/00
RUN  starts logging
STOP stops logging
PROG
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

ACE
AIR CONSULTING & ENGINEERING, Inc.

```
******** OFF    ********

******** ON     ********
******** RUN    ********
   07:08:00  11/15/00

******** STOP   ********
   07:09:28  11/15/00
Run statistics   N=00017
    Min     Avg     Max
1  00.053 00.083 00.120
2  00.044 00.054 00.062
3  00889. 01110. 01283.
4 -000.06 000.00 000.05
5 -000.05 001.16 009.75

   07:09:30  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
******** RUN    ********
   07:17:38  11/15/00

******** STOP   ********
   07:18:09  11/15/00
Run statistics   N=00006
    Min     Avg     Max
1  04.955 04.974 05.018
2  14.960 14.968 14.972
3  00180. 00188. 00190.
4 -000.05 000.01 000.04
5 -000.05 000.18 000.30

   07:18:10  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
******** RUN    ********
   07:24:33  11/15/00

******** STOP   ********
   07:25:05  11/15/00
Run statistics   N=00006
    Min     Avg     Max
1  20.283 20.312 20.330
2  00.216 00.234 00.240
3  02995. 03016. 03029.
4 -000.02 000.03 000.05
5 -000.10 000.15 000.25

   07:25:07  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
******** RUN    ********
   07:30:05  11/15/00

******** STOP   ********
   07:30:42  11/15/00
Run statistics   N=00007
    Min     Avg     Max
1  20.403 20.433 20.445
2  00.194 00.206 00.216
3  00002. 00005. 00007.
4 -000.08-000.04 000.04
5  241.75 242.14 243.00

   07:30:44  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
******** RUN    ********
   07:34:11  11/15/00

******** STOP   ********
   07:34:26  11/15/00
Run statistics   N=00003
    Min     Avg     Max
1  20.458 20.505 20.550
2  00.194 00.210 00.218
3  00003. 00006. 00007.
4 -000.07 000.00 000.04
5  057.20 057.62 058.40

   07:34:27  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** RUN    ********
   07:34:50  11/15/00

******** STOP   ********
   07:35:05  11/15/00
Run statistics   N=00003
    Min     Avg     Max
1  20.470 20.475 20.480
2  00.194 00.201 00.206
3  00003. 00004. 00005.
4 -000.08-000.03 000.00
5  057.20 057.28 057.40

   07:35:07  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
******** RUN    ********
   07:37:02  11/15/00

******** STOP   ********
   07:37:08  11/15/00
Run statistics   N=00001
    Min     Avg     Max
1  20.490 20.490 20.490
2  00.198 00.198 00.198
3  00034. 00034. 00034.
4 -000.02-000.02-000.02
5  047.55 047.55 047.55

   07:37:10  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
******** RUN    ********
   07:39:16  11/15/00

******** STOP   ********
   07:40:01  11/15/00
Run statistics   N=00009
    Min     Avg     Max
1  20.460 20.490 20.518
2  00.200 00.208 00.214
3  00004. 00005. 00007.
4 -000.06-000.02 000.03
5  034.85 035.77 036.15

   07:40:03  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
******** RUN    ********
   07:44:42  11/15/00
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

```
******** STOP ********
   07:44:58  11/15/00
Run statistics   N=00003
     Min     Avg     Max
1  20.533 20.552 20.565
2  00.202 00.208 00.218
3  00847. 00848. 00850.
4 -000.06-000.02 000.05
5  002.85 003.00 003.10

   07:44:59  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF   ********

******** ON    ********
******** RUN   ********
   08:45:18  11/15/00

******** STOP ********
   09:02:20  11/15/00
Run statistics   N=00204
     Min     Avg     Max
1  10.180 10.917 11.893
2  08.772 09.727 10.488
3  00194. 00368. 00634.
4 -000.09-000.01 000.06
5  013.70 020.30 035.70

   09:02:21  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF   ********

******** ON    ********
******** RUN   ********
   09:18:17  11/15/00

******** STOP ********
   09:49:08  11/15/00
Run statistics   N=00370
     Min     Avg     Max
1  09.965 10.586 11.213
2  09.766 10.335 10.854
3  00102. 00504. 00802.
4 -000.08-000.02 000.06
5  013.35 025.34 047.80

   09:49:09  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF   ********

******** ON    ********
******** RUN   ********
   10:00:01  11/15/00

******** STOP ********
   10:00:27  11/15/00
Run statistics   N=00005
     Min     Avg     Max
1  20.673 20.694 20.708
2  00.190 00.200 00.208
3  00830. 00834. 00840.
4 -000.01 000.02 000.04
5  003.60 003.76 003.95

   10:00:29  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF   ********

******** ON    ********
******** RUN   ********
   10:05:58  11/15/00

******** STOP ********
   10:06:24  11/15/00
Run statistics   N=00005
     Min     Avg     Max
1  05.005 05.042 05.070
2  15.000 15.010 15.016
3  00005. 00007. 00010.
4 -000.06-000.02 000.04
5  040.05 040.72 041.05

   10:06:25  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF   ********

******** ON    ********
******** RUN   ********
   10:35:05  11/15/00

******** STOP ********
   11:39:35  11/15/00
Run statistics   N=00774
     Min     Avg     Max
1  09.178 10.130 12.595
2  08.306 10.821 11.640
3  00473. 01284. 03157.
4 -000.08-000.01 000.05
5  023.45 059.71 196.20

   11:39:36  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF   ********

******** ON    ********
******** RUN   ********
   11:50:21  11/15/00

******** STOP ********
   11:51:31  11/15/00
Run statistics   N=00014
     Min     Avg     Max
1  20.770 20.814 20.875
2  00.230 00.457 01.878
3  02909. 02919. 02935.
4 -000.06-000.02 000.05
5  004.70 005.54 006.25

   11:51:33  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF   ********

******** ON    ********
******** RUN   ********
   11:57:04  11/15/00

******** STOP ********
   11:57:39  11/15/00
Run statistics   N=00007
     Min     Avg     Max
1  20.810 20.832 20.850
2  00.172 00.185 00.196
3  00003. 00005. 00010.
4 -000.08-000.04 000.04
5  057.45 057.94 058.60

   11:57:40  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF   ********

******** ON    ********
******** RUN   ********
   12:00:55  11/15/00

******** STOP ********
   12:01:20  11/15/00
Run statistics   N=00005
     Min     Avg     Max
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

```
1  05.038 05.059 05.078
2  15.254 15.264 15.278
3  02237. 02341. 02436.
4 -000.03-000.01 000.00
5  156.25 157.62 159.05

   12:01:22  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   12:05:13  11/15/00

********  STOP  ********
   12:05:43  11/15/00
Run statistics   N=00006
    Min    Avg    Max
1  20.773 20.814 20.858
2  00.202 00.208 00.216
3  00826. 00834. 00839.
4 -000.06-000.02 000.04
5 -000.05 000.29 001.15

   12:05:45  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   12:10:37  11/15/00

********  STOP  ********
   12:10:55  11/15/00
Run statistics   N=00003
    Min    Avg    Max
1  20.823 20.854 20.870
2  00.184 00.189 00.192
3  00004. 00005. 00006.
4 -000.08-000.06-000.04
5  239.20 239.32 239.50

   12:10:57  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   12:15:02  11/15/00

********  STOP  ********
   12:15:18  11/15/00
Run statistics   N=00003
    Min    Avg    Max
1  20.830 20.834 20.838
2  00.190 00.196 00.202
3  00005. 00006. 00007.
4 -000.06-000.01 000.02
5  053.15 054.08 054.85

   12:15:19  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   13:06:46  11/15/00

********  STOP  ********
   14:13:34  11/15/00
Run statistics   N=00801
    Min    Avg    Max
1  08.997 09.552 10.388
2  10.562 11.403 11.806
3  01290. 02731. 04943.
4 -000.08-000.01 000.06
5  064.80 192.84 485.95

   14:13:35  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   14:20:33  11/15/00

********  STOP  ********
   14:21:13  11/15/00
Run statistics   N=00008
    Min    Avg    Max
1  20.715 20.737 20.765
2  00.268 00.276 00.284
3  00006. 00007. 00008.
4 -000.01 000.02 000.06
5  239.50 240.27 240.75

   14:21:14  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  STOP  ********
   14:21:49  11/15/00
Run statistics   N=00008
    Min    Avg    Max
1  20.715 20.737 20.765
2  00.268 00.276 00.284
3  00006. 00007. 00008.
4 -000.01 000.02 000.06
5  239.50 240.27 240.75

   14:21:50  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   14:28:03  11/15/00

********  STOP  ********
   14:28:43  11/15/00
Run statistics   N=00008
    Min    Avg    Max
1  05.050 05.105 05.203
2  15.124 15.205 15.248
3  02891. 02900. 02915.
4 -000.02-000.01 000.00
5  006.30 006.91 007.70

   14:28:44  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   14:45:26  11/15/00

********  OFF   ********

********  ON    ********
********  STOP  ********
   15:52:34  11/15/00
Run statistics   N=00557
    Min    Avg    Max
1  08.848 09.271 11.358
2  09.720 11.532 11.826
3  00610. 04643. 08576.
4 -000.07 000.00 000.07
5  029.50 397.23 991.35

   15:52:36  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

ACE AIR CONSULTING & ENGINEERING, Inc.

```
******** OFF ********

******** ON ********
   15:59:53 11/15/00
RUN starts logging
STOP stops logging
PROG starts programming
******** PROG ********
 Log Interval=00:00:05
 Stop in 0000:01:56:40
 Stop on full cache
Date? [MMDDYY]
 Date=11/15/00
Time? [HHMMSS]
 Time=16:00:44
Celsius units? (Yes,No)
 Fahrenheit selected
Reject 60Hz? (Yes,No)
 50Hz selected
Calibrate? (Yes,No)
 Cal mode OFF
Change Tadjust? (Yes,No)
 Tadjust=+00.0F
******** EXIT ********
   16:01:04 11/15/00
RUN starts logging
STOP stops logging
PROG starts programming

******** PROG ********
******** EXIT ********
   16:01:18 11/15/00
RUN starts logging
STOP stops logging
PROG starts programming

******** PROG ********
Log Interval? [HHMMSS]
 Log Interval=00:00:05
 Stop in 0000:01:56:40
Stop on full cache?(Y/N)
 Overwrite full cache
Date? [MMDDYY]
******** EXIT ********
   16:01:45 11/15/00
RUN starts logging
STOP stops logging
PROG starts programming

******** RUN ********
   16:02:16 11/15/00

******** STOP ********
   16:02:26 11/15/00
Run statistics  N=00002
    Min     Avg     Max
1  20.713 20.730 20.748
2  00.266 00.266 00.266
3  06682. 06717. 06751.
4 -000.02-000.01 000.00
5  006.80 006.80 006.80

   16:02:27 11/15/00
RUN starts logging
STOP stops logging
PROG starts programming

******** OFF ********

******** ON ********
******** RUN ********
   16:07:37 11/15/00

******** STOP ********
   16:08:29 11/15/00
Run statistics  N=00010
    Min     Avg     Max
1  20.713 20.729 20.750
2  00.202 00.214 00.230
3  02894. 02910. 02929.
4 -000.07-000.02 000.02
5  006.50 006.77 007.90

   16:08:30 11/15/00
RUN starts logging
STOP stops logging
PROG starts programming

******** OFF ********

******** ON ********
******** RUN ********
   16:12:41 11/15/00

******** STOP ********
   16:13:01 11/15/00
Run statistics  N=00004
    Min     Avg     Max
1  20.763 20.778 20.795
2  00.210 00.216 00.220
3  00008. 00009. 00011.
4  000.04 000.05 000.05
5  243.75 243.95 244.35

   16:13:03 11/15/00
RUN starts logging
STOP stops logging
PROG starts programming

******** OFF ********

******** ON ********
******** RUN ********
   16:18:50 11/15/00

******** STOP ********
   16:19:20 11/15/00
Run statistics  N=00006
    Min     Avg     Max
1  05.040 05.074 05.100
2  15.222 15.232 15.238
3  08204. 08232. 08254.
4 -000.08-000.05 000.00
5  007.00 007.74 007.95

   16:19:22 11/15/00
RUN starts logging
STOP stops logging
PROG starts programming

******** OFF ********

******** ON ********
******** RUN ********
   16:25:21 11/15/00

******** STOP ********
   16:26:11 11/15/00
Run statistics  N=00010
    Min     Avg     Max
1  20.645 20.660 20.680
2  00.272 00.286 00.298
3  03295. 03312. 03331.
4  000.00 000.02 000.05
5  005.50 006.47 007.00

   16:26:12 11/15/00
RUN starts logging
STOP stops logging
PROG starts programming

******** OFF ********

******** ON ********
   16:33:04 11/15/00
RUN starts logging
STOP stops logging
PROG starts programming
******** RUN ********
   16:33:04 11/15/00

******** STOP ********
   17:39:36 11/15/00
Run statistics  N=00797
    Min     Avg     Max
1  08.832 09.349 10.622
2  10.378 11.498 11.864
3  01156. 03233. 05676.
4 -000.09-000.01 000.06
5  035.05 185.30 580.65

   17:39:38 11/15/00
RUN starts logging
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

ACE AIR CONSULTING & ENGINEERING, Inc.

```
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   17:46:46  11/15/00

********  STOP  ********
   17:47:07  11/15/00
Run statistics   N=00004
    Min     Avg     Max
1  20.570 20.613 20.650
2  00.270 00.277 00.284
3  08258. 08279. 08300.
4 -000.06-000.01 000.04
5  000.10 000.21 000.30

   17:47:08  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   17:49:26  11/15/00

********  STOP  ********
   17:50:23  11/15/00
Run statistics   N=00011
    Min     Avg     Max
1  05.015 05.039 05.070
2  15.134 15.143 15.162
3  05456. 06108. 06917.
4 -000.05-000.01 000.07
5  143.20 285.93 361.25

   17:50:24  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   17:54:28  11/15/00

********  STOP  ********
   17:55:04  11/15/00
Run statistics   N=00007
    Min     Avg     Max
1  20.548 20.573 20.602
2  00.326 00.338 00.354
3  00003. 00005. 00006.
4 -000.08-000.04 000.00
5  235.05 235.59 236.45

   17:55:06  11/15/00
RUN  starts logging
STOP stops logging
PROG starts programming
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

ACE AIR CONSULTING & ENGINEERING, INC.

```
******** OFF    ********

******** ON     ********
******** RUN    ********
   07:15:43  11/16/00

******** STOP   ********
   07:17:41  11/16/00
Run statistics   N=00023
    Min     Ave     Max
1  20.968 21.033 21.078
2  00.134 00.146 00.158
3  08206. 08259. 08325.
4 -000.03 000.01 000.10
5 -000.15 000.10 000.30

   07:17:42  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
******** RUN    ********
   07:22:42  11/16/00

******** STOP   ********
   07:23:17  11/16/00
Run statistics   N=00007
    Min     Ave     Max
1  05.063 05.079 05.092
2  15.136 15.148 15.154
3  03338. 03354. 03366.
4  000.00 000.02 000.04
5 -000.05 000.29 000.55

   07:23:19  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
******** RUN    ********
   07:26:09  11/16/00

******** STOP   ********
   07:26:34  11/16/00
Run statistics   N=00005
    Min     Ave     Max
1  15.075 15.091 15.110
2  05.306 05.312 05.320
3  00915. 01241. 01760.
4 -000.03-000.02 000.01
5  213.80 216.78 218.75

   07:26:35  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
******** RUN    ********
   07:30:44  11/16/00

******** STOP   ********
   07:31:10  11/16/00
Run statistics   N=00005
    Min     Ave     Max
1  00.053 00.087 00.110
2  00.072 00.075 00.084
3  00004. 00005. 00008.
4  000.00 000.01 000.07
5  241.10 241.62 242.25

   07:31:11  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
******** RUN    ********
   07:36:45  11/16/00

******** STOP   ********
   07:37:08  11/16/00
Run statistics   N=00004
    Min     Ave     Max
1  20.685 20.691 20.698
2  00.208 00.215 00.220
3  00005. 00008. 00009.
4  000.00 000.05 000.07
5  028.95 029.11 029.20

   07:37:09  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
******** RUN    ********
   07:41:54  11/16/00

******** STOP   ********
   07:42:46  11/16/00
Run statistics   N=00010
    Min     Ave     Max
1  20.705 20.725 20.748
2  00.172 00.177 00.190
3  00004. 00005. 00007.
4 -000.06-000.04 000.04
5  049.60 050.68 051.65

   07:42:47  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
******** RUN    ********
   08:32:31  11/16/00

******** STOP   ********
   09:39:09  11/16/00
Run statistics   N=00799
    Min     Ave     Max
1  08.825 09.290 09.793
2  11.158 11.511 11.778
3  01171. 03295. 05100.
4 -000.07 000.00 000.07
5  117.90 251.72 498.85

   09:39:10  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
******** RUN    ********
   09:48:01  11/16/00

******** STOP   ********
   09:48:47  11/16/00
Run-statistics   N=00009
    Min     Ave     Max
1  05.010 05.035 05.050
2  15.100 15.112 15.126
3  00003. 00009. 00012.
4 -000.07 000.01 000.05
5  014.75 015.31 015.80

   09:48:48  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
******** PROG   ********
 Program volts  mX+b
 m polarity = -
 m = -2.00000
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

ACE AIR CONSULTING & ENGINEERING, INC.

```
 b polarity = +
 b = +000000
 Units = V
Decimal Position? (0-5)
 Decimal position = 3
 2 V V  -2.00000 000000
******** EXIT ********
   09:51:20  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   09:54:41  11/16/00

********  STOP  ********
   09:54:51  11/16/00
Run statistics   N=00002
    Min    Avg    Max
1  20.565 20.569 20.573
2  06.016 06.035 06.054
3  00255. 00259. 00262.
4 -000.07-000.02 000.04
5  008.10 008.50 008.90

   09:54:52  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   09:55:46  11/16/00

********  STOP  ********
   09:56:02  11/16/00
Run statistics   N=00003
    Min    Avg    Max
1  20.560 20.578 20.590
2  15.022 15.028 15.038
3  00004. 00008. 00014.
4 -000.06-000.03 000.01
5  005.50 005.75 006.00

   09:56:04  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   09:59:15  11/16/00

********  STOP  ********
   09:59:40  11/16/00
Run statistics   N=00005
    Min    Avg    Max
1  20.583 20.603 20.653
2  04.370 04.408 04.448
3  00183. 00269. 00405.
4 -000.01 000.01 000.02
5  009.60 011.04 012.40

   09:59:41  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   10:05:26  11/16/00

********  STOP  ********
   10:06:17  11/16/00
Run statistics   N=00010
    Min    Avg    Max
1  20.620 20.646 20.663
2 -00.224-00.195-00.160
3  02324. 02334. 02343.
4 -000.03-000.01 000.05
5  006.70 007.49 008.00

********  RUN   ********
   10:06:18  11/16/00

********  STOP  ********
   10:07:25  11/16/00
Run statistics   N=00011
    Min    Avg    Max
1  20.615 20.648 20.670
2 -00.236-00.215-00.188
3  02332. 02519. 03020.
4 -000.03-000.01 000.05
5  007.65 008.16 009.05

   10:07:26  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming
********  RUN   ********
   10:07:30  11/16/00

********  STOP  ********
   10:07:53  11/16/00
Run statistics   N=00002
    Min    Avg    Max
1  20.655 20.664 20.673
2 -00.238-00.207-00.176
3  03015. 03017. 03019.
4 -000.05-000.03 000.00
5  007.00 007.50 008.00

   10:07:55  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   10:11:27  11/16/00

********  STOP  ********
   10:11:55  11/16/00
Run statistics   N=00005
    Min    Avg    Max
1  20.610 20.640 20.678
2  00.078 00.097 00.106
3  00074. 00141. 00197.
4 -000.09 000.01 000.05
5  190.20 190.46 190.75

   10:11:57  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   10:13:22  11/16/00

********  STOP  ********
   10:13:48  11/16/00
Run statistics   N=00005
    Min    Avg    Max
1  20.598 20.627 20.658
2  00.072 00.079 00.094
3  00000. 00002. 00003.
4  000.01 000.04 000.05
5  240.75 241.31 241.95

   10:13:50  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   10:18:32  11/16/00

********  STOP  ********
   10:18:42  11/16/00
Run statistics   N=00002
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

ACE AIR CONSULTING & ENGINEERING, Inc.

```
     Min     Avg     Max
1  20.615 20.646 20.678
2  06.266 06.360 06.454
3  00342. 00365. 00388.
4  000.00 000.02 000.04
5  054.60 054.60 054.60

   10:18:44  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   10:20:15  11/16/00

********  STOP  ********
   10:20:30  11/16/00
Run statistics   N=00003
     Min     Avg     Max
1  11.747 11.807 11.853
2  07.064 07.186 07.294
3  00265. 00266. 00267.
4 -000.06-000.01 000.02
5  051.20 052.03 053.65

   10:20:32  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   10:34:26  11/16/00

********  STOP  ********
   11:25:48  11/16/00
Run statistics   N=00616
     Min     Avg     Max
1  08.695 09.889 20.260
2  06.340 08.150 08.654
3  00325. 04708. 08712.
4 -000.08 000.00 000.08
5  034.90 339.31 763.10

   11:25:49  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   11:28:13  11/16/00

********  STOP  ********
   11:28:40  11/16/00
Run statistics   N=00005
     Min     Avg     Max
1  09.290 09.377 09.465
2  07.916 07.982 08.038
3  02212. 02239. 02281.
4 -000.01 000.01 000.04
5  128.40 140.01 158.55

********  RUN   ********
   11:28:41  11/16/00

********  STOP  ********
   11:41:14  11/16/00
Run statistics   N=00148
     Min     Avg     Max
1  08.898 09.088 09.288
2  07.828 08.029 08.302
3  02174. 04039. 05087.
4 -000.06-000.01 000.05
5  188.75 283.86 404.25

   11:41:16  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   11:48:50  11/16/00

********  STOP  ********
   11:49:26  11/16/00
Run statistics   N=00007
     Min     Avg     Max
1  20.390 20.406 20.440
2  00.080 00.101 00.136
3  02834. 02839. 02847.
4 -000.07-000.02 000.05
5  024.30 025.05 026.05

   11:49:27  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   11:54:02  11/16/00

********  STOP  ********
   11:54:27  11/16/00
Run statistics   N=00005
     Min     Avg     Max
1  20.383 20.400 20.430
2  00.010 00.054 00.136
3  00002. 00005. 00008.
4 -000.05-000.01 000.06
5  252.50 252.67 252.85

   11:54:28  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   11:57:41  11/16/00

********  STOP  ********
   11:58:01  11/16/00
Run statistics   N=00004
     Min     Avg     Max
1  20.398 20.409 20.428
2  14.344 14.385 14.428
3  00005. 00009. 00017.
4 -000.06-000.03 000.02
5  027.20 027.74 028.55

   11:58:03  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  RUN   ********
   11:58:42  11/16/00

********  STOP  ********
   11:59:37  11/16/00
Run statistics   N=00011
     Min     Avg     Max
1  20.370 20.405 20.440
2  14.838 14.975 15.100
3 -00003. 00001. 00008.
4 -000.05-000.01 000.05
5  028.00 029.64 031.20

   11:59:38  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   12:00:58  11/16/00

********  STOP  ********
   12:01:09  11/16/00
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

ACE AIR CONSULTING & ENGINEERING, Inc.

```
Run statistics   N=00002
    Min     Avg     Max
1  20.418 20.421 20.425
2  14.956 14.986 15.016
3 -00001. 00001. 00002.
4  000.02 000.04 000.05
5  000.30 000.50 000.70

   12:01:11  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   12:06:26  11/16/00

********  STOP  ********
   12:06:46  11/16/00
Run statistics   N=00004
    Min     Avg     Max
1  20.395 20.413 20.423
2 -00.050-00.028 00.004
3  00004. 00006. 00009.
4 -000.05 000.00 000.05
5  241.05 241.51 242.15

   12:06:47  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   12:12:48  11/16/00

********  STOP  ********
   12:13:19  11/16/00
Run statistics   N=00006
    Min     Avg     Max
1  20.380 20.394 20.408
2 -00.078-00.053-00.026
3  03013. 03020. 03029.
4 -000.05-000.03 000.00
5 -000.10 000.21 000.30

   12:13:21  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   12:20:11  11/16/00

********  STOP  ********
   13:25:16  11/16/00
Run statistics   N=00781
    Min     Avg     Max
1  08.560 09.215 09.950
2  07.418 07.970 08.460
3  01968. 03986. 09317.
4 -000.08 000.00 000.08
5  088.00 280.77 827.65

   13:25:18  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   13:32:26  11/16/00

********  STOP  ********
   13:32:59  11/16/00
Run statistics   N=00006
    Min     Avg     Max
1  20.273 20.296 20.313
2  00.010 00.024 00.042
3  02894. 02907. 02918.
4 -000.07-000.02 000.05
5  001.20 001.68 002.20

   13:33:00  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   13:37:32  11/16/00

********  STOP  ********
   13:37:48  11/16/00
Run statistics   N=00003
    Min     Avg     Max
1  14.763 14.786 14.805
2  00.028 00.031 00.036
3  00156. 00158. 00159.
4  000.00 000.03 000.06
5  227.90 228.63 229.40

   13:37:49  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  RUN   ********
   13:38:38  11/16/00

********  STOP  ********
   13:39:06  11/16/00
Run statistics   N=00005
    Min     Avg     Max
1  14.740 14.770 14.805
2  00.004 00.019 00.028
3  00004. 00007. 00010.
4 -000.01 000.01 000.05
5  229.95 230.85 231.70

   13:39:08  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   13:42:07  11/16/00

********  STOP  ********
   13:42:29  11/16/00
Run statistics   N=00004
    Min     Avg     Max
1  20.293 20.309 20.318
2  14.178 14.246 14.352
3  00034. 00036. 00038.
4 -000.02 000.01 000.03
5  000.30 001.20 003.15

   13:42:30  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  RUN   ********
   13:43:16  11/16/00

********  STOP  ********
   13:44:25  11/16/00
Run statistics   N=00014
    Min     Avg     Max
1  20.288 20.323 20.355
2  15.272 15.375 15.490
3 -00003. 00001. 00008.
4 -000.04 000.00 000.02
5 -000.15 000.13 000.30

   13:44:27  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********
```

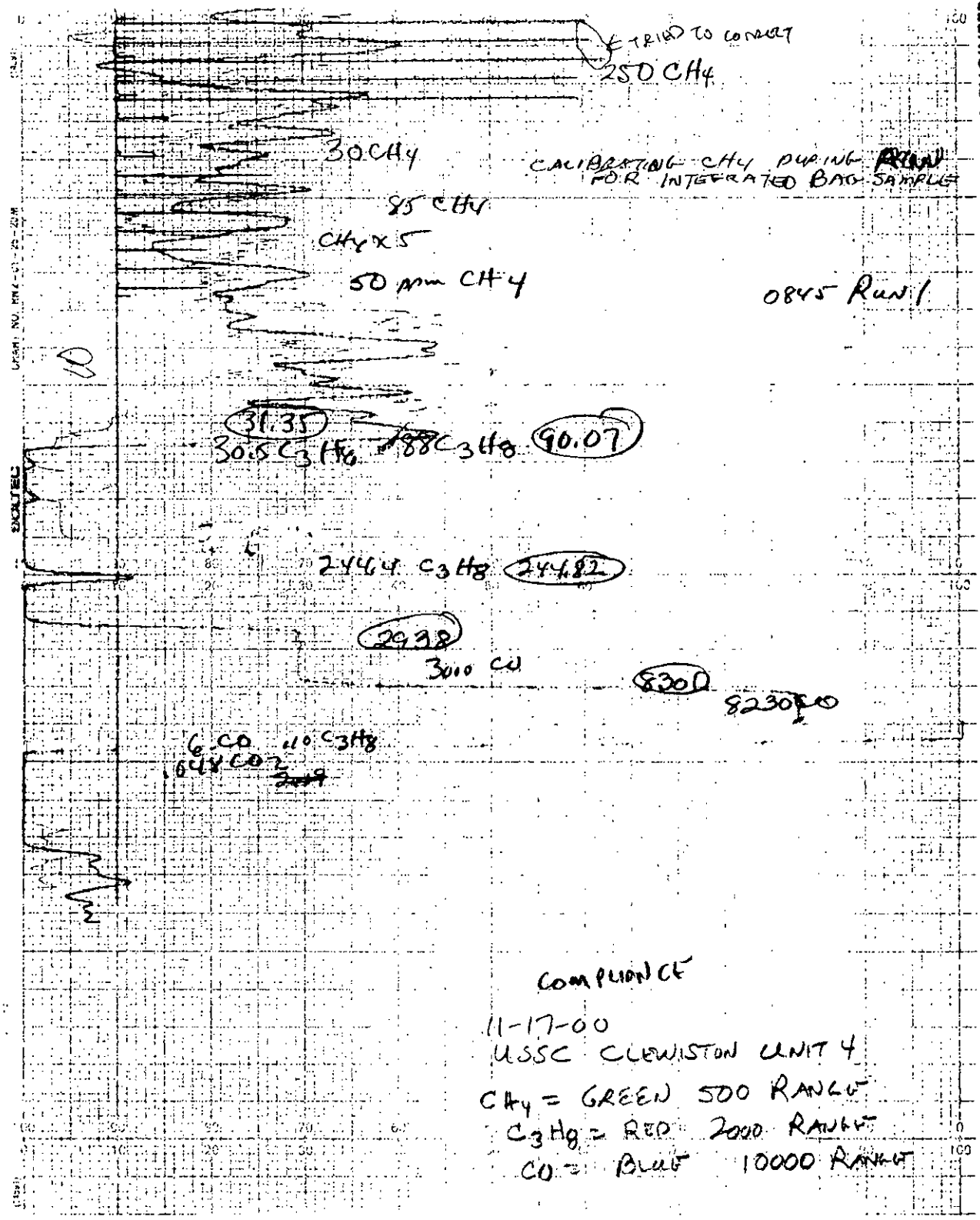
CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

ACE AIR CONSULTING & ENGINEERING, Inc.

```
********  ON    ********
********  RUN   ********
   13:59:22  11/16/00

********  STOP  ********
   15:06:30  11/16/00
Run statistics   N=00305
    Min     Avg     Max
1  08.943 09.890 11.383
2  06.948 08.000 08.618
3  00358. 01554. 04810.
4 -000.08-000.01 000.06
5  031.00 112.47 394.15

   15:06:32  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   15:12:47  11/16/00

********  STOP  ********
   15:13:08  11/16/00
Run statistics   N=00004
    Min     Avg     Max
1  20.227 20.236 20.258
2  14.794 14.815 14.840
3 -00004.-00003. 00000.
4 -000.06-000.04 000.00
5 -000.20-000.09 000.05

   15:13:10  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   15:16:37  11/16/00

********  STOP  ********
   15:17:34  11/16/00
Run statistics   N=00011
    Min     Avg     Max
1  14.713 14.807 15.398
2 -00.094-00.059-00.024
3  02222. 02582. 02749.
4 -000.06-000.03 000.03
5 -000.20 000.08 000.25

   15:17:35  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   15:18:34  11/16/00

********  STOP  ********
   15:19:06  11/16/00
Run statistics   N=00006
    Min     Avg     Max
1  20.210 20.245 20.273
2 -00.086-00.077-00.066
3  02803. 02808. 02815.
4 -000.06 000.02 000.05
5 -000.05 000.13 000.25

   15:19:07  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   15:23:01  11/16/00

********  STOP  ********
   15:23:26  11/16/00
Run statistics   N=00005
    Min     Avg     Max
1  20.250 20.269 20.288
2 -00.154-00.137-00.104
3  00005. 00021. 00035.
4 -000.08-000.06-000.03
5  226.50 226.68 226.75

   15:23:28  11/16/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

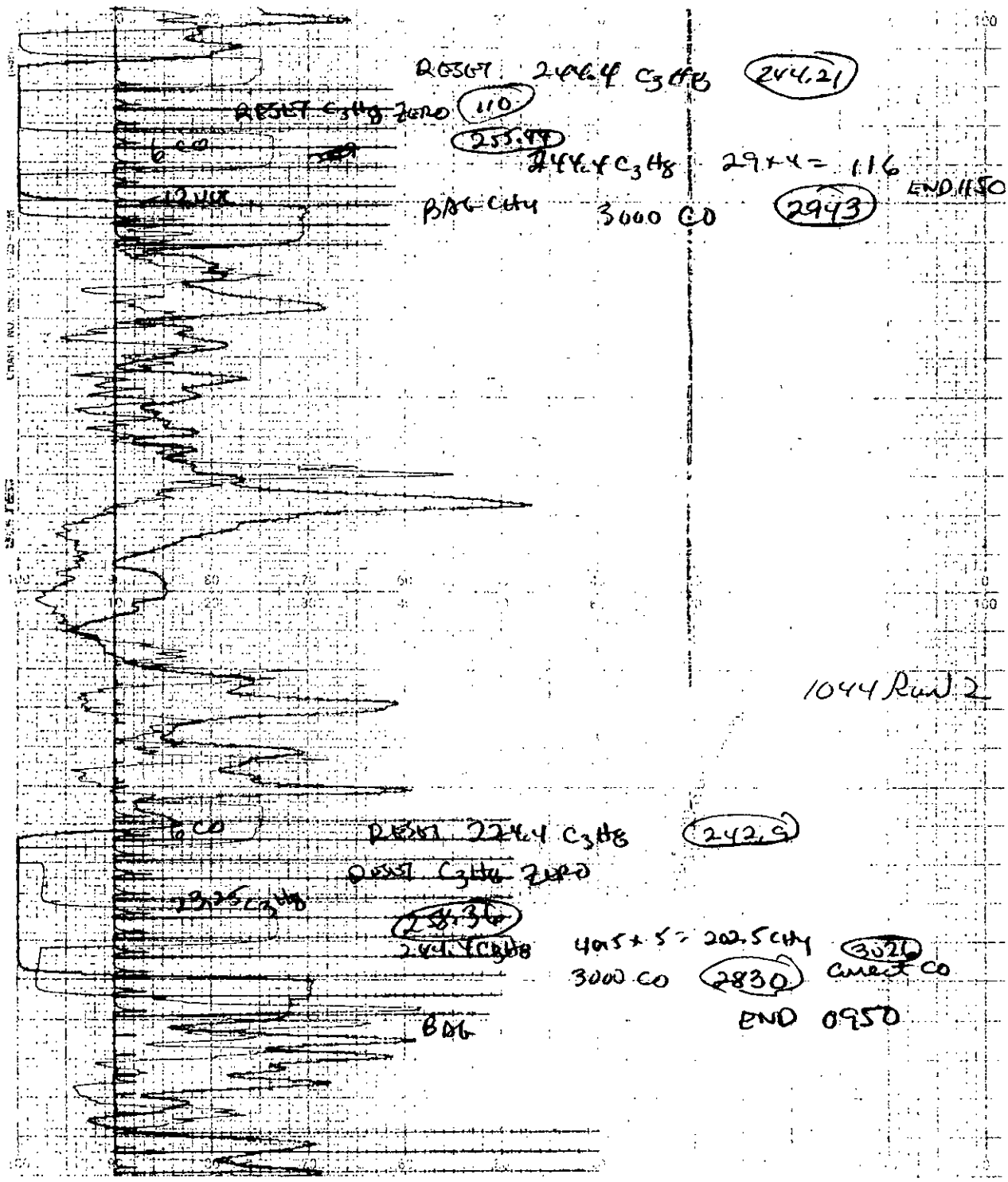
ACE AIR CONSULTING & ENGINEERING, Inc.



A

START

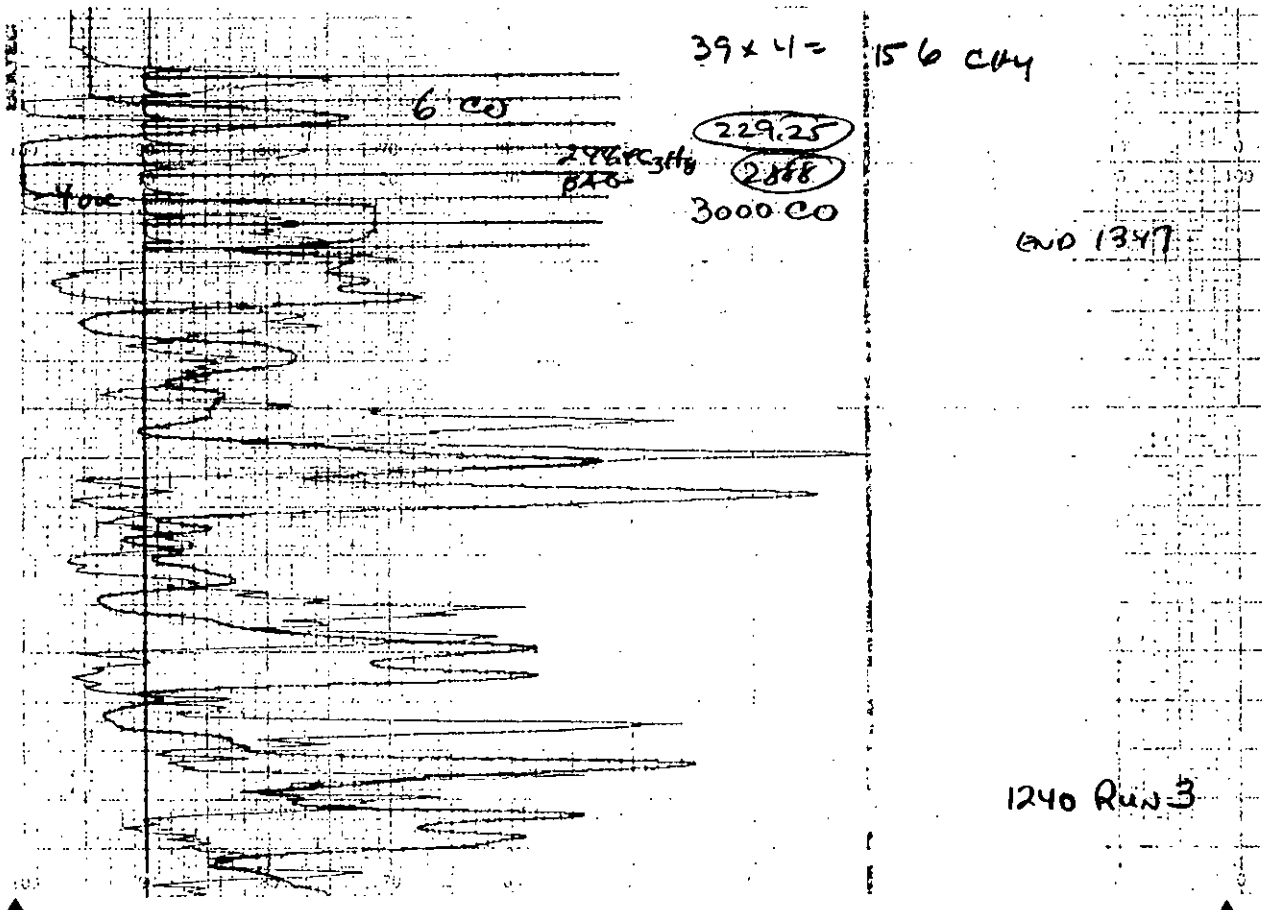
AIR CONSULTING AND ENGINEERING, INC.



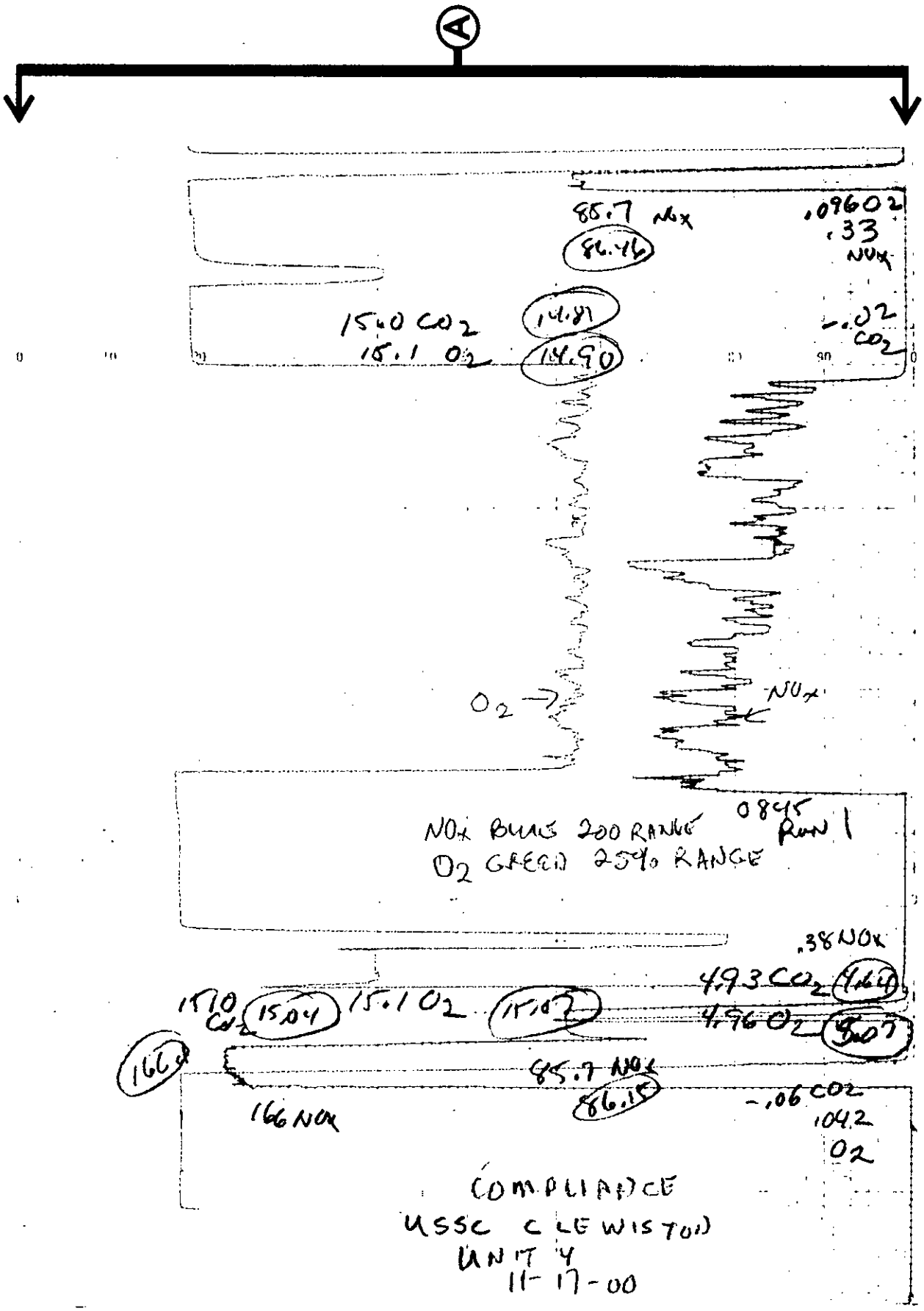
AIR CONSULTING AND ENGINEERING, INC.

END

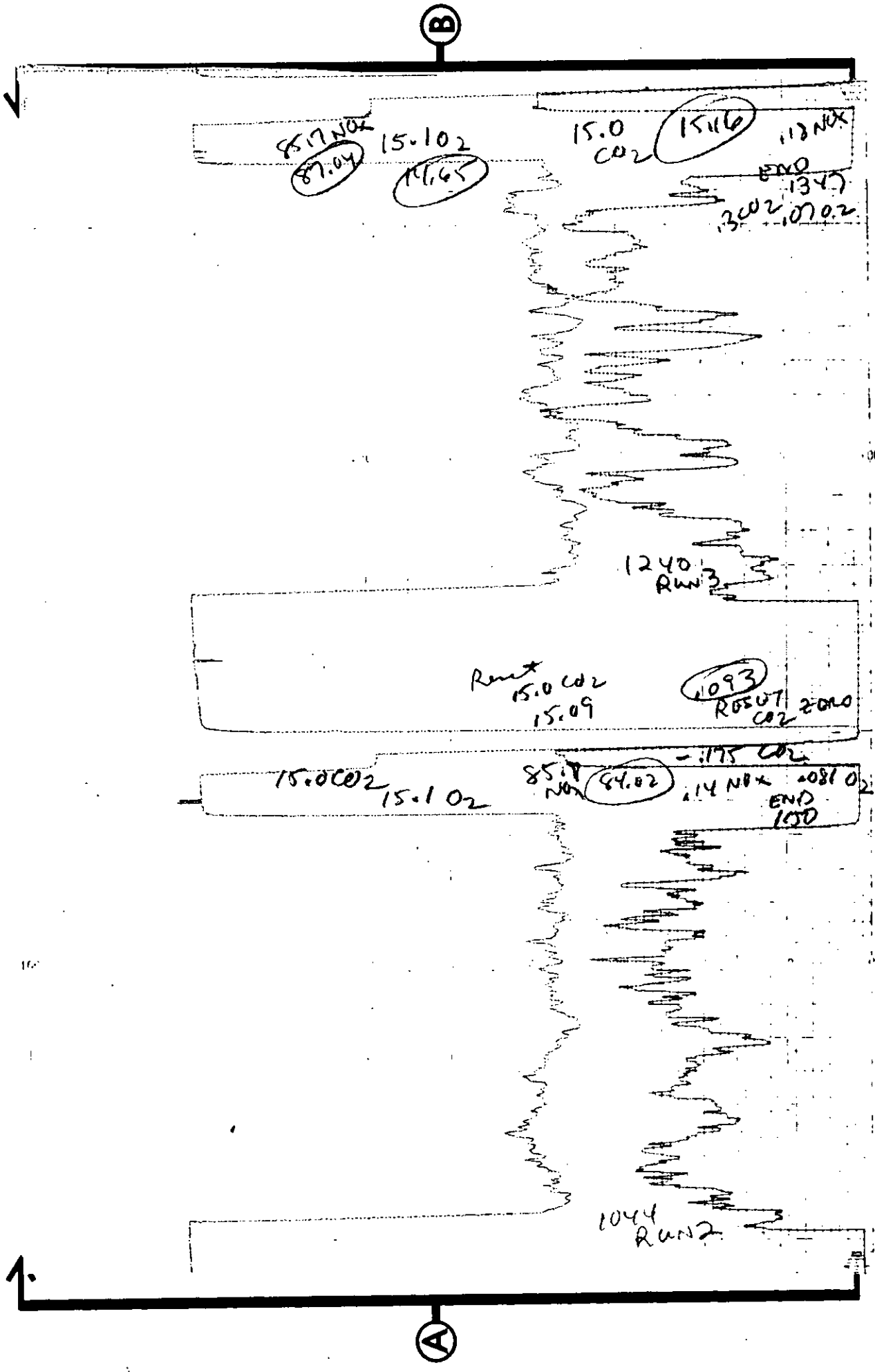
AIR CONSULTING AND ENGINEERING, INC.



B



AIR CONSULTING AND ENGINEERING, INC.



```
******** OFF    ********

******** ON     ********
   07:28:47  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming
********  STOP  ********
   07:28:47  11/17/00
Run statistics   N=00004
    Min     Avg     Max
1 -00.073-00.024 00.020
2  00.014 00.048 00.070
3  00004. 00006. 00008.
4  000.27 000.36 000.45
5  001.90 002.19 002.90

   07:28:48  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
********  RUN   ********
   07:31:48  11/17/00

********  STOP  ********
   07:32:05  11/17/00
Run statistics   N=00003
    Min     Avg     Max
1  20.785 20.791 20.795
2  00.012 00.022 00.030
3  00005. 00007. 00010.
4  000.21 000.24 000.25
5  000.00 000.10 000.20

   07:32:06  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
********  RUN   ********
   07:39:00  11/17/00

********  STOP  ********
   07:39:26  11/17/00
Run statistics   N=00005
    Min     Avg     Max
1  20.710 20.752 20.778
2 -00.028-00.011 00.018
3  08278. 08301. 08329.
4  000.31 000.40 000.43
5  000.00 000.19 000.40

   07:39:27  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
********  RUN   ********
   07:47:47  11/17/00

********  STOP  ********
   07:49:27  11/17/00
Run statistics   N=00020
    Min     Avg     Max
1  20.713 20.757 20.798
2 -00.076-00.039 00.008
3  02918. 02938. 02967.
4  000.10 000.18 000.25
5  000.00 000.16 000.30

   07:49:29  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
********  RUN   ********
   07:56:19  11/17/00

********  STOP  ********
   07:56:51  11/17/00
Run statistics   N=00006
    Min     Avg     Max
1  00.015 00.042 00.070
2 -00.086-00.057-00.022
3  00006. 00012. 00016.
4  165.61 166.10 166.65
5  244.60 244.82 245.10

   07:56:52  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
********  RUN   ********
   08:04:04  11/17/00

********  STOP  ********
   08:04:24  11/17/00
Run statistics   N=00004
    Min     Avg     Max
1  00.008 00.047 00.065
2  00.006 00.031 00.042
3  00005. 00006. 00006.
4  085.84 086.15 086.36
5  036.05 036.47 036.75

   08:04:26  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
********  RUN   ********
   08:08:56  11/17/00

********  STOP  ********
   08:09:17  11/17/00
Run statistics   N=00004
    Min     Avg     Max
1  15.058 15.071 15.100
2  15.032 15.044 15.060
3  00003. 00005. 00008.
4  000.32 000.34 000.39
5  005.70 005.83 006.05

   08:09:18  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
********  RUN   ********
   08:13:01  11/17/00

********  STOP  ********
   08:13:46  11/17/00
Run statistics   N=00009
    Min     Avg     Max
1  05.038 05.072 05.108
2  04.602 04.642 04.682
3  00109. 00150. 00170.
4  000.33 000.38 000.41
5  006.00 008.77 011.45

   08:13:47  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF    ********

******** ON     ********
********  RUN   ********
   08:16:18  11/17/00
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

```
******** STOP ********
   08:16:35  11/17/00
Run statistics   N=00003
     Min     Avg     Max
1  20.627 20.631 20.638
2  00.020 00.025 00.036
3  00014. 00016. 00017.
4  000.89 000.94 000.97
5  030.95 031.35 031.95

   08:16:37  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF  ********

******** ON   ********
******** RUN  ********
   08:19:16  11/17/00

******** STOP ********
   08:19:31  11/17/00
Run statistics   N=00003
     Min     Avg     Max
1  20.625 20.663 20.690
2  00.030 00.031 00.032
3  00044. 00051. 00063.
4  000.71 000.73 000.75
5  089.35 090.07 090.55

   08:19:32  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF  ********

******** ON   ********
******** RUN  ********
   08:44:08  11/17/00

******** STOP ********
   09:51:00  11/17/00
Run statistics   N=00802
     Min     Avg     Max
1  08.878 09.468 10.380
2  06.906 07.714 08.160
3  00731. 02360. 04039.
4  025.77 045.53 071.24
5  048.95 183.79 493.90

   09:51:01  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF  ********
```

```
******** ON   ********
******** RUN  ********
   09:57:09  11/17/00

******** STOP ********
   09:57:41  11/17/00
Run statistics   N=00006
     Min     Avg     Max
1  20.425 20.448 20.468
2  00.114 00.123 00.134
3  02823. 02830. 02835.
4  001.00 001.03 001.05
5  019.35 019.51 019.70

   09:57:42  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** RUN  ********
   09:58:31  11/17/00

******** RUN  ********
   09:59:37  11/17/00

******** STOP ********
   09:59:45  11/17/00
 Log Interval exceeded!
Run statistics   N=00014
     Min     Avg     Max
1  20.405 20.446 20.483
2  00.070 00.093 00.130
3  03015. 03026. 03039.
4  000.69 000.78 000.85
5  020.45 021.09 021.65

   09:59:46  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF  ********

******** ON   ********
******** RUN  ********
   10:04:35  11/17/00

******** STOP ********
   10:05:06  11/17/00
Run statistics   N=00006
     Min     Avg     Max
1  20.413 20.457 20.498
2  00.004 00.042 00.072
3  00004. 00007. 00009.
4  000.51 000.57 000.61
5  257.80 258.36 258.75

   10:05:07  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming
```

```
******** OFF  ********

******** ON   ********
******** RUN  ********
   10:06:52  11/17/00

******** STOP ********
   10:07:22  11/17/00
Run statistics   N=00006
     Min     Avg     Max
1  14.875 14.902 14.933
2  14.626 14.693 14.788
3  00005. 00007. 00008.
4  000.11 000.17 000.21
5  031.80 039.39 050.80

   10:07:24  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF  ********

******** ON   ********
******** RUN  ********
   10:08:36  11/17/00

******** STOP ********
   10:08:57  11/17/00
Run statistics   N=00004
     Min     Avg     Max
1  16.708 17.352 17.968
2  14.472 14.699 14.806
3  00005. 00007. 00010.
4  000.50 000.56 000.61
5  023.35 023.51 023.75

   10:08:59  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming
******** RUN  ********
   10:09:03  11/17/00

******** STOP ********
   10:11:39  11/17/00
Run statistics   N=00029
     Min     Avg     Max
1  19.102 19.999 20.293
2  14.702 14.813 14.932
3  00003. 00006. 00010.
4  000.49 000.60 000.81
5  023.55 024.96 026.55

   10:11:41  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

******** OFF  ********
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

```
******** ON     ********
******** RUN    ********
   10:14:11  11/17/00

******** STOP   ********
   10:14:26  11/17/00
Run statistics   N=00003
     Min     Avg     Max
1  20.328 20.337 20.343
2  14.740 14.768 14.798
3  00004. 00007. 00010.
4  000.60 000.61 000.62
5  000.00 000.15 000.35

   10:14:28  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF    ********

********  ON     ********
********  RUN    ********
   10:19:38  11/17/00

********  STOP   ********
   10:19:58  11/17/00
Run statistics   N=00004
     Min     Avg     Max
1  20.430 20.454 20.475
2 -00.028-00.020 00.000
3  00005. 00006. 00006.
4  000.29 000.33 000.41
5  242.55 242.90 243.05

   10:20:00  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF    ********

********  ON     ********
********  RUN    ********
   10:25:49  11/17/00

********  STOP   ********
   10:26:25  11/17/00
Run statistics   N=00007
     Min     Avg     Max
1  00.053 00.096 00.135
2  06.952 07.014 07.060
3  01523. 01551. 01583.
4  086.02 086.46 086.97
5  061.70 072.84 082.25

   10:26:27  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF    ********

********  ON     ********
********  RUN    ********
   10:43:44  11/17/00

********  STOP   ********
   11:50:06  11/17/00
Run statistics   N=00796
     Min     Avg     Max
1  08.545 09.508 10.953
2  06.406 07.300 07.790
3  00556. 01834. 05322.
4  025.75 051.21 076.13
5  015.95 110.14 435.75

   11:50:07  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF    ********

********  ON     ********
********  RUN    ********
   11:57:17  11/17/00

********  STOP   ********
   11:57:48  11/17/00
Run statistics   N=00006
     Min     Avg     Max
1  19.960 19.992 20.025
2 -00.103-00.095-00.080
3  02933. 02943. 02949.
4  000.86 000.91 001.02
5 -000.10 000.14 000.30

   11:57:49  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF    ********

********  ON     ********
********  RUN    ********
   12:00:59  11/17/00

********  STOP   ********
   12:01:37  11/17/00
Run statistics   N=00007
     Min     Avg     Max
1  14.618 14.638 14.673
2 -00.190-00.145-00.128
3  00235. 00431. 00900.
4  000.03 000.14 000.17
5  249.60 251.64 252.50

   12:01:38  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF    ********

********  ON     ********
********  RUN    ********
   12:02:37  11/17/00

********  STOP   ********
   12:03:19  11/17/00
Run statistics   N=00008
     Min     Avg     Max
1  00.183 00.617 01.560
2 -00.204-00.167-00.132
3  00008. 00014. 00020.
4  073.95 080.31 083.26
5  255.40 255.55 255.75

   12:03:20  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  RUN    ********
   12:03:47  11/17/00

********  STOP   ********
   12:04:09  11/17/00
Run statistics   N=00004
     Min     Avg     Max
1  00.063 00.081 00.103
2 -00.180-00.175-00.172
3  00004. 00006. 00007.
4  083.61 084.02 084.22
5  255.25 255.44 255.70

   12:04:10  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF    ********

********  ON     ********
********  RUN    ********
   12:06:57  11/17/00

********  STOP   ********
   12:07:23  11/17/00
Run statistics   N=00005
     Min     Avg     Max
1  19.543 19.724 19.803
2  13.582 13.617 13.663
3  00003. 00007. 00014.
4  001.11 001.36 001.74
5 -000.15 000.01 000.40
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

```
   12:07:25  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   12:11:02  11/17/00

********  STOP  ********
   12:11:13  11/17/00
Run statistics   N=00002
    Min     Avg     Max
1  19.995 19.996 19.998
2  13.522 13.533 13.544
3  00005. 00006. 00007.
4  000.68 000.73 000.77
5  000.00 000.18 000.35

   12:11:14  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   12:15:33  11/17/00

********  STOP  ********
   12:16:05  11/17/00
Run statistics   N=00006
    Min     Avg     Max
1  19.998 20.053 20.078
2  00.072 00.093 00.122
3  00005. 00012. 00015.
4  000.46 000.53 000.60
5  243.90 244.21 244.80

   12:16:06  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   12:20:02  11/17/00

********  STOP  ********
   12:20:26  11/17/00
Run statistics   N=00005
    Min     Avg     Max
1  20.102 20.157 20.183
2  14.996 15.094 15.174
3  00004. 00005. 00007.
4  000.30 000.35 000.41
5 -000.10 000.13 000.35

   12:20:27  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   12:39:35  11/17/00

********  STOP  ********
   13:46:31  11/17/00
Run statistics   N=00803
    Min     Avg     Max
1  08.263 09.401 10.760
2  06.950 08.129 08.684
3  00478. 02175. 06537.
4  024.21 058.59 089.13
5  022.30 178.53 676.40

   13:46:33  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   13:53:16  11/17/00

********  STOP  ********
   13:54:01  11/17/00
Run statistics   N=20009
    Min     Avg     Max
1  20.050 20.088 20.130
2  00.354 00.397 00.456
3  02874. 02888. 02900.
4  000.88 000.95 001.04
5  000.00 000.16 000.35

   13:54:03  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   13:57:51  11/17/00

********  STOP  ********
   13:58:36  11/17/00
Run statistics   N=00009
    Min     Avg     Max
1  14.595 14.651 14.698
2  00.282 00.322 00.370
3  00013. 00026. 00040.
4  000.08 000.15 000.23
5  227.05 227.78 228.95

   13:58:37  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  RUN   ********
   13:59:09  11/17/00

********  STOP  ********
   13:59:31  11/17/00
Run statistics   N=00004
    Min     Avg     Max
1  03.195 05.954 08.985
2  00.232 00.298 00.350
3  00010. 00015. 00020.
4  030.73 050.18 067.32
5  228.70 229.25 229.65

   13:59:32  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming

********  OFF   ********

********  ON    ********
********  RUN   ********
   14:01:47  11/17/00

********  STOP  ********
   14:02:19  11/17/00
Run statistics   N=00006
    Min     Avg     Max
1  00.045 00.071 00.108
2  15.042 15.138 15.236
3  00004. 00006. 00008.
4  086.69 087.04 087.39
5 -000.10 002.27 004.00

   14:02:21  11/17/00
RUN  starts logging
STOP stops logging
PROG starts programming
```

CONTINUOUS MONITORING DATA LOGGER PRINTOUTS

APPENDIX E

BOILER OPERATING PARAMETERS

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/13/00
RUN NUMBER:	1-P

BEGIN INTEGRATOR TIME:	11:27 AM
END INTERGRATOR TIME:	12:43 PM
TOTAL TIME:	1:16
TOTAL MINUTES:	76
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	95482
STEAM INTEGRATOR FINAL READING:	95760
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	219474
FEEDWATER:	
TEMPERATURE (F):	280.0
PRESSURE (psia):	961.3
ENTHALPY (BTU/lb):	220.5
STEAM:	
TEMPERATURE (F):	787.7
PRESSURE (psia):	642.5
ENTHALPY (BTU/lb):	1399.8
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	470.6
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	470.6
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	70.59
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/13/00
RUN NUMBER:	2-P

BEGIN INTEGRATOR TIME:	1:41 PM
END INTERGRATOR TIME:	2:56 PM
TOTAL TIME:	1:15
TOTAL MINUTES:	75
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	95974
STEAM INTEGRATOR FINAL READING:	96246
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	217600
FEEDWATER:	
TEMPERATURE (F):	250.0
PRESSURE (psia):	948.3
ENTHALPY (BTU/lb):	220.4
STEAM:	
TEMPERATURE (F):	784.6
PRESSURE (psia):	638.1
ENTHALPY (BTU/lb):	1398.1
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	465.9
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	465.9
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	69.89
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/13/00
RUN NUMBER:	3-P

BEGIN INTEGRATOR TIME:	3:30 PM
END INTERGRATOR TIME:	4:42 PM
TOTAL TIME:	1:12
TOTAL MINUTES:	72
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	96368
STEAM INTEGRATOR FINAL READING:	96634
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	221667
FEEDWATER:	
TEMPERATURE (F):	250.0
PRESSURE (psia):	996.9
ENTHALPY (BTU/lb):	220.5
STEAM:	
TEMPERATURE (F):	784.8
PRESSURE (psia):	635.1
ENTHALPY (BTU/lb):	1398.3
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	474.7
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	474.7
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	71.20
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/14/00
RUN NUMBER:	4-P

BEGIN INTEGRATOR TIME:	8:33 AM
END INTERGRATOR TIME:	9:47 AM
TOTAL TIME:	1:14
TOTAL MINUTES:	74
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	99498
STEAM INTEGRATOR FINAL READING:	99806
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	249730
FEEDWATER:	
TEMPERATURE (F):	250.0
PRESSURE (psia):	1026.5
ENTHALPY (BTU/lb):	220.6
STEAM:	
TEMPERATURE (F):	806.4
PRESSURE (psia):	638.9
ENTHALPY (BTU/lb):	1410.0
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	540.1
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	540.1
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	81.01
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/14/00
RUN NUMBER:	5-P

BEGIN INTEGRATOR TIME:	10:22 AM
END INTERGRATOR TIME:	11:35 AM
TOTAL TIME:	1:13
TOTAL MINUTES:	73
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	99934
STEAM INTEGRATOR FINAL READING:	100224
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	238356
FEEDWATER:	
TEMPERATURE (F):	250.0
PRESSURE (psia):	1029.5
ENTHALPY (BTU/lb):	220.6
STEAM:	
TEMPERATURE (F):	809.2
PRESSURE (psia):	629.7
ENTHALPY (BTU/lb):	1412.3
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	516.5
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	516.5
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	77.47
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/14/00
RUN NUMBER:	6-P

BEGIN INTEGRATOR TIME:	2:05 PM
END INTERGRATOR TIME:	3:18 PM
TOTAL TIME:	1:13
TOTAL MINUTES:	73
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	100819
STEAM INTEGRATOR FINAL READING:	101105
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	235068
FEEDWATER:	
TEMPERATURE (F):	250.0
PRESSURE (psia):	1017.1
ENTHALPY (BTU/lb):	220.6
STEAM:	
TEMPERATURE (F):	810.6
PRESSURE (psia):	637.1
ENTHALPY (BTU/lb):	1412.8
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	509.6
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	509.6
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	76.43
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/15/00
RUN NUMBER:	7-P

BEGIN INTEGRATOR TIME:	8:44 AM
END INTERGRATOR TIME:	9:56 AM
TOTAL TIME:	1:12
TOTAL MINUTES:	72
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	104866
STEAM INTEGRATOR FINAL READING:	105143
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	230833
FEEDWATER:	
TEMPERATURE (F):	250.0
PRESSURE (psia):	997.7
ENTHALPY (BTU/lb):	220.5
STEAM:	
TEMPERATURE (F):	796.8
PRESSURE (psia):	619.1
ENTHALPY (BTU/lb):	1405.8
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	497.5
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	497.5
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	74.62
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/15/00
RUN NUMBER:	8-P

BEGIN INTEGRATOR TIME:	10:34 AM
END INTERGRATOR TIME:	11:47 AM
TOTAL TIME:	1:13
TOTAL MINUTES:	73
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	105295
STEAM INTEGRATOR FINAL READING:	105598
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	249041
FEEDWATER:	
TEMPERATURE (F):	250.0
PRESSURE (psia):	1001.9
ENTHALPY (BTU/lb):	220.5
STEAM:	
TEMPERATURE (F):	817.8
PRESSURE (psia):	619.1
ENTHALPY (BTU/lb):	1417.6
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	542.0
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	542.0
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	81.30
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/15/00
RUN NUMBER:	9-P

BEGIN INTEGRATOR TIME:	1:04 PM
END INTERGRATOR TIME:	2:19 PM
TOTAL TIME:	1:15
TOTAL MINUTES:	75
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	105922
STEAM INTEGRATOR FINAL READING:	106251
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	263200
FEEDWATER:	
TEMPERATURE (F):	250.0
PRESSURE (psia):	1000.7
ENTHALPY (BTU/lb):	200.5
STEAM:	
TEMPERATURE (F):	806.8
PRESSURE (psia):	621.9
ENTHALPY (BTU/lb):	1411.3
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	579.4
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	579.4
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	86.91
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/15/00
RUN NUMBER:	10-P

BEGIN INTEGRATOR TIME:	2:44 PM
END INTERGRATOR TIME:	3:58 PM
TOTAL TIME:	1:14
TOTAL MINUTES:	74
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	106359
STEAM INTEGRATOR FINAL READING:	106657
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	241622
FEEDWATER:	
TEMPERATURE (F):	250.0
PRESSURE (psia):	1007.3
ENTHALPY (BTU/lb):	220.6
STEAM:	
TEMPERATURE (F):	805.4
PRESSURE (psia):	609.1
ENTHALPY (BTU/lb):	1411.1
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	523.0
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	523.0
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	78.45
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/15/00
RUN NUMBER:	11-P

BEGIN INTEGRATOR TIME:	4:31 PM
END INTERGRATOR TIME:	5:44 PM
TOTAL TIME:	1:13
TOTAL MINUTES:	73
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	106795
STEAM INTEGRATOR FINAL READING:	107113
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	261370
FEEDWATER:	
TEMPERATURE (F):	250.0
PRESSURE (psia):	995.9
ENTHALPY (BTU/lb):	220.5
STEAM:	
TEMPERATURE (F):	805.6
PRESSURE (psia):	625.9
ENTHALPY (BTU/lb):	1410.5
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	565.5
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	565.5
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	84.82
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/16/00
RUN NUMBER:	12-P

BEGIN INTEGRATOR TIME:	8:29 AM
END INTERGRATOR TIME:	9:40 AM
TOTAL TIME:	1:11
TOTAL MINUTES:	71
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	110445
STEAM INTEGRATOR FINAL READING:	110761
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	267042
FEEDWATER:	
TEMPERATURE (F):	250.0
PRESSURE (psia):	986.5
ENTHALPY (BTU/lb):	220.5
STEAM:	
TEMPERATURE (F):	811.8
PRESSURE (psia):	650.3
ENTHALPY (BTU/lb):	1412.8
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	578.9
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	578.9
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	86.83
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/16/00
RUN NUMBER:	13-P

BEGIN INTEGRATOR TIME:	10:33 AM
END INTERGRATOR TIME:	11:46 AM
TOTAL TIME:	1:13
TOTAL MINUTES:	73
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	110962
STEAM INTEGRATOR FINAL READING:	111267
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	250685
FEEDWATER:	
TEMPERATURE (F):	250.0
PRESSURE (psia):	978.7
ENTHALPY (BTU/lb):	220.5
STEAM:	
TEMPERATURE (F):	808.6
PRESSURE (psia):	635.9
ENTHALPY (BTU/lb):	1411.7
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	542.9
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	542.9
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	81.44
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/16/00
RUN NUMBER:	14-p

BEGIN INTEGRATOR TIME:	12:17 PM
END INTERGRATOR TIME:	1:30 PM
TOTAL TIME:	1:13
TOTAL MINUTES:	73
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	111396
STEAM INTEGRATOR FINAL READING:	111713
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	260548
FEEDWATER:	
TEMPERATURE (F):	250.0
PRESSURE (psia):	986.1
ENTHALPY (BTU/lb):	220.5
STEAM:	
TEMPERATURE (F):	812.0
PRESSURE (psia):	641.5
ENTHALPY (BTU/lb):	1413.4
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	565.1
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	565.1
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	84.77
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/16/00
RUN NUMBER:	15-p

BEGIN INTEGRATOR TIME:	1:58 PM
END INTERGRATOR TIME:	3:10 PM
TOTAL TIME:	1:12
TOTAL MINUTES:	72
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	111835
STEAM INTEGRATOR FINAL READING:	112138
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	252500
FEEDWATER:	
TEMPERATURE (F):	250.0
PRESSURE (psia):	977.9
ENTHALPY (BTU/lb):	220.5
STEAM:	
TEMPERATURE (F):	810.0
PRESSURE (psia):	636.3
ENTHALPY (BTU/lb):	1412.5
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	547.2
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	547.2
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	82.09
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP.
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/17/00
RUN NUMBER:	1

BEGIN INTEGRATOR TIME:	8:40 AM
END INTERGRATOR TIME:	9:55 AM
TOTAL TIME:	1:15
TOTAL MINUTES:	75
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	116569
STEAM INTEGRATOR FINAL READING:	116892
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	258400
FEEDWATER:	
TEMPERATURE (F):	250.0
PRESSURE (psia):	963.7
ENTHALPY (BTU/lb):	220.5
STEAM:	
TEMPERATURE (F):	803.2
PRESSURE (psia):	640.7
ENTHALPY (BTU/lb):	1408.5
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	558.2
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	558.2
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	83.72
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP.
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/17/00
RUN NUMBER:	2

BEGIN INTEGRATOR TIME:	10:42 AM
END INTERGRATOR TIME:	11:54 AM
TOTAL TIME:	1:12
TOTAL MINUTES:	72
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	117086
STEAM INTEGRATOR FINAL READING:	117394
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	256667
FEEDWATER:	
TEMPERATURE (F):	250.0
PRESSURE (psia):	968.7
ENTHALPY (BTU/lb):	220.5
STEAM:	
TEMPERATURE (F):	804.4
PRESSURE (psia):	639.9
ENTHALPY (BTU/lb):	1409.2
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	554.7
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	554.7
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	83.21
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING and ENGINEERING, INC.
BOILER PARAMETERS and HEAT INPUT CALCULATIONS

COMPANY NAME:	UNITED STATES SUGAR CORP.
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER # 4
DATE:	11/17/00
RUN NUMBER:	3

BEGIN INTEGRATOR TIME:	12:38 PM
END INTERGRATOR TIME:	1:51 PM
TOTAL TIME:	1:13
TOTAL MINUTES:	73
OIL METER INITIAL READING:	0
OIL METER FINAL READING:	0
OIL METER FACTOR:	1
OIL USAGE (gph)	0
STEAM INTEGRATOR INITIAL READING:	117585
STEAM INTEGRATOR FINAL READING:	117904
STEAM INTEGRATOR FACTOR:	1000
STEAM RATE (lbs/Hr)	262192
FEEDWATER:	
TEMPERATURE (F):	250.0
PRESSURE (psia):	964.5
ENTHALPY (BTU/lb):	220.5
STEAM:	
TEMPERATURE (F):	804.4
PRESSURE (psia):	631.5
ENTHALPY (BTU/lb):	1409.6
BOILER EFFICIENCY (percent):	55.0
HEAT INPUT:	
NET STEAM (MMBTU/Hr):	566.9
HEAT INPUT FROM OIL @ 150000 BTU/gal (MMBTU/Hr):	0.0
HEAT INPUT FROM NON-OIL (MMBTU/Hr):	566.9
ALLOWABLE PM EMISSION FROM OIL (lb/MMBTU):	0.10
ALLOWABLE PM EMISSION FROM NON-OIL (lb/MMBTU):	0.15
TOTAL ALLOWABLE PM EMISSION (lb/Hr):	85.03
TOTAL ALLOWABLE PM EMISSION (lb/MMBTU):	0.15

AIR CONSULTING & ENGINEERING, INC.

BOILER OPERATION PARAMETERS

PLANT NAME USSC CLOW — BOILER NUMBER 4

DATE 1113 — RUN NUMBER 1P

STEAM INTEGRATOR FACTOR 1000 — OIL METER FACTOR _____

STEAM (TIME): START 1127 END 1243 — OIL (TIME): START _____ END _____

INITIAL INTEGRATOR 95482 — INITIAL METER _____

FINAL INTEGRATOR 95760 — FINAL METER _____

OPERATOR SIGNATURE _____

	STEAM			FEEDWATER	
TIME	LBS. FLOW	TEMP.	PRESSURE	TEMP.	PRESSURE
11:27	207	778	594	250	999
11:42	219	790	635	250	898
11:57	220	804	647	250	930
12:12	231	785	645	250	1000
12:27	219	788	630	250	915
12:42	227	781	616	250	938
12:57					
					220.5
			1399.8		
AVERAGES:		787.7	627.8	250	946.7

14.7 14.6

SCRUBBER DATA: NO. 1 1252.5 NO. 2 961.3

SCRUBBER (S) PRESSURE DROP _____ / _____

GPM 475 / _____

H20 LEVEL _____ / _____

AIR CONSULTING & ENGINEERING, INC.

BOILER OPERATION PARAMETERS

PLANT NAME USSC CLEW. BOILER NUMBER 4

DATE 11-13-00 RUN NUMBER 2P

STEAM INTEGRATOR FACTOR 1000 OIL METER FACTOR _____

STEAM (TIME): START 1341 END 1456 OIL (TIME): START _____ END _____

INITIAL INTEGRATOR 95974 INITIAL METER _____

FINAL INTEGRATOR 96246 FINAL METER _____

OPERATOR SIGNATURE _____

		STEAM			FEEDWATER	
	TIME	LBS. FLOW	TEMP.	PRESSURE	TEMP.	PRESSURE
1	13:41	234	805	631	250	950
2	13:56	219	784	617	250	921
2	14:11	210	776	612	250	931
2	14:26	210	768	611	250	886
2	14:41	216	790	646	250	980
	14:56					
	AVERAGES:		784.6	623.4	250	933.6

(1398.1)

2204.4

SCRUBBER DATA: NO. 1 623.1 NO. 2 946.3

SCRUBBER (S) PRESSURE DROP 9.5 / _____

GPM _____ / _____

H20 LEVEL _____ / _____

AIR CONSULTING & ENGINEERING, INC.

BOILER OPERATION PARAMETERS

PLANT NAME USIC CLEW. BOILER NUMBER 4

DATE 11-13-00 RUN NUMBER 3P

STEAM INTEGRATOR FACTOR _____ OIL METER FACTOR _____

STEAM (TIME): START 1530 END 1642 OIL (TIME): START _____ END _____

INITIAL INTEGRATOR 96368 INITIAL METER _____

FINAL INTEGRATOR 96634 FINAL METER _____

OPERATOR SIGNATURE _____

		STEAM			FEEDWATER	
	TIME	LBS. FLOW	TEMP.	PRESSURE	TEMP.	PRESSURE
3	2 15:30	240	785	641	250	1030
	2 15:45	221	799	636	250	976
7	2 16:00	210	780	587	250	974
	16:15	240	776	633	250	966
	16:30	238	784	605	250	965
	AVERAGES:	1641	620.4 (1396.3)	250	982.2 (220.5)	

SCRUBBER DATA: NO. 1 14.2 / 4.3 NO. 2 14.7 / 996.9

SCRUBBER (S) PRESSURE DROP _____ / _____

GPM _____ / _____

H20 LEVEL _____ / _____

AIR CONSULTING & ENGINEERING, INC.

BOILER OPERATION PARAMETERS

PLANT NAME USSC CLEWISTON
BOILER NUMBER 4
DATE 11-14-00
RUN NUMBER 4P
STEAM INTEGRATOR FACTOR 1000
OIL METER FACTOR
STEAM (TIME): START 0833 END 0947
OIL (TIME): START END
INITIAL INTEGRATOR 99498
INITIAL METER
FINAL INTEGRATOR 99806
FINAL METER
OPERATOR SIGNATURE

		STEAM			FEEDWATER	
	TIME	LBS. FLOW	TEMP	PRESSURE	TEMP.	PRESSURE
8	0833	273	655	815	250	974
7	0848	248	615	809	250	1039
6	0903	244	608	810	250	1034
7	0918	254	617	803	250	1031
6	0933	256	626	795	250	981
	0948					
				1410		
						220.5
	AVERAGES:		624.2	806.4	250	1011.8

9.4202
11.10 Cc/3

SCRUBBER DATA: NO. 1 NO. 2

SCRUBBER (S) PRESSURE DROP

GPM

H20 LEVEL

AIR CONSULTING & ENGINEERING, INC.

BOILER OPERATION PARAMETERS

PLANT NAME USSC CLAIRTON | BOILER NUMBER 4

DATE 11-14-00 | RUN NUMBER 5P

STEAM INTEGRATOR FACTOR 1000 | OIL METER FACTOR

STEAM (TIME): START 1022 END 1135 | OIL (TIME): START END

INITIAL INTEGRATOR 99934 | INITIAL METER

FINAL INTEGRATOR 100224 | FINAL METER

OPERATOR SIGNATURE

		STEAM				FEEDWATER	
	CO	TIME	LBS. FLOW	TEMP.	PRESSURE	TEMP.	PRESSURE
1	3	1022	250	786	620	250	980
2	1	1037	221	816	616	250	1037
3	2	1052	236	825	632	250	1022
4	5	1107	254	810	602	250	1010
5	7	1122	240	809	605	250	1025
					1412.3		2.20.60
		AVERAGES:	809.2		615.0	250	1014.8

SCRUBBER DATA: NO. 1 14.7 / 29.7 NO. 2 14.7 / 1029.5

SCRUBBER (S) PRESSURE DROP ____ / ____

GPM ____ / ____

H20 LEVEL ____ / ____

AIR CONSULTING & ENGINEERING, INC.

BOILER OPERATION PARAMETERS

PLANT NAME USSC CLEWISTON

BOILER NUMBER 4

DATE 11-15-00

RUN NUMBER 7P 137.2

STEAM INTEGRATOR FACTOR 1000

OIL METER FACTOR

STEAM (TIME): START 0844 END 0956

OIL (TIME): START END

INITIAL INTEGRATOR 104866

INITIAL METER

FINAL INTEGRATOR 105143

FINAL METER

OPERATOR SIGNATURE

	STEAM			FEEDWATER	
TIME	LBS. FLOW	TEMP.	PRESSURE	TEMP.	PRESSURE
8:45	241	797	559	250	1027
9:00	229	801	603	250	1006
9:15	222	792	610	250	1014
9:30	260	792	627	250	912
9:45	238	802	623	250	956
10:00					
			1405.8		
					220.53
	AVERAGES:	796.8	604.4	250	983

14

997.6

SCRUBBER DATA: NO. 1 NO. 2

SCRUBBER (S) PRESSURE DROP /

GPM /

H20 LEVEL /

AIR CONSULTING & ENGINEERING, INC.

BOILER OPERATION PARAMETERS

PLANT NAME USSC CLOW

BOILER NUMBER 8D

DATE 11-15-00

RUN NUMBER 4

STEAM INTEGRATOR FACTOR _____

OIL METER FACTOR _____

STEAM (TIME): START 1034 END 1147

OIL (TIME): START _____ END _____

INITIAL INTEGRATOR 105295

INITIAL METER _____

FINAL INTEGRATOR 105598

FINAL METER _____

OPERATOR SIGNATURE _____

	STEAM			FEEDWATER	
TIME	LBS. FLOW	TEMP.	PRESSURE	TEMP.	PRESSURE
10:35	249	837	601	250	1021
10:50	239	818	589	250	974
11:05	245	806	642	250	985
11:20	257	817	581	250	973
11:35	264	811	609	250	983
11:50					
			1417.6		220.54
	AVERAGES:	817.8	604.4	250	987.2

SCRUBBER DATA: NO. 1 14.6 619.0 NO. 2 14.6 1201.8

SCRUBBER (S) PRESSURE DROP _____ / _____

GPM _____ / _____

H20 LEVEL _____ / _____

AIR CONSULTING & ENGINEERING, INC.

BOILER OPERATION PARAMETERS

PLANT NAME USSC CLAIRTON
BOILER NUMBER 4
DATE 1-15-00
RUN NUMBER 9P
STEAM INTEGRATOR FACTOR 1000
OIL METER FACTOR
STEAM (TIME): START 1304 END 1419
OIL (TIME): START END
INITIAL INTEGRATOR 105922
INITIAL METER
FINAL INTEGRATOR 106251
FINAL METER
OPERATOR SIGNATURE

	STEAM			FEEDWATER	
TIME	LBS. FLOW	TEMP.	PRESSURE	TEMP.	PRESSURE
1:05	254	800	600	250	977
1:20	281	803	600	250	970
1:35	266	818	597	250	1019
1:50	265	805	629	250	979
2:05	271	808	610	250	985
2:20					
			1411.3		200.54
	AVERAGES:	806.8	607.2	250.0	986.0

1-9
16.
19.
28.
22.
29.

14.6 14.6

SCRUBBER DATA: NO. 1 621 8 NO. 2 1003.6

SCRUBBER (S) PRESSURE DROP /

GPM /

H20 LEVEL /

AIR CONSULTING & ENGINEERING, INC.

BOILER OPERATION PARAMETERS

PLANT NAME U&SC Clearwater — BOILER NUMBER 4

DATE 11-15-00 — RUN NUMBER 10P

STEAM INTEGRATOR FACTOR 1000 — OIL METER FACTOR _____

STEAM (TIME): START 1444 END 1558 — OIL (TIME): START _____ END _____

INITIAL INTEGRATOR 106359 — INITIAL METER _____

FINAL INTEGRATOR 106657 — FINAL METER _____

OPERATOR SIGNATURE _____

		STEAM			FEEDWATER	
	TIME	LBS. FLOW	TEMP.	PRESSURE	TEMP.	PRESSURE
8 31	1445	256	804	626	250	970
51.	1500	252	802	610	250	974
94.	1515	250	814	585	250	1008
55.	1530	252	807	540	250	990
3.	1545	223	800	611	250	1021
	16:00					
						220.55
				1411.1		
	AVERAGES:	805.4	594.4		250	992.6

SCRUBBER DATA: NO. 1 14.6 / 9.0 (69) — NO. 2 14.6 / 1007.2

SCRUBBER (S) PRESSURE DROP _____ / _____

GPM _____ / _____

H20 LEVEL _____ / _____

AIR CONSULTING & ENGINEERING, INC.

BOILER OPERATION PARAMETERS

PLANT NAME USSC CLOW
BOILER NUMBER 1 ~~6~~ 4
DATE 11-15-00
RUN NUMBER 11 P
STEAM INTEGRATOR FACTOR 1000
OIL METER FACTOR
STEAM (TIME): START 1631 END 1744
OIL (TIME): START END
INITIAL INTEGRATOR 106795
INITIAL METER
FINAL INTEGRATOR 107113
FINAL METER
OPERATOR SIGNATURE

		STEAM			FEEDWATER	
	TIME	LBS. FLOW	TEMP.	PRESSURE	TEMP.	PRESSURE
10.	4:30	257	803	615	250	965
12.	4:45	254	812	609	250	1023
19.	5:00	272	801	619	250	948
18.	5:15	268	806	616	250	998
11.	5:30	278	806	597	250	973
	5:45					
				1410.5		220.53
	AVERAGES:	805.6	611.2		250.0	981.2

14.6 14.6

SCRUBBER DATA: NO. 1 625.8 NO. 2 995.8
SCRUBBER (S) PRESSURE DROP /
GPM /
H20 LEVEL /

ACE AIR CONSULTING & ENGINEERING, INC.

BOILER OPERATION PARAMETERS

PLANT NAME USSC CLEWISTON
BOILER NUMBER 4
DATE 11-16-00
RUN NUMBER 12P
STEAM INTEGRATOR FACTOR 1000
OIL METER FACTOR
STEAM (TIME): START 0829 END 0943
OIL (TIME): START END
INITIAL INTEGRATOR 110445
INITIAL METER
FINAL INTEGRATOR 110761
FINAL METER
OPERATOR SIGNATURE

	STEAM			FEEDWATER	
TIME	LBS. FLOW	TEMP.	PRESSURE	TEMP.	PRESSURE
8:30	238	808	628	250	978
8:45	266	817	626	250	976
9:00	260	811	633	250	984
9:15	262	812	642	250	979
9:30	257	811	649	250	948
9:45					
10:00					
			1412.8		220.57
	AVERAGES:	811.8	635.6	250.0	971.8

SCRUBBER DATA: NO. 1 14.6 / 150.2 NO. 2 14.6 / 96.4

SCRUBBER (S) PRESSURE DROP ____ / ____

GPM ____ / ____

H20 LEVEL ____ / ____

AIR CONSULTING & ENGINEERING, INC.

BOILER OPERATION PARAMETERS

PLANT NAME USSC CLEWISTON

BOILER NUMBER 4

DATE 11-16-00

RUN NUMBER 13P

STEAM INTEGRATOR FACTOR 1000

OIL METER FACTOR

STEAM (TIME): START 1033 END 1146

OIL (TIME): START END

INITIAL INTEGRATOR 110962

INITIAL METER

FINAL INTEGRATOR 111267

FINAL METER

OPERATOR SIGNATURE

	STEAM			FEEDWATER	
TIME	LBS. FLOW	TEMP.	PRESSURE	TEMP.	PRESSURE
10:35	245	812	644	250	980
10:50	220	784	579	250	938
11:05	261	817	640	250	969
11:20	258	812	619	250	956
11 35	255	818	624	250	977
					220.5
			1411.7		
	AVERAGES:	808.6	621.2	250.0	964.0

SCRUBBER DATA: NO. 1 14.6 / 135.8 NO. 2 14.6 / 978.6

SCRUBBER (S) PRESSURE DROP ____ / ____

GPM ____ / ____

H20 LEVEL ____ / ____

AIR CONSULTING & ENGINEERING, INC.

BOILER OPERATION PARAMETERS

PLANT NAME USSC CLAIRTON | BOILER NUMBER 4

DATE 11-16-00 | RUN NUMBER 14P

STEAM INTEGRATOR FACTOR 1000 | OIL METER FACTOR

STEAM (TIME): START 1217 END 1330 | OIL (TIME): START END

INITIAL INTEGRATOR 11396 | INITIAL METER

FINAL INTEGRATOR 11713 | FINAL METER

OPERATOR SIGNATURE

	STEAM			FEEDWATER	
TIME	LBS. FLOW	TEMP.	PRESSURE	TEMP.	PRESSURE
39. 12:15	253	815	623	250	968
32 12:30	268	805	632	250	956
28 12:45	255	819	630	250	985
21. 13:00	267	811	630	250	970
20. 13:15	272	810	619	250	978
13:30					
			1413.4		220.51
	AVERAGES:	812.0	626.8	250.0	971.4

SCRUBBER DATA: NO. 14.6 / 641.4 NO. 2 14.6 / 986.0

SCRUBBER (S) PRESSURE DROP ____ / ____

GPM ____ / ____

H20 LEVEL ____ / ____

AIR CONSULTING & ENGINEERING, INC.

BOILER OPERATION PARAMETERS

PLANT NAME USSC CLEVELAND
BOILER NUMBER 4
DATE 11-16-00
RUN NUMBER 15P
STEAM INTEGRATOR FACTOR 1000
OIL METER FACTOR
STEAM (TIME): START 1358 END 1510
OIL (TIME): START END
INITIAL INTEGRATOR 111835
INITIAL METER
FINAL INTEGRATOR 112138
FINAL METER
OPERATOR SIGNATURE

		STEAM			FEEDWATER	
	TIME	LBS. FLOW	TEMP.	PRESSURE	TEMP.	PRESSURE
10	14:00	262	819	660	250	968
10	14:15	252	811	604	250	968
12.	14:30	253	812	612	250	968
8.	14:45	262	808	602	250	984
15	15:00	258	800	630	250	928
				1412.5		220.49
	AVERAGES:	810.0	621.6		250.0	963.2

14.6
NO. 1 636.2

14.6
NO. 2 977.8

SCRUBBER DATA:
SCRUBBER (S) PRESSURE DROP ____ / ____
GPM ____ / ____
H20 LEVEL ____ / ____

AIR CONSULTING & ENGINEERING, INC.

BOILER OPERATION PARAMETERS

PLANT NAME USSC CLEVELAND
BOILER NUMBER 4
DATE 11-17-00
RUN NUMBER 1
STEAM INTEGRATOR FACTOR 1000
OIL METER FACTOR
STEAM (TIME): START 0840 END 0955
OIL (TIME): START END
INITIAL INTEGRATOR 116569
INITIAL METER
FINAL INTEGRATOR 116892
FINAL METER
OPERATOR SIGNATURE B.A. BALL

	STEAM			FEEDWATER	
TIME	LBS. FLOW	TEMP.	PRESSURE	TEMP.	PRESSURE
8:40	265	621	799	250	928
8:55	256	606	799	250	939
9:10	254	658	809	250	954
9:25	265	629	807	250	950
9:40	258	606	800	250	988
9:55	262	636	805	250	935
			1408.5		220.47
		640.7			
		14.7			
	AVERAGES:	626.0	803.17	250	949.0

SCRUBBER DATA: NO. 1 / NO. 2

SCRUBBER (S) PRESSURE DROP 10.2 / 10.1

GPM /

H20-LEVEL /

AIR CONSULTING & ENGINEERING, INC.

BOILER OPERATION PARAMETERS

PLANT NAME U.S.S. CHEW #2 (N)
BOILER NUMBER 4
DATE 11-17-00
RUN NUMBER 2
STEAM INTEGRATOR FACTOR 1000
OIL METER FACTOR
STEAM (TIME): START 1042 END 1154
OIL (TIME): START END
INITIAL INTEGRATOR 117086
INITIAL METER
FINAL INTEGRATOR 117394
FINAL METER
OPERATOR SIGNATURE B.A. BALL

	STEAM			FEEDWATER	
TIME	LBS. FLOW	TEMP.	PRESSURE	TEMP.	PRESSURE
10:42	257	811	626	253	962
10:57	256	790	554	258	963
11:12	260	809	646	250	980
11:27	264	809	637	250	963
11:42	266	803	629	250	954
11:57					
					220.48
			1409.8		
			639.8		968.4
			14.6		14.0
	AVERAGES:	804.4	625.2	250.0	954.0

SCRUBBER DATA: NO. 1 (BEGIN) NO. 2 (END)
SCRUBBER (S) PRESSURE DROP 10.1 : 9.1
GPM :
H20 LEVEL :

AIR CONSULTING & ENGINEERING, INC.

BOILER OPERATION PARAMETERS

PLANT NAME USSC CLEVISTON
BOILER NUMBER 4
DATE 11-17-00
RUN NUMBER 3
STEAM INTEGRATOR FACTOR 1000
OIL METER FACTOR
STEAM (TIME): START 1238 END 1351
OIL (TIME): START END
INITIAL INTEGRATOR 117585
INITIAL METER
FINAL INTEGRATOR 117904
FINAL METER
OPERATOR SIGNATURE B.A. BALL

		STEAM			FEEDWATER	
R CO	TIME	LBS. FLOW	TEMP.	PRESSURE	TEMP.	PRESSURE
21 40.	12:40	270	808	612	250	963
14 8.	12:55	256	798	642	250	915
P 5.	13:10	266	802	609	250	942
5 37.	13:25	271	811	621	250	962
2 17.	13:40	266	803	600	250	967
	13:55					
						220.47
			1409.6			
						964.4
				638.4		
				14.6		14.6
	AVERAGES:		804.4	616.8	250.0	949.8

SCRUBBER DATA: BEGIN END
SCRUBBER (S) PRESSURE DROP 9.3 / 9.3
GPM /
H20 LEVEL /

12:40 | 61 379 13:25 66 380
12:55 | 66 384 13:40 65 387
13:10 | 64 379

AIR CONSULTING AND ENGINEERING, INC.

SCRUBBER WATER DATA

PLANT:	OSSC CLEW. No 4	DATE:	11-17-00
SOURCE:	No 4	RUN:	1
LOCATION:	CLEWISTON, FL.	OPERATOR:	J.A. BACH

TIME	PRESSURE	FLOW GPM	PH		PRESSURE	FLOW GPH	PH
0840	73	403					
0855	60	378					
0910	60	380					
0925	71	384					
0940	68	377					

AIR CONSULTING AND ENGINEERING, INC.

SCRUBBER WATER DATA

PLANT:	USSC CLEWISTON	DATE:	11-17-00
SOURCE:	UNIT 4	RUN:	3
LOCATION:	CLEWISTON, FLORIDA	OPERATOR:	S.A. SALLC

TIME	PRESSURE	FLOW GPM	~~PH~~		PRESSURE	FLOW GPH	PH
10:42	68	382					
10:57	64	375					
11:12	64	377					
11:27	69	392					
10:42	67	397					

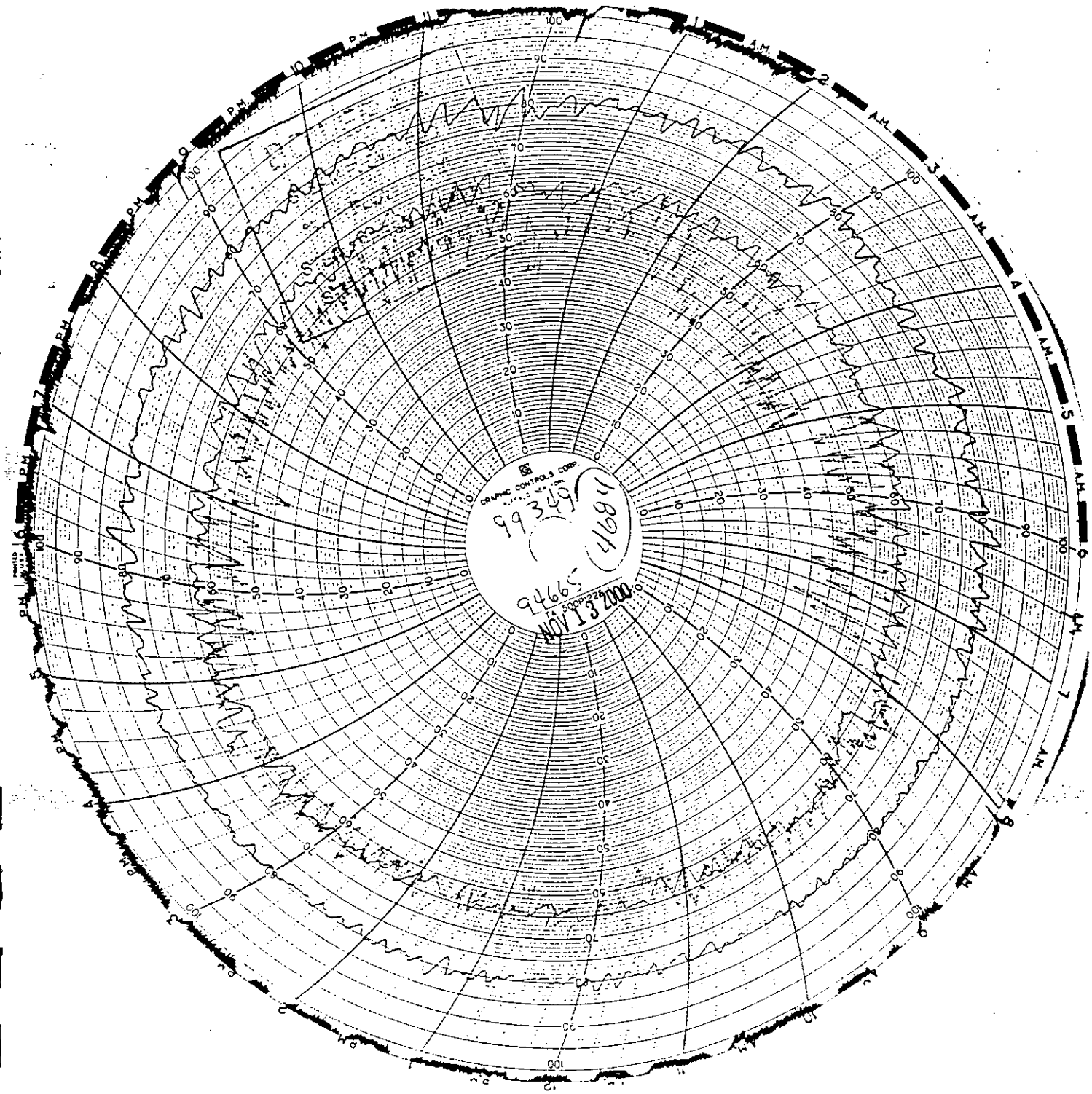
#4 Boiler Compl TEST

Parameters Logged

1 Manometer (8-11 inches)
2 Scrubber water Pressure (40-55 psig)
3 Scrubber water Flow (375 gpm)
4 Steam Temp
5 Steam Press
6 Steam Flow

Pollutants

CO 6.5 lb/mm BTU
NOx 0.20 lbs/mm BTU
PM - 0.15 lb/mm BTU ~~Process~~ - 0.10 lb/mm BTU - 01
VOC (as Propane) 0.50 lb/mm BTU
VE 20%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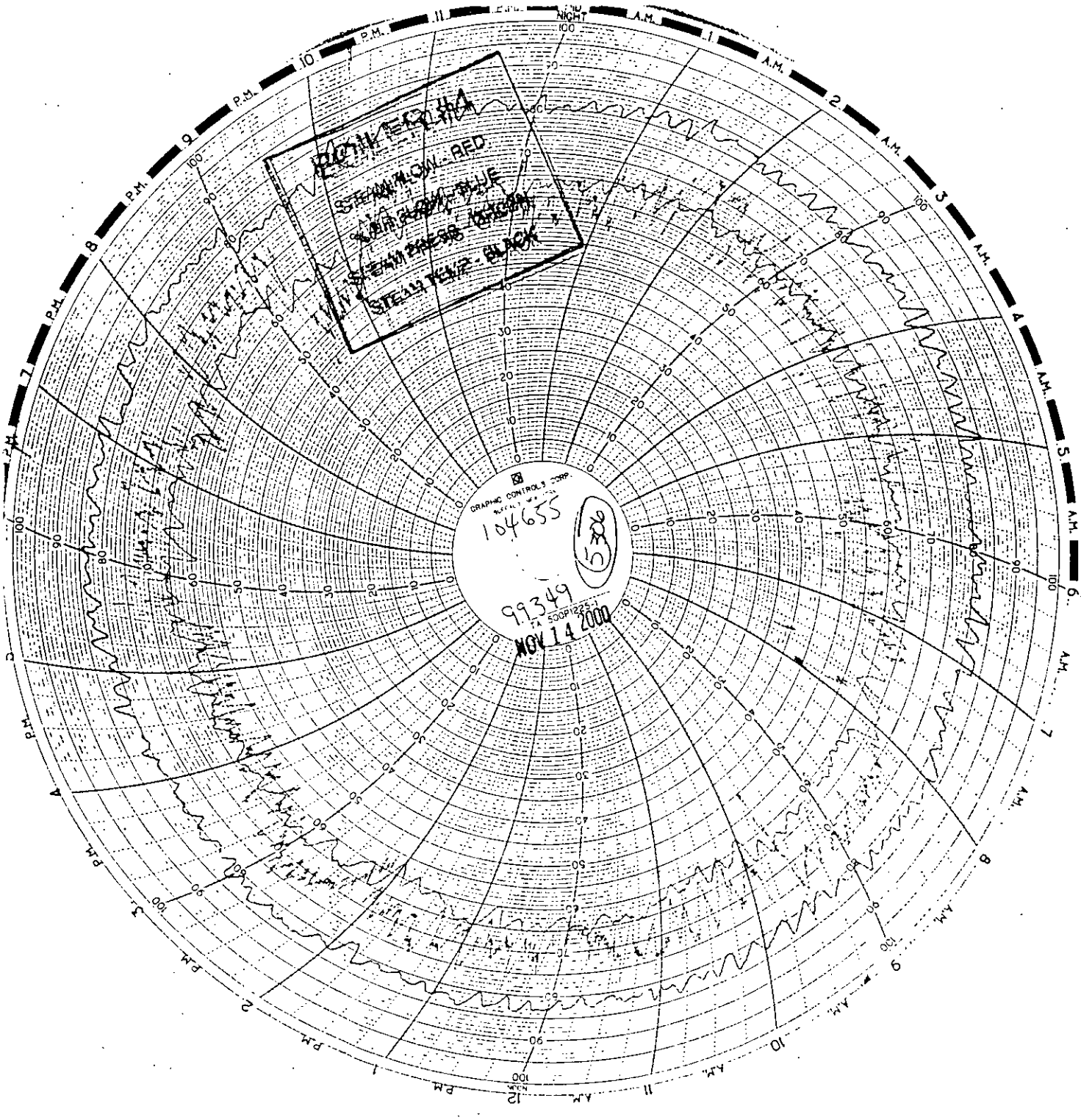
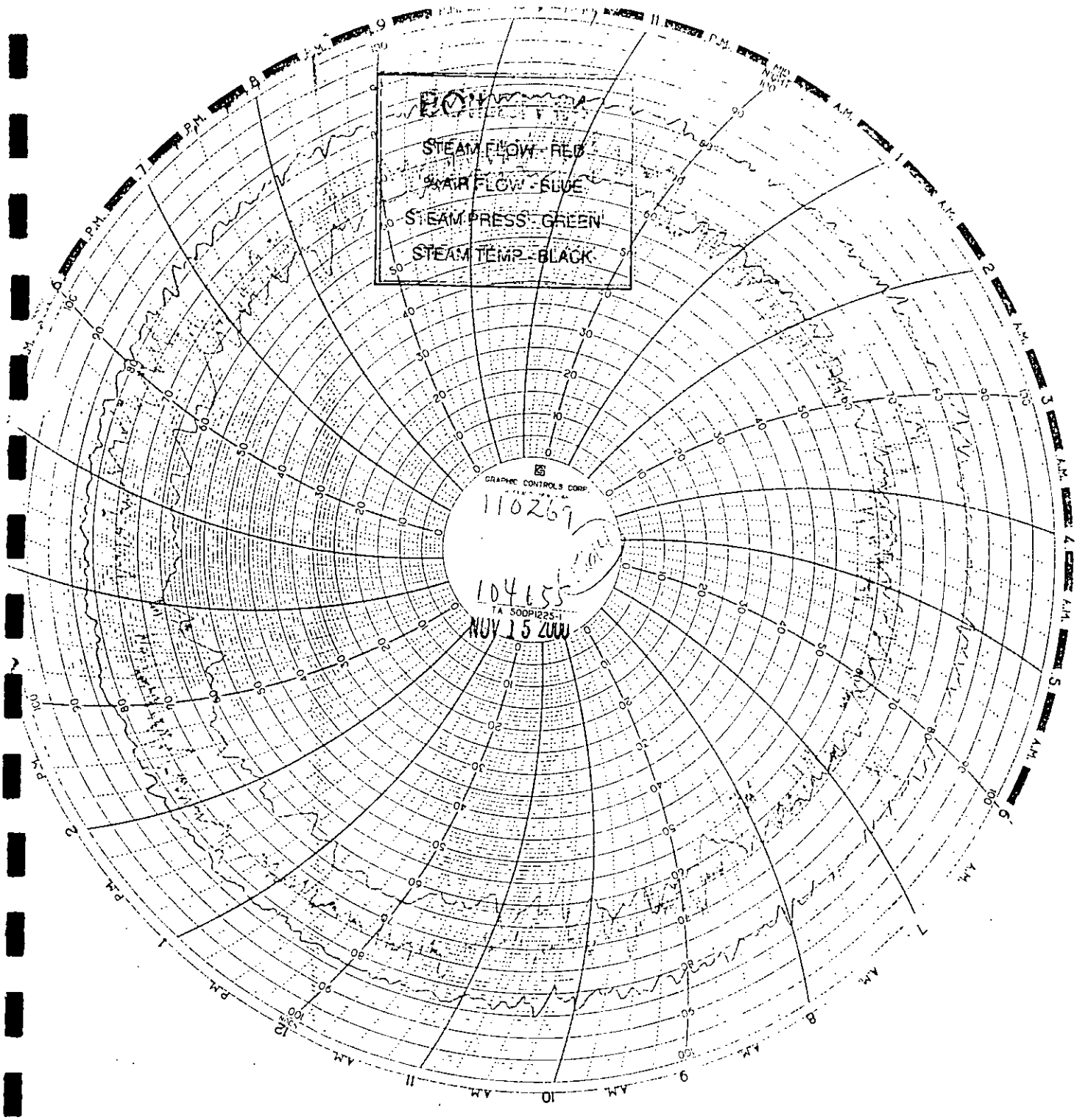
99349
11691
94665
NOV 13 2000


NIGHT
A.M.
P.M.
GRAPHIC CONTROLS CORP.
104655
99349
NOV 14 2000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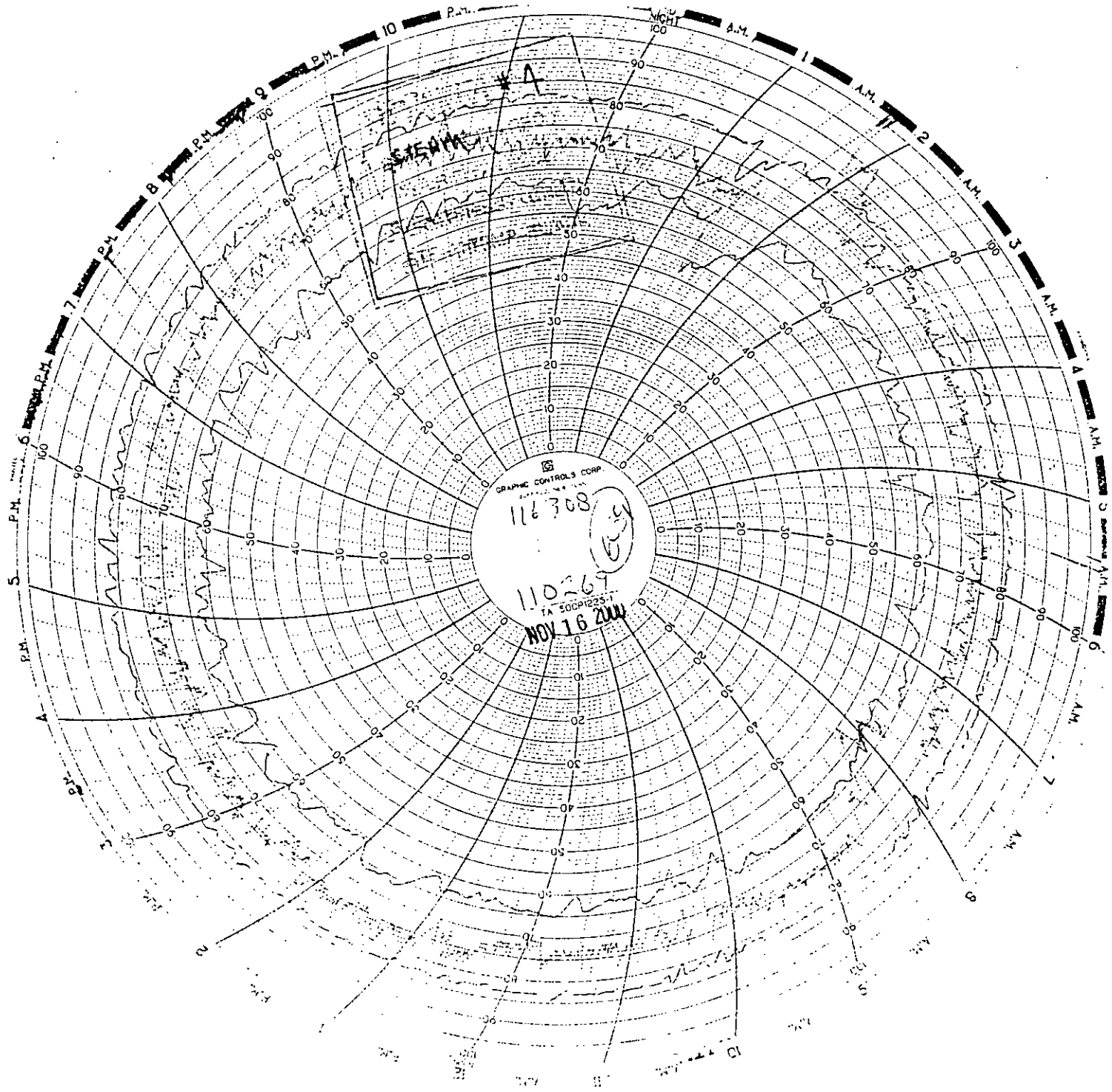
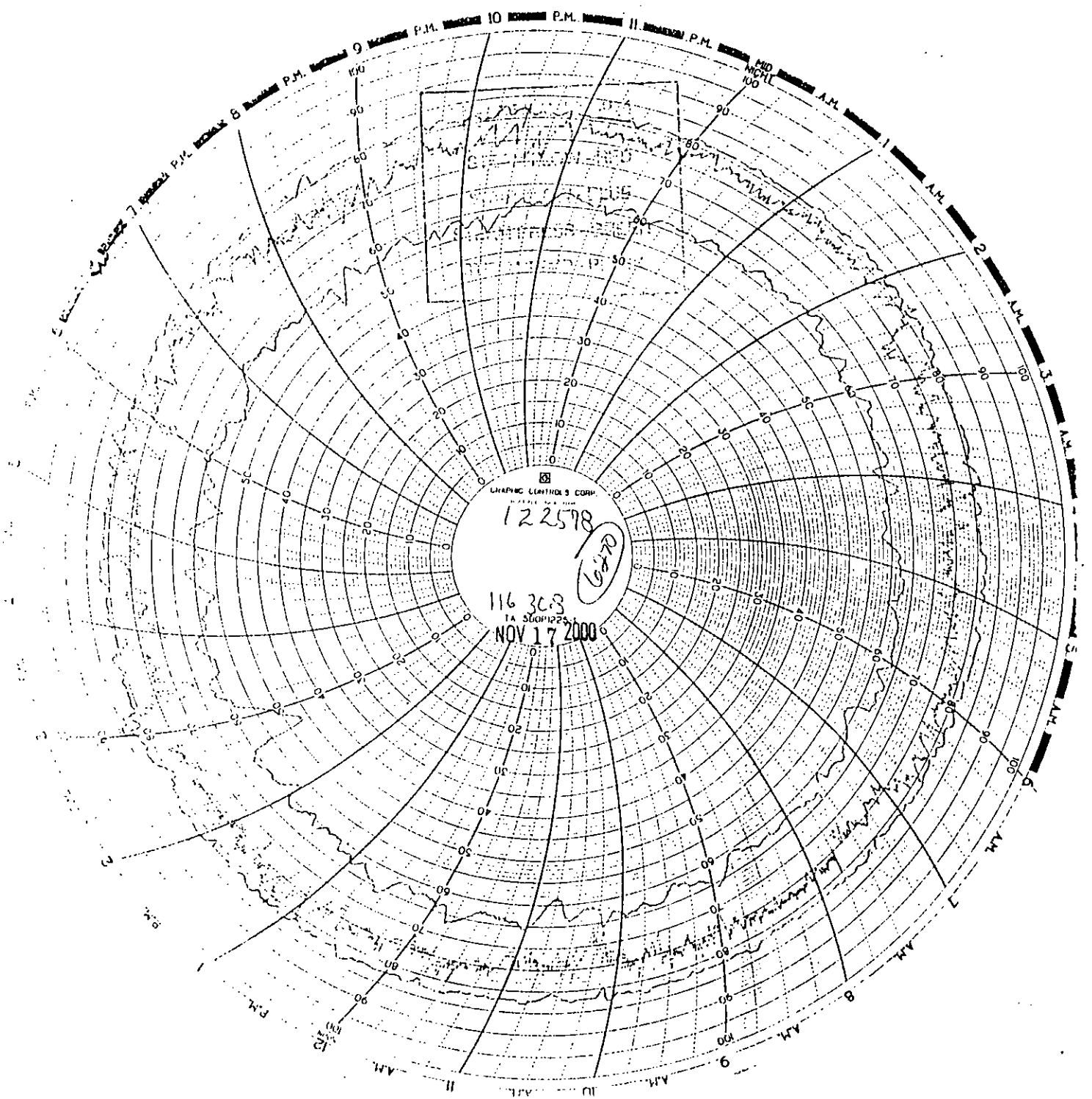
AIR FLOW - BLUE
STEAM PRESS - GREEN
STEAM TEMP - BLACK
GRAPHIC CONTROLS CORP.
110267
104155
TA 500P1225-1
NOV 15 2000


STEAM
#4
GRAPHIC CONTROLS CORP.
114308
110269
TA 50CP1225-1
NOV 16 2000


10 P.M.
11 P.M.
MID NIGHT
A.M.
9 P.M.
8 P.M.
7 P.M.
GRAPHIC CONTROLS CORP.
122578
116 303
TA SUSPISS
NOV 17 2000

APPENDIX F

QUALITY ASSURANCE

DRY GAS METER CALIBRATION STANDARD

Air Consulting and Engineering, Inc. (ACE) uses a Precision Scientific model 63123 wet test meter (Serial Number PS 001105) as its dry gas meter calibration standard. The wet test meter has a one cubic foot per revolution capacity and is verified for accuracy by water displacement annually. The latest verification occurred September 5, 2000.

AIR CONSULTING AND ENGINEERING,INC. — WET TEST METER ANNUAL CALIBRATION

DATE 9-5-00 CALIBRATED BY C. RESHARD WET TEST METER SERIAL NUMBER PSC01105

RANGE OF WET TEST METER FLOW RATE 0-120 (l/min) VOLUME OF TEST FLASK 28.32 (V_s) SATISFACTORY LEAK CHECK? ✓

Ambient Temperature of Equilliberate Liquid In Wet Test Meter and Reservoir 65 (Deg. F)

TEST NUMBER	FINAL VOLUME (V_f), (l)	INITIAL VOLUME (V_i), (l)	TOTAL VOLUME (V_m), b (l)	FLASK VOLUME (V_s), (l)	PERCENT ERROR, c %
1	28.26	0	28.26	28.32	-0.21
2	28.28	0	28.28	28.32	-0.14
3	28.25	0	28.25	28.32	-0.25

CALCULATIONS:

b $V_m = V_f - V_i$.

c % Error = 100 ($V_m - V_s$) / V_s = -0.20 (+/- 1%)

ACE AIR CONSULTING & ENGINEERING, INC.

AIR CONSULTING AND ENGINEERING,INC.

ANNUAL METER CALIBRATION

DATE 10-17-00 CALIBRATED BY C. RESHARD

LEAK CHECK 0.00 CFM at 15 ("Hg)

METER BOX NUMBER 2

BAROMETRIC PRESSURE (" Hg) 30.08

DRY GAS METER TEMPERATURE (F) 70

ASTM GLASS THERMOMETER TEMPERATURE (F) 70

HS	AVERAGE HD	GAS VOLUME, WET TEST METER			GAS VOLUME, DRY GAS METER			TEMP. WET METER (F)	TEMP. DRY METER (F)	TIME (MIIN)	TIMER (MIN)
		INITIAL	FINAL	ACTUAL (FT3)	INITIAL	FINAL	ACTUAL (FT3)				
-0.40	2.0	0.0	5.690	5.690	981.949	987.722	5.773	62	72	7	7
-0.19	0.5	6.259	11.596	5.337	988.303	993.729	5.426	63	73	13	13
-0.52	3.0	12.468	18.446	5.978	994.603	000.656	6.053	63	73	6	6
-0.25	1.0	18.783	23.999	5.216	001.003	006.318	5.315	62	73	9	9
-0.65	4.0	24.981	30.701	5.720	007.304	013.085	5.781	62	73	5	5
-0.33	1.5	31.200	36.810	5.610	013.600	019.321	5.721	62	73	8	8

RESULTS

DELTA H@	SCFM	Y
1.6339	0.8266	0.9996
1.6044	0.4167	1.0012
1.6344	1.0112	0.9992
1.6040	0.5894	0.9996
1.6467	1.1633	1.0005
1.6434	0.7131	0.9976
MEAN: 1.6278		0.9996

ACCEPTABLE? (YES) / NO (CIRCLE) INITIALS [signature] DATE 10/17/00

ACEL AIR COMBUSTION & ENGINEERING, Inc.

AIR CONSULTING AND ENGINEERING,INC.

POST TEST CALIBRATION

DATE 11-27-00 CALIBRATED BY C. RESHARD PLANT U.S. SUGAR-CLEWISTON SOURCE BOILER # 4

METER BOX NUMBER 2

PYROMETER NUMBER ATK-2 THERMOCOUPLE NUMBER 109

LEAK CHECK 0.00 CFM at 15 ("Hg) THERMOCOUPLE TEMP. 150 (F) / ASTM GLASS THERMOMETER 150 (F)

ACE Pb 30.02 ("Hg) / FLIGHT SVCS. Pb 30.02 ("Hg) METER TEMP. 61 (F) / ASTM GLASS THERMOMETER 61 (F)

HS	AVERAGE .HD	GAS VOLUME, WET TEST METER			GAS VOLUME, DRY GAS METER			TEMP. WET METER (F)	TEMP. DRY METER (F)	TIME (MIIN)	MAX. VACUUM ("Hg)
		INITIAL	FINAL	ACTUAL (FT3)	INITIAL	FINAL	ACTUAL (FT3)				
-0.36	1.6	5.070	10.836	5.766	639.802	645.696	5.894	57	62	8	10
-0.36	1.6	10.836	16.592	5.756	645.696	651.558	5.862	57	63	8	10
-0.36	1.6	16.592	22.340	5.748	651.558	657.420	5.862	56	64	8	10

RESULTS

	DELTA H@	SCFM	Y
	1.6654	0.7385	0.9839
	1.6680	0.7373	0.9894
	1.6630	0.7377	0.9919
MEAN:	1.6654		0.9884

PRE TEST "Y" 0.9996

ACCEPTABLE? YES / NO (CIRCLE) INITIALS N.F DATE 11/30/2000

AIR CONSULTING AND ENGINEERING, INC.

PITOT TUBE CALIBRATION

DATE CALIBRATED 10-23-00 CALIBRATED BY B. J. Carter PITOT TUBE NUMBER 103

IS PITOT TUBE ASSEMBLY LEVEL (YES) / NO (circle) ARE PITOT TUBE OPENINGS DAMAGED YES / (NO) (circle)

α_1= 1.0 °(<10°), α_2= 2.5 °(<10°), β_1= 1.5 °(<5°), β_2= 1.0° (<5°)

γ= 2 ° θ= 1 ° A= 1.123 In. = (Pa + Pb)

z = A sinγ = .039 In.; <0.125 In.

w = A sinθ = .020 In.; <0.031 In.

P_a .561 In. P_b .562 In. D_t .375 In.

Was calibration required? YES / (NO) (circle)

THERMOCOUPLE CALIBRATION

SOURCE (SPECIFY)	GLASS THERMOMETER WITH NBS MERCURY (F)	PYROMETER (F)	DEGREE DIFFERENCE	PERCENT DIFFERENCE
ICE BATH	32	32	0	0
AMBIENT	75	75	0	0
HOT OVEN	577	577	0	0

FDEP - MAXIMUM 5 DEGREE DIFFERENCE

EPA - $\left[\frac{\text{(REF. TEMP. F + 460) - (PYROMETER TEMP. F + 460)}}{\text{(REF. TEMP. F + 460)}}\right] \cdot 100 \leq 1.5\%$

ACCEPTABLE? (YES) / NO (CIRCLE) INITIALS _____ DATE 10/23/00

ACE AIR CONSULTING & ENGINEERING, INC.

AIR CONSULTING AND ENGINEERING,INC.

PYROMETER CALIBRATION

DATE 10/26/00 CALIBRATED BY PFB PYROMETER NUMBER Atk-2

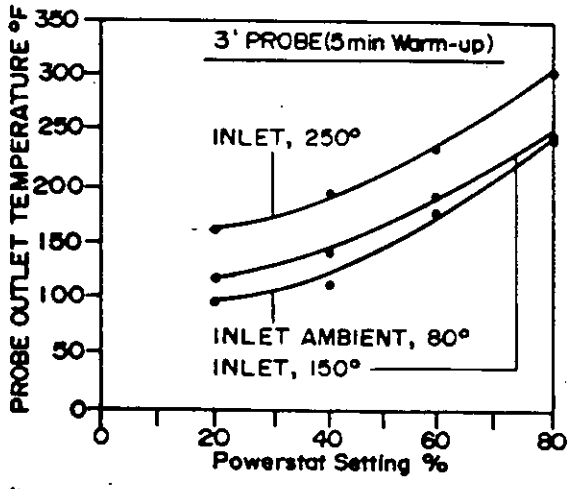
SOURCE (SPECIFY)	GLASS THERMOMETER WITH NBS MERCURY (F)	PYROMETER (F)	DEGREE DIFFERENCE	PERCENT DIFFERENCE
ICE BATH	33	34	1	0.20
AMBIENT	81	82	1	0.18
HOT OVEN	377	380	3	0.36

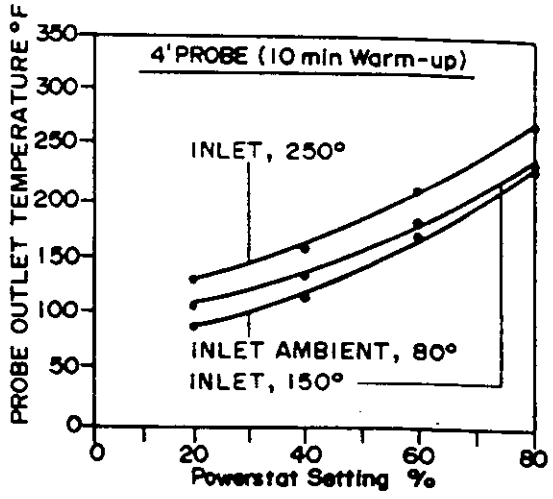
FDEP - MAXIMUM 5 DEGREE DIFFERENCE

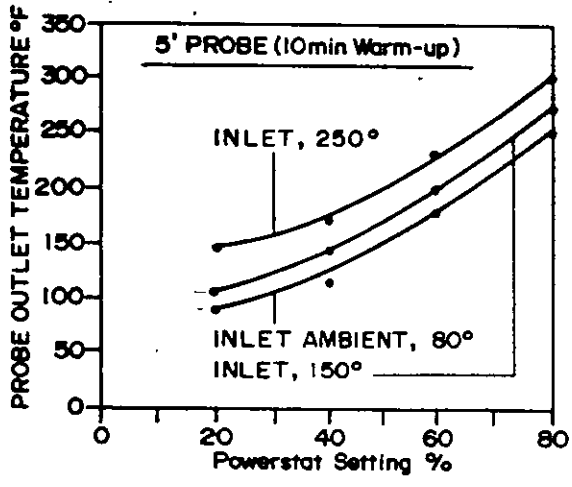
EPA - $\left[\frac{\text{(REF. TEMP. F + 460) - (PYROMETER TEMP. F + 460)}}{\text{(REF. TEMP. F + 460)}}\right] 100 \leq 1.5\%$

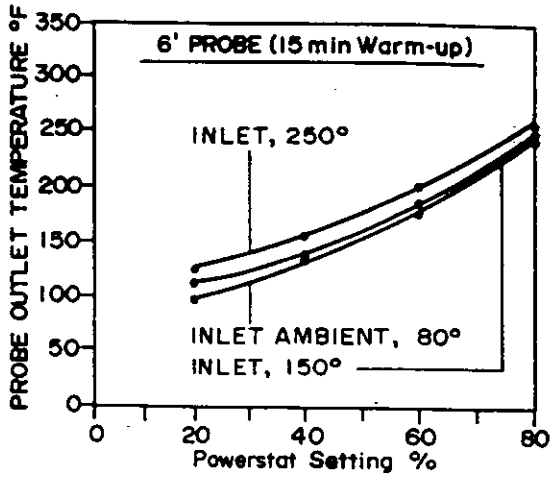
ACCEPTABLE? (YES) / NO (CIRCLE) INITIALS [signature] DATE 10/26/00

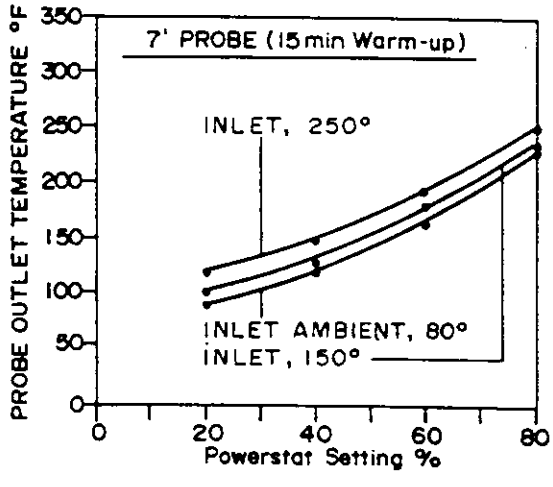
ACEL AIR CONSULTING & ENGINEERING, INC.











NOTE: Flow rate held constant at 0.75; 50% change in flow rate has little effect on probe temperature.

PROBE GRAPH

AIR CONSULTING and ENGINEERING

AIR PRODUCTS AND CHEMICALS, INC.
5837 WEST FIFTH STREET
JACKSONVILLE, FL 32254
TELEPHONE (877) 205-5529

DATE: 07/19/99
TIME: 11:20
PAGE: 1

****
* CERTIFICATE OF ANALYSIS *
****

AIR CONSULTING & ENGINEERING
2106 NORTHWEST 67TH PLACE
SUITE 4
GAINESVILLE FL 32606-

CUSTOMER ACCOUNT : J0978
CUSTOMER ORDER NO : 2118
CUST ORD LINE/REL :
ORDER NO : CSS-240078-01
SHIPPER NUMBER : 854-C-05022

REMARKS : The information provided on this Certificate of Analysis conforms to the requirements of the Purchase Order listed above. In accordance with our internal work instruction A-3, products below are traceable to NIST.

CERTIFIED GAS MIXTURE: CARBON MONOXIDE IN NITROGEN

BAR CODE	CYLINDER NO	VOLUME	COMPONENT REQUESTED	CAS NUMBER	CONCENTRATION REQUESTED	ANALYTICAL RESULT	ANALYTICAL ACCURACY (+/-)	UNIT OF MEASURE	LAB MET
-- BATCH NO. 861-60099		Analysis Date 07/07/99	Chicago Spec Gas						
DBA548	SG865665ALB	141.00 CF	CARBON MONOXIDE	630-08-0	800	791	2%	MOLAR PPM	09
			NITROGEN	7727-37-9		Balance			
DGA656	SG9160788BAL	141.00 CF	CARBON MONOXIDE	630-08-0	800	796	2%	MOLAR PPM	09
			NITROGEN	7727-37-9		Balance			

LIST OF LAB METHODS USED :
09 GC-TCD

CERTIFICATION

THIS ANALYSIS HAS BEEN PERFORMED UTILIZING APPROVED ANALYTICAL METHOD(S) AND IS CORRECT TO WITHIN THE ANALYTICAL ACCURACIES OF THIS (THESE) METHOD(S).

AUTHORIZED SIGNATURE

Airgas Specialty Gases

325 McCausland Court
Cheshire, CT 06410
Phone: (203) 250-6827
FAX: (203) 250-6842

CERTIFICATE OF ANALYSIS

Date: 11/24/97

Record Number: 3480

Customer Name: SOUTHEAST AIRGAS

Purchase Order #: 6536-6

Grade of Product: Certified Standard

Cylinder Number:	Component	Required Concentration	Actual Concentration
CC79220	Carbon Monoxide	3500 ppm	3500 ppm
	Nitrogen	Balance	Balance

Uncertainty Of Analytical Result 2 %

E W R Dosel

Approval Signature

NATIONAL SPECIALTY GASES
630 UNITED DRIVE
DURHAM, NC
27713
(919)544-3772

CERTIFICATE OF ANALYSIS * EPA PROTOCOL MIXTURES

REFERENCE #:	88-48677	CYLINDER #:	CC67330	CYL. PRESSURE:	2000 PSIG	P.O. #:	4103
EXP. DATE:	8/1/99	LAST ANALYSIS DATE:	8/1/96	CUSTOMER:	CRYOTECH		

METHOD: ANALYZED ACCORDING TO EPA TRACEABILITY PROTOCOL FOR ASSAY AND CERTIFICATION OF GASEOUS CALIBRATION STANDARDS-SEPTEMBER 1993,G-2 THIS STANDARD SHOULD NOT BE USED WHEN ITS GAS PRESSURE IS BELOW 1.0 MEGAPASCALS (150 PSIG).

COMPONENT: CARBON MONOXIDE

STANDARD

SRM #: 1680B
CYL. #: CLM 10009
CONC: 490.4 PPM

INSTRUMENT: ROSEMOUNT NDIR

MODEL #: 880A
SERIAL #: 2000172
LAST CAL.: 7/2/96

MEAN CONC.: 8950 PPM +/- 71.6 PPM

REPLICATE CONC.

DATE: 7/25/96		DATE: 8/1/96	
8930	PPM	8980	PPM
8930	PPM	8980	PPM
8930	PPM	8980	PPM

BALANCE GAS: NITROGEN

REPLICATE DATA						REPLICATE DATA		REPLICATE DATA	
DATE: 7/25/96									
Z	0	R	490	C	490				
R	490	Z	0	C	491				
Z	0	C	491	R	490				
DATE 8/1/96									
Z	0	R	490	C	494				
R	491	Z	0	C	495				
Z	0	C	494	R	490				

Z=ZERO C=CANDIDATE R=REFERENCE

ANALYST: [signature] APPROVED BY: [signature]

ASSAYED AT: NATIONAL SPECIALTY GASES, 630 UNITED DRIVE, DURHAM, NC 27713. (919)544-3772

RATA CLASS

Scott Specialty Gases

Dual-Analyzed Calibration Standard

1750 EAST CLUB BLVD,DURHAM,NC 27704 Phone: 919-220-0803 Fax: 919-220-0808

CERTIFICATE OF ACCURACY: EPA Protocol Gas

Assay Laboratory

SCOTT SPECIALTY GASES
1750 EAST CLUB BLVD
DURHAM,NC 27704

P.O. No.: 2108
Project No.: 12-34454-008

Customer

AIR CONSULTING & ENGRING
STEVE NECK
SUITE #4
2106 NW 67TH PLACE
GAINESVILLE FL 32606

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; Procedure #G1; September, 1997.

Cylinder Number: ALM027189 **Certification Date:** 6/09/99 **Exp. Date:** 6/09/2002

Cylinder Pressure*:** 2000 PSIG

COMPONENT	CERTIFIED CONCENTRATION (Moles)		ANALYTICAL ACCURACY**	TRACEABILITY
CARBON DIOXIDE	4.94	%	+/- 1%	Direct NIST and NMi
OXYGEN	15.1	%	+/- 1%	Direct NIST and NMi
NITROGEN		BALANCE		

* Do not use when cylinder pressure is below 150 psig.

** Analytical accuracy is based on the requirements of EPA Protocol procedure G1, September 1997. Product certified as +/- 1% analytical accuracy is directly traceable to NIST or NMI standards.

REFERENCE STANDARD

TYPE/SRM NO.	EXPIRATION DATE	CYLINDER NUMBER	CONCENTRATION	COMPONENT
NTRM 5000	7/13/01	ALM049023	5.032 %	CARBON DIOXIDE
NTRM 2659	1/02/01	ALM031720	20.72 %	OXYGEN

INSTRUMENTATION

INSTRUMENT/MODEL/SERIAL#	DATE LAST CALIBRATED	ANALYTICAL PRINCIPLE
VARIAN GC/3400/0160-CO2	06/01/99	GC / TCD
VARIAN/3400/16804-O2	06/02/99	GC / TCD

ANALYZER READINGS

(Z = Zero Gas R = Reference Gas T = Test Gas r = Correlation Coefficient)

First Triad Analysis **Second Triad Analysis** **Calibration Curve**

CARBON DIOXIDE

Date:06/09/99	Response Unit:AREA	
Z1 = 0.0000	R1 = 342327	T1 = 335410
R2 = 342678	Z2 = 0.0000	T2 = 336853
Z3 = 0.0000	T3 = 335794	R3 = 342464
Avg. Concentration:	4.940	%

Concentration = A + Bx + Cx2 + Dx3 + Ex4
r = 0.99999
Constants: A = 0.00
B = 1.00 C = 0.00
D = 0.00 E = 0.00

OXYGEN

Date:06/09/99	Response Unit:AREA	
Z1 = 0.0000	R1 = 529147	T1 = 386601
R2 = 530681	Z2 = 0.0000	T2 = 387184
Z3 = 0.0000	T3 = 387746	R3 = 531851
Avg. Concentration:	15.10	%

Concentration = A + Bx + Cx2 + Dx3 + Ex4
r = 0.99999
Constants: A = 0.00
B = 1.00 C = 0.00
D = 0.00 E = 0.00

APPROVED BY: R.M. Becton

R.M. BECTON

Airgas
Specialty Gases
4380 Hamilton Blvd.
Theodore, AL 36582
P.O. Box 190969
Mobile, AL 36619
Phone: (334) 653-2500
FAX: (334) 653-2530

Certificate of Analysis: E.P.A. Protocol Gas Mixture

Cylinder No :	CC114672	Order No.	362199
Cylinder Pressure:	2000 psig	Expiration Date:	11/9/02
Certification Date	11/9/99	Laboratory.	ASG-MOBILE

Reference Standard Information:

Type	Component	Cyl. Number	Concentration
NTRM81675	CARBON DIOXIDE	CC34949	14.08%
NTRM82658	OXYGEN	CC45609	10.08%

Instrumentation:

Instrument/Model/Serial No.	Analytical Principle
SIEMENS ULTRAMAT 5E K3-684	NDIR
SIEMENS OXYMAT 5E KE-904	PARAMAGNETIC

Analytical Methodology does not require correction for analytical interferences.

Certified Concentrations:

Component	Concentration	Accuracy	Procedure
CARBON DIOXIDE	15.03 %	+/-1%	G1
OXYGEN	4.998 %	+/-1%	G1
NITROGEN	BALANCE		

Analytical Results:

1st Component: CARBON DIOXIDE

1st Analysis Date:	11/9/99						
R	14.08	S	15.04	Z	0.000	Conc	15.04 %
S	15.04	Z	0.000	R	14.08	Conc	15.04 %
Z	0.000	R	14.08	S	15.02	Conc	15.02 %
						AVG	15.03 %

2nd Component: OXYGEN

1st Analysis Date:	11/9/99						
R	10.08	S	5.010	Z	0.000	Conc	5.010 %
S	4.990	Z	0.000	R	10.09	Conc	4.985 %
Z	0.000	R	10.08	S	5.000	Conc	5.000 %
						AVG	4.998 %

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed

Do not use cylinder below 150 psig

Approved for Release

RATA CLASS

Scott Specialty Gases

Dual-Analyzed Calibration Standard

1750 EAST CLUB BLVD,DURHAM,NC 27704 Phone: 919-220-0803 Fax: 919-220-0808

CERTIFICATE OF ACCURACY: EPA Protocol Gas

Assay Laboratory

SCOTT SPECIALTY GASES
1750 EAST CLUB BLVD
DURHAM,NC 27704

P.O. No.: 2127
Project No.: 12-36342-018

Customer

AIR CONSULTING & ENGRING
STEVE NECK
SUITE #4
2106 NW 67TH PLACE
GAINESVILLE FL 32606

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; Procedure #G1; September, 1997.

Cylinder Number: ALM019254 **Certification Date:** 10/29/99 **Exp. Date:** 10/28/2002
Cylinder Pressure*:** 2000 PSIG

COMPONENT	CERTIFIED CONCENTRATION (Moles)		ANALYTICAL ACCURACY**	TRACEABILITY
PROPANE	30.5	PPM	+/- 1%	Direct NIST and NMi
AIR		BALANCE		

*** Do not use when cylinder pressure is below 150 psig.

** Analytical accuracy is based on the requirements of EPA Protocal procedure G1, September 1997.
Product certified as +/- 1% analytical accuracy is directly traceable to NIST or NMI standards.

REFERENCE STANDARD

TYPE/SRM NO.	EXPIRATION DATE	CYLINDER NUMBER	CONCENTRATION	COMPONENT
NTRM 1667	8/01/01	ALM012782	49.70 PPM	PROPANE

INSTRUMENTATION

INSTRUMENT/MODEL/SERIAL#	DATE LAST CALIBRATED	ANALYTICAL PRINCIPLE
VARIAN/3400/16804-C3H8	10/08/99	GC / TCD

ANALYZER READINGS

(Z = Zero Gas R = Reference Gas T = Test Gas r = Correlation Coefficient)

First Triad Analysis | Second Triad Analysis | Calibration Curve

PROPANE

Date:10/29/99	Response Unit:ACR	
Z1 = 0.00000	R1 = 54417.00	T1 = 33436.00
R2 = 54547.00	Z2 = 0.00000	T2 = 33453.00
Z3 = 0.00000	T3 = 33488.00	R3 = 54465.00
Avg. Concentration:	30.50	PPM

Concentration = A + Bx + Cx2 + Dx3 + Ex4
r = 0.999990

Constants:	A = 0.000000
B = 1.000000	C = 0.000000
D = 0.000000	E = 0.000000

APPROVED BY: _____
B M BECTON

RATA CLASS

Scott Specialty Gases

Dual-Analyzed Calibration Standard

1750 EAST CLUB BLVD,DURHAM,NC 27704 Phone: 919-220-0803 Fax: 919-220-0808

CERTIFICATE OF ACCURACY: EPA Protocol Gas

Assay Laboratory

SCOTT SPECIALTY GASES
1750 EAST CLUB BLVD
DURHAM,NC 27704

P.O. No.: 2127
Project No.: 12-36342-017

Customer

AIR CONSULTING & ENGRING
STEVE NECK
SUITE #4
2106 NW 67TH PLACE
GAINESVILLE FL 32606

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; Procedure #G1; September, 1997.

Cylinder Number: ALM024751 **Certification Date:** 10/29/99 **Exp. Date:** 10/28/2002
Cylinder Pressure*:** 2000 PSIG

COMPONENT	CERTIFIED CONCENTRATION (Moles)		ANALYTICAL ACCURACY**	TRACEABILITY
PROPANE	51.1	PPM	+/- 1%	Direct NIST and NMi
AIR		BALANCE		

*** Do not use when cylinder pressure is below 150 psig.

** Analytical accuracy is based on the requirements of EPA Protocal procedure G1, September 1997.
Product certified as +/- 1% analytical accuracy is directly traceable to NIST or NMI standards.

REFERENCE STANDARD

TYPE/SRM NO.	EXPIRATION DATE	CYLINDER NUMBER	CONCENTRATION	COMPONENT
NTRM 1667	8/01/01	ALM012782	49.70 PPM	PROPANE

INSTRUMENTATION

INSTRUMENT/MODEL/SERIAL#	DATE LAST CALIBRATED	ANALYTICAL PRINCIPLE
VARIAN/3400/16804-C3H8	10/08/99	GC / TCD

ANALYZER READINGS

(Z = Zero Gas R = Reference Gas T = Test Gas r = Correlation Coefficient)

First Triad Analysis | Second Triad Analysis | Calibration Curve

PROPANE

Date:10/29/99	Response Unit:ACR	
Z1 = 0.00000	R1 = 54417.00	T1 = 55965.00
R2 = 54547.00	Z2 = 0.00000	T2 = 55902.00
Z3 = 0.00000	T3 = 56033.00	R3 = 54465.00
Avg. Concentration	51.10	PPM

Concentration = A + Bx + Cx2 + Dx3 + Ex4	
r = 0.999990	
Constants:	A = 0.000000
B = 1.000000	C = 0.000000
D = 0.000000	E = 0.000000

APPROVED BY: _____
B M BECTON

Airgas
Specialty Gases
5480 Hamilton Blvd.
Theodore, AL 36582
P.O. Box 190969
Mobile, AL 36619
Phone: (334) 653-2500
FAX: (334) 653-2530

Certificate of Analysis: E.P.A. Protocol Gas Mixture

Cylinder No :	CC99401	Order No.	389353
Cylinder Pressure:	2000 PSI	Expiration Date:	4/24/03
Certification Date	4/24/00	Laboratory:	ASG-MOBILE

Reference Standard Information:

Type	Component	Cyl. Number	Concentration
NTRM81669	PROPANE	CC45854	476PPM

Instrumentation:

Instrument/Model/Serial No.	Analytical Principle
HP 5890 GC/2728A12513	FID

Analytical Methodology does not require correction for analytical interferences.

Certified Concentrations:

Component	Concentration	Accuracy	Procedure
PROPANE	244.4 PPM	+/-1%	G1
AIR	Balance		

Analytical Results:

1st Component: PROPANE

1st Analysis Date: 4/24/00

R	93354	S	47913	Z	0	Conc	244.3
S	48014	Z	0	R	93537	Conc	244.3
Z	0	R	93531	S	48043	Conc	244.5
						AVG	244.4

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed.

Do not use cylinder below 150 psig.

Carol Stewart
Approved for Release

Scott Specialty Gases
1750 EAST CLUB BLVD,DURHAM,NC 27704 Phone: 800-772-6889 Fax: 215-766-7226

CERTIFIED MASTER CLASS
Single-Certified Calibration Standard

CERTIFICATE OF ACCURACY: Certified Master Class Calibration Standard

Product Information
Project No.: 12-36342-019
Item No.:
P.O. No.: 2127

Cylinder Number: ALM035200
Cylinder Size: AL
Certification Date: 10/22/1999
Expiration Date: 10/22/2001

Customer

AIR CONSULTING & ENGRING
STEVE NECK
SUITE #4
2106 NW 67TH PLACE
GAINESVILLE, FL 32606

CERTIFIED CONCENTRATION

Component Name	Concentration (Moles)		Accuracy (+/-%)
METHANE	30.	PPM	2
AIR		BALANCE	

TRACEABILITY

Traceable To

NIST

APPROVED BY: G BARTNETT

DATE: 10/6/02

Scott Specialty Gases
1750 EAST CLUB BLVD,DURHAM,NC 27704
Phone: 800-772-6889 Fax: 215-766-7226

CERTIFIED MASTER CLASS
Single-Certified Calibration Standard

CERTIFICATE OF ACCURACY: Certified Master Class Calibration Standard

Product Information
Project No.: 12-36342-020
Item No.:
P.O. No.: 2127

Cylinder Number: AAL18085
Cylinder Size: AL
Certification Date: 10/22/1999
Expiration Date: 10/22/2001

Customer

AIR CONSULTING & ENGRING
STEVE NECK
SUITE #4
2106 NW 67TH PLACE
GAINESVILLE, FL 32606

CERTIFIED CONCENTRATION

Component Name	Concentration (Moles)		Accuracy (+/-%)
METHANE	50.2	PPM	2
AIR		BALANCE	

TRACEABILITY

Traceable To

NIST

APPROVED BY: Steven M McGuire
G BARTNETT

DATE: 10/6/00

Scott Specialty Gases
1750 EAST CLUB BLVD.DURHAM,NC 27704 Phone: 919-220-0803 Fax: 919-220-0808

CERTIFIED MASTER CLASS
Single-Certified Calibration Standard

CERTIFICATE OF ACCURACY: Certified Master Class Calibration Standard

Product Information
Project No.: 12-36342-021
Item No.: 12022712 PAL
P.O. No.: 2127

Cylinder Number: ALM016047
Cylinder Size: AL
Certification Date: 10/22/1999
Expiration Date: 10/22/2000

Customer

AIR CONSULTING & ENGRING
STEVE NECK
SUITE #4
2106 NW 67TH PLACE
GAINESVILLE, FL 32606

CERTIFIED CONCENTRATION

Component Name	Concentration (Moles)		Accuracy (+/-%)
METHANE	85.	PPM	2
AIR		BALANCE	

TRACEABILITY

Traceable To

NIST

APPROVED BY: G BARTNETT

DATE: 10 22 99

Scott Specialty Gases
1750 EAST CLUB BLVD,DURHAM,NC 27704 Phone: 800-772-6889 Fax: 215-766-7226

CERTIFIED MASTER CLASS
Single-Certified Calibration Standard

CERTIFICATE OF ACCURACY: Certified Master Class Calibration Standard

Product Information
Project No.: 12-36342-022
Item No.:
P.O. No.: 2127

Cylinder Number: AAL17249
Cylinder Size: AL
Certification Date: 10/21/1999
Expiration Date: 10/21/2001

Customer

AIR CONSULTING & ENGRING
STEVE NECK
SUITE #4
2106 NW 67TH PLACE
GAINESVILLE, FL 32606

CERTIFIED CONCENTRATION

Component Name	Concentration (Moles)		Accuracy (+/-%)
METHANE	250.	PPM	2
AIR		BALANCE	

TRACEABILITY

Traceable To

NIST

APPROVED BY: G BARTNETT DATE: 10/6/00

APPENDIX G

PROJECT PARTICIPANTS

PROJECT PARTICIPANTS

Air Consulting and Engineering, Inc.

Stephen L. Neck, P.E.
Field Testing

Gregory R. Prows
Field Testing

Charles Reshard
Field Testing
Post Test Calibration

Dagmar Fick
Report Preparation

Gloria Gagich
Document Production

US Sugar Corporation

Don Griffin
Project Manager

Bret Nesbitt
Test Coordinator