TABLE 1. EMISSIONS TEST SUMMARY

Company: DIRECTORS SERVICE, INC.
Source: B & L Systems, Inc.
N20 Series Human Crematory

	Run 1	Run 2	Run 3
Date of Run	3/5/03	3/5/03	3/5/03
Weight of Human Remains (lbs.)	160	155	140
Start Time (24-hr. clock)	1030	1355	1610
End Time (24-hr. clock)	1133	1455	1712
Vol. Dry Gas Sampled Meter Cond. (DCF)	46.971	43.084	42.977
Gas Meter Calibration Factor	0.997	0.997	0.997
Barometric Pressure at Barom. (in. Hg.)	30.01	30.02	30.00
Elev. Diff. Manom. to Barom. (ft.)	0	0	0
Vol. Gas Sampled Std. Cond. (DSCF)	44.572	40.839	40.702
Vol. Liquid Collected Std. Cond. (SCF)	4.894	4.701	4.272
Moisture in Stack Gas (% Vol.)	9.9	10.3	9.5
Molecular Weight Dry Stack Gas	29.29	29.32	29.26
Molecular Weight Wet Stack Gas	28.17	28.15	28.19
Stack Gas Static Press. (in. H2O gauge)	-0.05	-0.05	-0.04
Stack Gas Static Press. (in. Hg. abs.)	30.01	30.02	30.00
Average Square Root Velocity Head	0.204	0.191	0.194
Average Orifice Differential (in. H2O)	1.928	1.621	1.623
Average Gas Meter Temperature (°F)	99.0	99.4	99.5
Average Stack Gas Temperature (°F)	922.6	983.8	963.8
Pitot Tube Coefficient	0.84	0.84	0.84
Stack Gas Vel. Stack Cond. (ft./sec.)	18.78	17.95	18.04
Effective Stack Area (sq. ft.)	1.82	1.82	1.82
Stack Gas Flow Rate Std. Cond. (DSCFM)	706	644	662
Stack Gas Flow Rate Stack Cond. (ACFM)	2,046	1,957	1,966
Net Time of Run (min.)	60	60	60
Nozzle Diameter (in.)	0.598	0.598	0.598
Percent Isokinetic	98.0	98.5	95.6

TABLE 1. EMISSIONS TEST SUMMARY (con't)

Company: DIRECTORS SERVICE, INC.
Source: B & L Systems, Inc.
N20 Series Human Crematory

	Run 1	Run 2	Run 3	
Date of Run	3/5/03	3/5/03	3/5/03	
Weight of Human Remains (lbs.)	160	155	140	
Start Time (24-hr. clock)	1030	1355	1610	
End Time (24-hr. clock)	1133	1455	1712	
Oxygen (%)	15.0	15.0	15.5	
Particulate Collected (mg.)	58.1	87.6	48.5	
				Average
Particulate Emissions (gr./DSCF)	0.020	0.033	0.018	0.024
Particulate Emissions (gr./DSCF @ 7% O2)	0.047	0.077	0.047	0.057
Particulate Emissions (lb./hr.)	0.12	0.18	0.10	0.14
CO Emissions (ppm)	2.92	1.75	7.25	4.0
CO Emissions (ppm @ 7% O2)	6.8	4.1	18.5	9.8
CO Emissions (lb./hr.)	0.009	0.005	0.021	0.012
NOx Emissions (ppm)	131.25	142.5	116.46	130.1
Nox Emissions (ppm @ 7% O2)	306.3	332.5	296.4	311.7
NOx Emissions (lb./hr.)	0.40	0.40	0.34	0.380
VOC Emissions (ppm)	0.21	1.00	1.83	1.0
VOC Emissions (ppm @ 7% O2)	0.5	2.3	4.7	2.5
VOC Emissions (lb./hr.)	0.001	0.003	0.005	0.003
SO_2 Collected (mg)	84.8	11.1	63.4	53.1
SO_2 Emissions (ppm @ 7% O2)	197.9	25.9	161.4	128.4
SO_2 Emissions (lb./hr.)	0.177	0.023	0.136	0.11

Note: Standard conditions 68°F, 29.92 in. Hg

1.0 MMBTU/hr). Emissions are controlled by the afterburner that is preheated and maintained at a minimum operating temperature of 1600°F prior to and during ignition of the primary chamber. Process operational data was provided by facility personnel and is included in the appendix.

4.0 SAMPLING PROCEDURES

4.1 Methods

All sampling was performed using methods currently acceptable to the FDEP. All test methods are contained in Title 40 of the Code of Federal Regulations, Appendix A and are as follows:

Pollutant	EPA Method No.	Title
Particulates	5	Determination of Particulate Emissions from Stationary Sources
Carbon Monoxide	10	Determination of Carbon Monoxide Emissions from Stationary Sources
Oxygen	3B	Gas analysis for the Determination of Emission Rate Correction Factor or Excess Air
Nitrogen Oxides	7E	Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure)
Sulfur Dioxide	6	Determination of Sulfur Dioxide Emissions from Stationary Sources, Section 2.1
Total Hydrocarbons	25A	Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer
Visible Emissions	9	Visual Determination of the Opacity of Emissions from Stationary Sources.

Sulfur dioxide emissions were determined simultaneous with particulates as per Section 6.1 of EPA Method 6.

4.2 Sampling Locations

Locations of the sample ports and stack dimensions are shown in Figure 1. Particulate/SO_2 sampling was accomplished by conducting horizontal traverses through each of two ports located on the stack at a ninety degree angle from one another. Twenty four sample points were chosen in accordance with EPA Method 1 - Sample and Velocity Traverses for Stationary Sources, 40 CFR 60, Appendix A. Carbon monoxide, nitrogen oxides, total hydrocarbon and oxygen sampling were performed from the same sampling ports as the particulate/SO_2 sampling.

4.3 Sampling Trains

The particulate/SO_2 sampling train consisted of a 3 foot Inconnel probe utilizing a one piece quartz glass nozzle and liner, a heated glass fiber filter and four impingers arranged as shown in Figure 2. Flexible tubing was used between the heated filter and the impingers. The first impinger was charged with 100 milliliters of 80% isopropanol, the second and third impingers were each charged with 100 milliliters of a 3% percent hydrogen peroxide solution and the fourth impinger

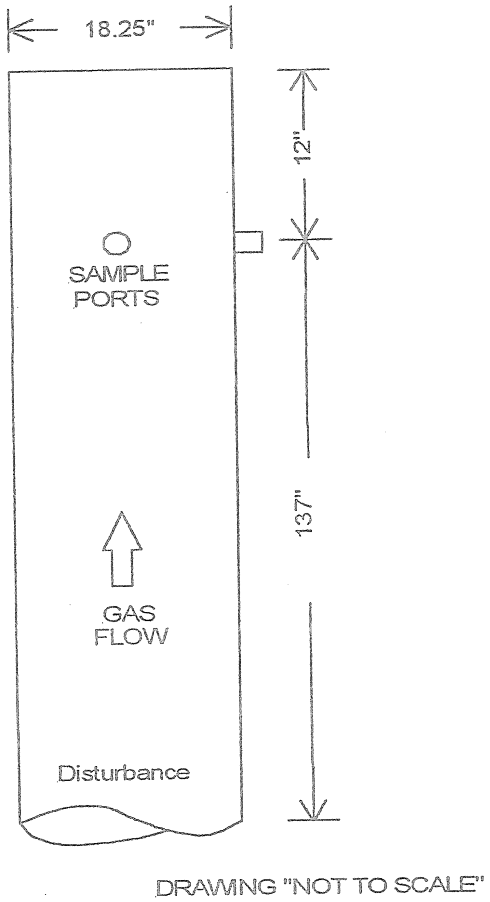


Figure 1. Stack Dimensions and Sample Port Locations, Directors Service, Inc., B&L Systems N20 Series Human Crematory, St. Petersburg, Florida.

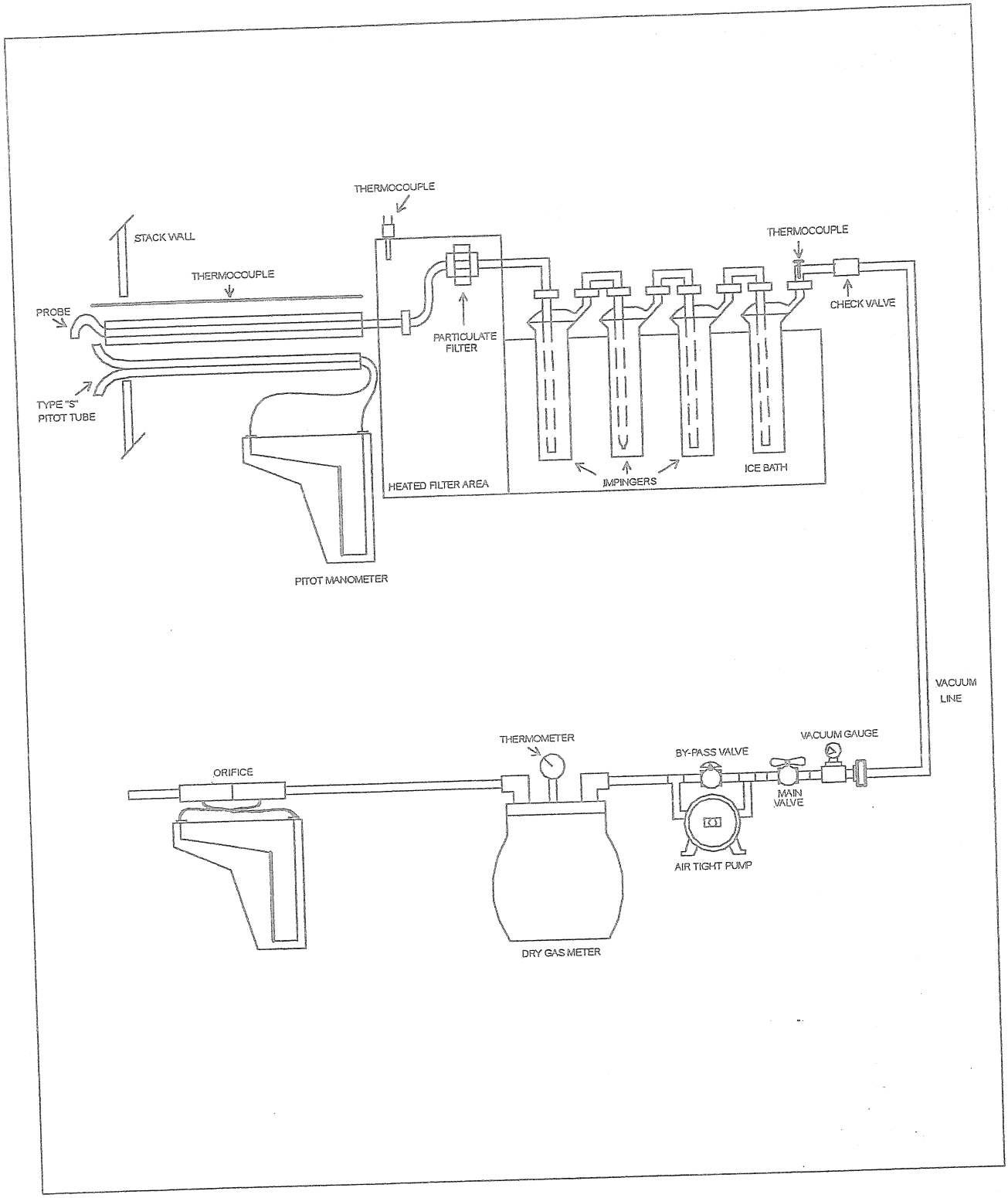


Figure 2. EPA Method 5/6 Sampling Train.

was charged with indicating silica gel desiccant. The impingers were cooled in an ice and water bath during sampling. A Nutech Corporation control console was used to monitor the gas flow rates and stack conditions during sampling.

The carbon monoxide sampling train consisted of a stainless steel probe, teflon sample line, condenser, silica gel and carbon dioxide adsorbent tubes and a Thermo Environmental Instruments, Inc. Model 48 Gas Filter Correlation CO analyzer arranged as shown in Figure 3.

The nitrogen oxides sampling train consisted of a stainless steel probe, teflon sample line, condenser and a Thermo Environmental Instruments, Inc. Model 10S Chemiluminescent NOx analyzer arranged as shown in Figure 4.

The total hydrocarbon sampling train consisted of a stainless steel probe, heated teflon sample line and a California Analytical Inc. Model 300 FID analyzer arranged as shown in Figure 5.

The oxygen sampling train consisted of a probe, sample line, tedlar bag in a rigid container, valve, vacuum pump, and flow meter.

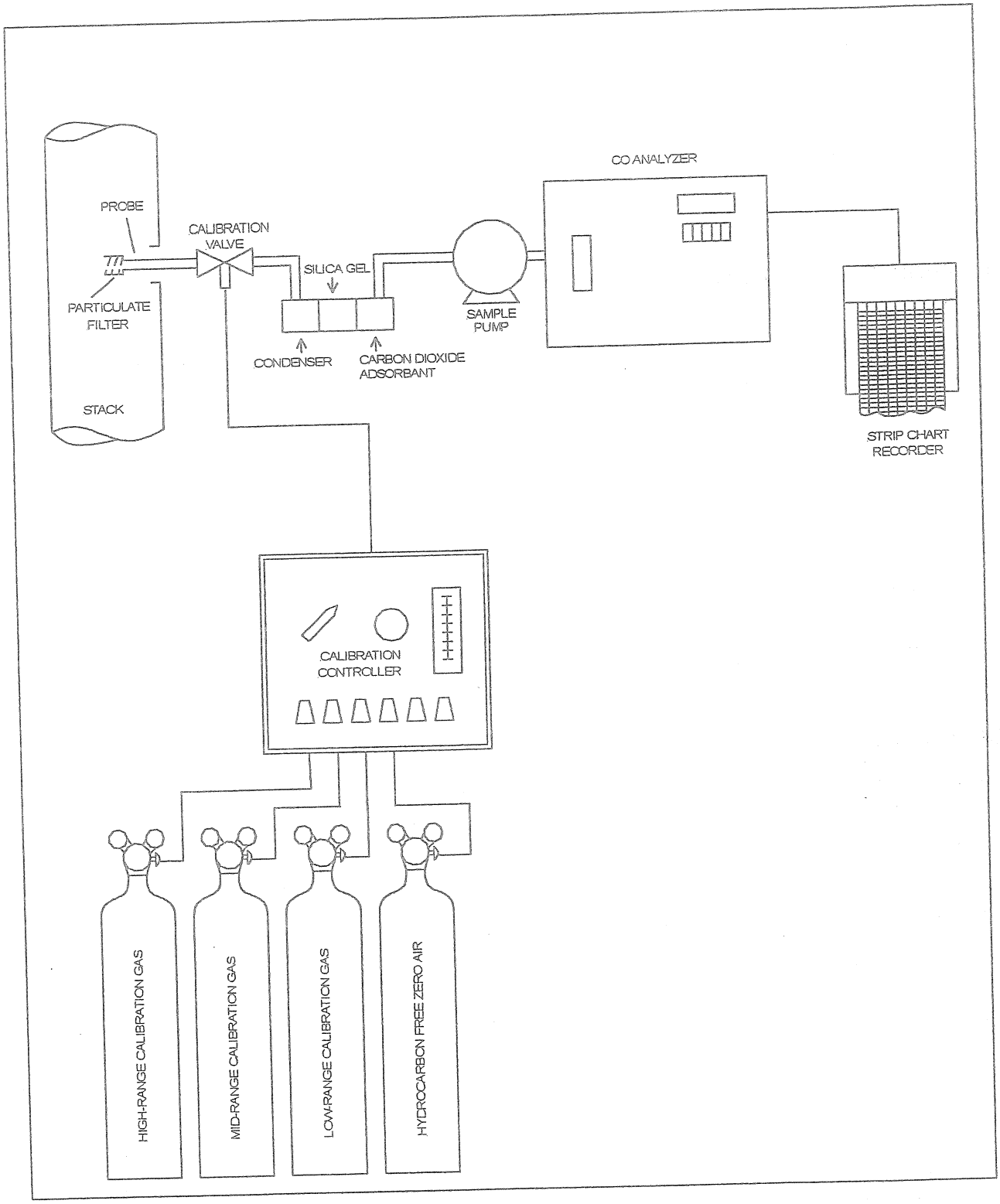


Figure 3. EPA Method 10 Sampling Train.

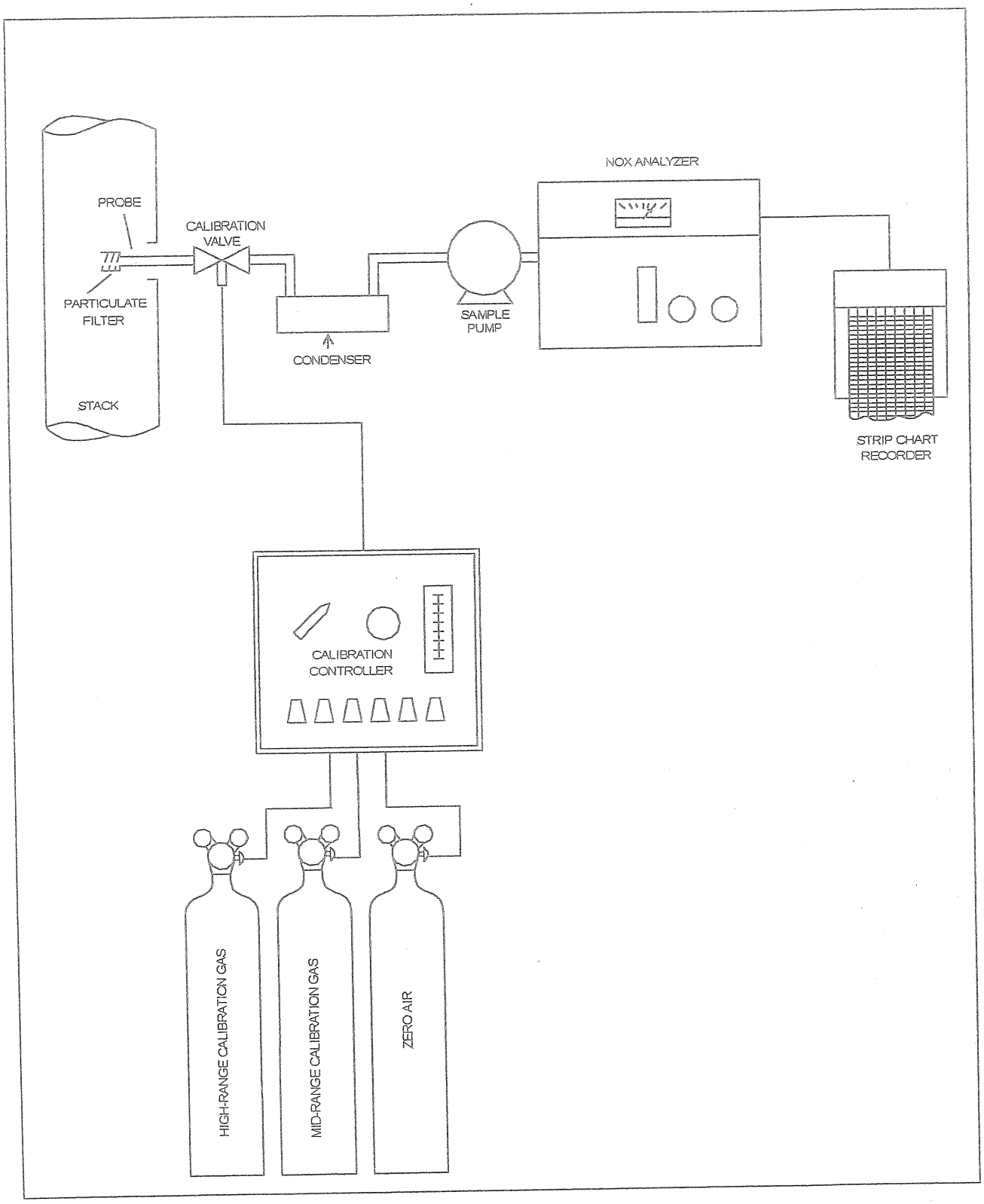


Figure 4. EPA Method 7E Sampling Train

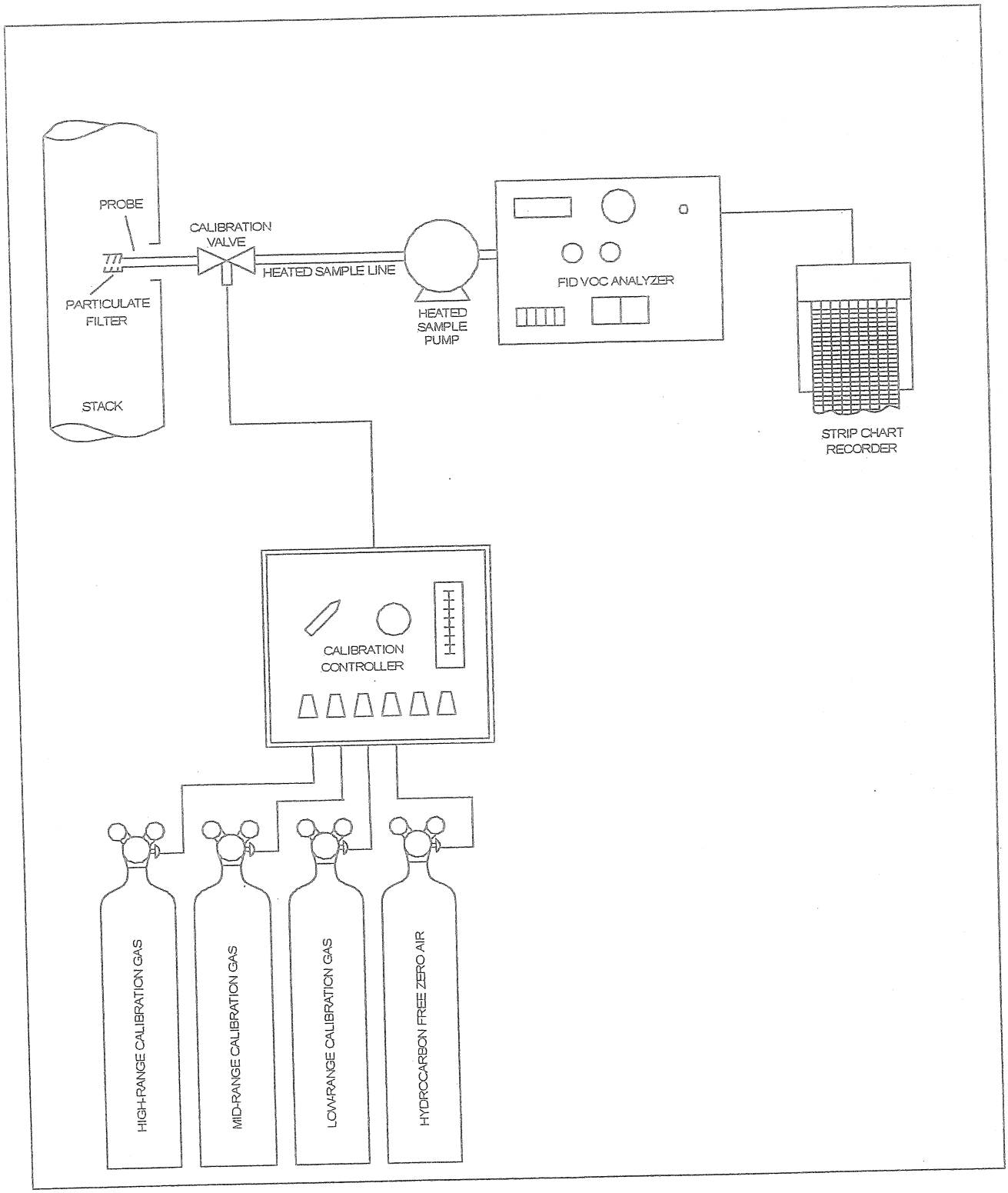


Figure 5. EPA Method 25A Sampling Train

4.4 Sample Collection

Prior to particulate/SO_2 sampling, the pitot tubes were checked for leaks and the manometers were zeroed. A pretest leak check of the sampling train was conducted by sealing the nozzle and applying a 15" Hg vacuum. A leak rate of less than 0.02 cubic feet per minute was considered acceptable. Sample was collected isokinetically for two and one half minutes at each of the points sampled.

All instrumental analyzers were calibrated immediately prior to the beginning and checked after each run by introducing known gases into the instrument through the sampling train.

The tedlar bag used for obtaining an integrated oxygen sample was leak checked prior to the test by pressurizing it to 2 to 4 in. H_2O and allowing it to stand overnight. The bag was considered leak free if it remained inflated. A one hour integrated sample was obtained at a rate 0.5 liters per minute for each run.

All sampling was conducted simultaneously.

4.5 Sample Recovery

A post test leak check of the particulate/SO_2 sampling train was performed at the completion of each run by sealing the nozzle and applying a vacuum equal to or greater than the maximum value reached during the sample period. A leak rate of

less than 0.02 CFM or 4 percent of the average sampling rate (whichever was less) was considered acceptable. The probe was them disconnected, the ice bath was drained and the remaining part of the sampling train was purged by drawing charcoal filtered air through the system for fifteen minutes at the average flow rate used during sampling. The nozzle and probe were then brushed and rinsed with reagent grade acetone and the washings were placed in clean polyethylene containers and sealed. The glass fiber filter was removed from the holder with forceps and placed in a covered petri dish for return to the laboratory. The front half of the filter holder was rinsed with acetone and the washings were added to the nozzle and probe wash. The contents of impingers 1 through 3 were measured volumetrically and the silica gel in the fourth impinger was weighed to the nearest 0.1 gram for determination of moisture content. The 80 percent isopropanol in the first impinger was discarded and the impinger was rinsed with deionized, distilled water. The 3 percent hydrogen peroxide in the second and third impingers was placed in a clean polyethylene sample bottle. The impingers, associated glassware and back half of the filter holder were then rinsed with deionized, distilled water which was added to the sample bottle.

Two calculations of the moisture content of the stack gas were made for each run, one from the impinger analysis and one from the assumption of saturated conditions based upon the average stack gas temperature and a psychrometric chart as described in EPA Method 4, Determination of Moisture Content in Stack Gases, 40 CFR 60, Appendix A. The lower of the two values of moisture content was

considered to be correct and was used in the emissions computations.

5.0 ANALYTICAL PROCEDURE

5.1 Pretest Preparation

The glass fiber filters for the particulate train were numbered, oven dried at 105°C for two to three hours, desiccated and weighed to a constant weight in preparation for the test. Results were recorded to the nearest 0.1 milligram. Filters were loaded into holders and a filter was set aside as a control blank. The impingers were charged as described in section 4.3 and the contents of the fourth impinger were weighed to the nearest 0.1 gram. The 3 percent hydrogen peroxide solution for the sulfur dioxide sampling was prepared the morning of the test from 30 percent reagent grade stock solution.

5.2 Analysis

Upon return to the laboratory, the particulate filters were removed from the containers with forceps, dried at 105°C for two to three hours, desiccated and weighed to a constant weight. Results were recorded to the nearest 0.1 milligram. The probe and nozzle washes and an acetone blank were measured volumetrically and transferred to clean, tared evaporating dishes and evaporated to dryness over low heat. The evaporating dishes were then oven dried at 105°C for two to three hours, desiccated and weighed to a constant weight. Results were recorded to the nearest 0.1 milligram. The total particulate reported is the sum of the filter weight gain and the

weight gain of the evaporating dishes, corrected for the acetone blank. The impinger solutions were analyzed for sulfur dioxide using procedures specified in Section 4.3 of EPA Method 8.

APPENDIX

Project Participants

Certification

Visible Emissions Evaluation

Process Operational Data

Laboratory Data

Field Data Sheets

Analyzer Strip Charts

Calibration Data

Calculations and Symbols

PROJECT PARTICIPANTS AND CERTIFICATION

DIRECTORS SERVICE, INC.
B & L SYSTEMS, INC. N20 SERIES
HUMAN CREMATORY
St. Petersburg, Florida

March 5, 2003

Project Participants:

Byron E. Nelson Kenneth M. Roberts James C. Andrews Travis B. Nelson	Conducted the field testing.
Timothy Gusrang (Director's Service)	Provided process rates.
Kenneth M. Roberts	Performed visible emissions evaluation.
Kenneth M. Roberts	Performed laboratory analyses.
Kenneth M. Roberts Marke S. Gierke	Prepared the final test report.

Certification:

I certify that to my knowledge all data submitted in this report is true and correct.

Byron E. Nelson, CIH

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

1204 North Wheeler Street, Plant City, Florida 33566 (813)752-5014

VISIBLE EMISSIONS EVALUATION

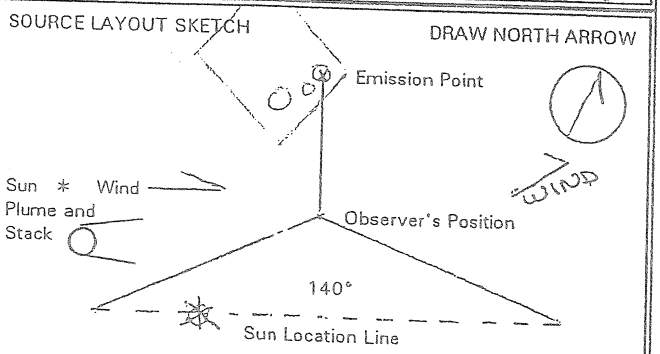
COMPANY: Directors Service, Inc.

UNIT: N20 Series Crematory

ADDRESS: 3121 44th Ave. - North
St. Petersburg, FL 33714

PERMIT NO. 1030035-002-AC	COMPLIANCE? YES ☒ NO ☐
AIRS NO. 1030035	EU NO. 003
PROCESS RATE 155 lb body	PERMITTED RATE ≤ 150 lb Body
PROCESS EQUIPMENT: B&L Systems - N20 Series Crematory	
CONTROL EQUIPMENT: 1600° F Afterburner	
OPERATING MODE: Nat. Gas Fired	AMBIENT TEMP. (°F) START 84° STOP
HEIGHT ABOVE GROUND LEVEL START ~25' STOP ✓	HEIGHT REL. TO OBSERVER START ~25' STOP ✓
DISTANCE FROM OBSERVER START ~180' STOP ✓	DIRECTION FROM OBSERVER START 348° STOP ✓
EMISSION COLOR: None	PLUME TYPE NA CONTIN. ☐ INTERMITTENT ☐
WATER DROPLETS PRESENT NO ☒ YES ☐	IS WATER DROPLET PLUME NA ATTACHED ☐ DETACHED ☐
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START Stack Exit STOP ✓	
DESCRIBE BACKGROUND START Sky STOP ✓	
BACKGROUND COLOR START Blue STOP ✓	SKY CONDITIONS START Scattered STOP ✓
WIND SPEED (MPH) START 4-8 STOP ✓	WIND DIRECTION START SW STOP ✓
AVERAGE OPACITY FOR HIGHEST PERIOD 0%	RANGE OF OPAC. READINGS MIN. 0% MAX. 0%

SOURCE LAYOUT SKETCH — DRAW NORTH ARROW



COMMENTS

OBSERVATION DATE	START TIME	STOP TIME
3/5/03	1400	1500

SEC / MIN	0	15	30	45	SEC / MIN	0	15	30	45
0	0	0	0	0	30	0	0	0	0
1	0	0	0	0	31	0	0	0	0
2	0	0	0	0	32	0	0	0	0
3	0	0	0	0	33	0	0	0	0
4	0	0	0	0	34	0	0	0	0
5	0	0	0	0	35	0	0	0	0
6	0	0	0	0	36	0	0	0	0
7	0	0	0	0	37	0	0	0	0
8	0	0	0	0	38	0	0	0	0
9	0	0	0	0	39	0	0	0	0
10	0	0	0	0	40	0	0	0	0
11	0	0	0	0	41	0	0	0	0
12	0	0	0	0	42	0	0	0	0
13	0	0	0	0	43	0	0	0	0
14	0	0	0	0	44	0	0	0	0
15	0	0	0	0	45	0	0	0	0
16	0	0	0	0	46	0	0	0	0
17	0	0	0	0	47	0	0	0	0
18	0	0	0	0	48	0	0	0	0
19	0	0	0	0	49	0	0	0	0
20	0	0	0	0	50	0	0	0	0
21	0	0	0	0	51	0	0	0	0
22	0	0	0	0	52	0	0	0	0
23	0	0	0	0	53	0	0	0	0
24	0	0	0	0	54	0	0	0	0
25	0	0	0	0	55	0	0	0	0
26	0	0	0	0	56	0	0	0	0
27	0	0	0	0	57	0	0	0	0
28	0	0	0	0	58	0	0	0	0
29	0	0	0	0	59	0	0	0	0

Observer: Ken Roberts

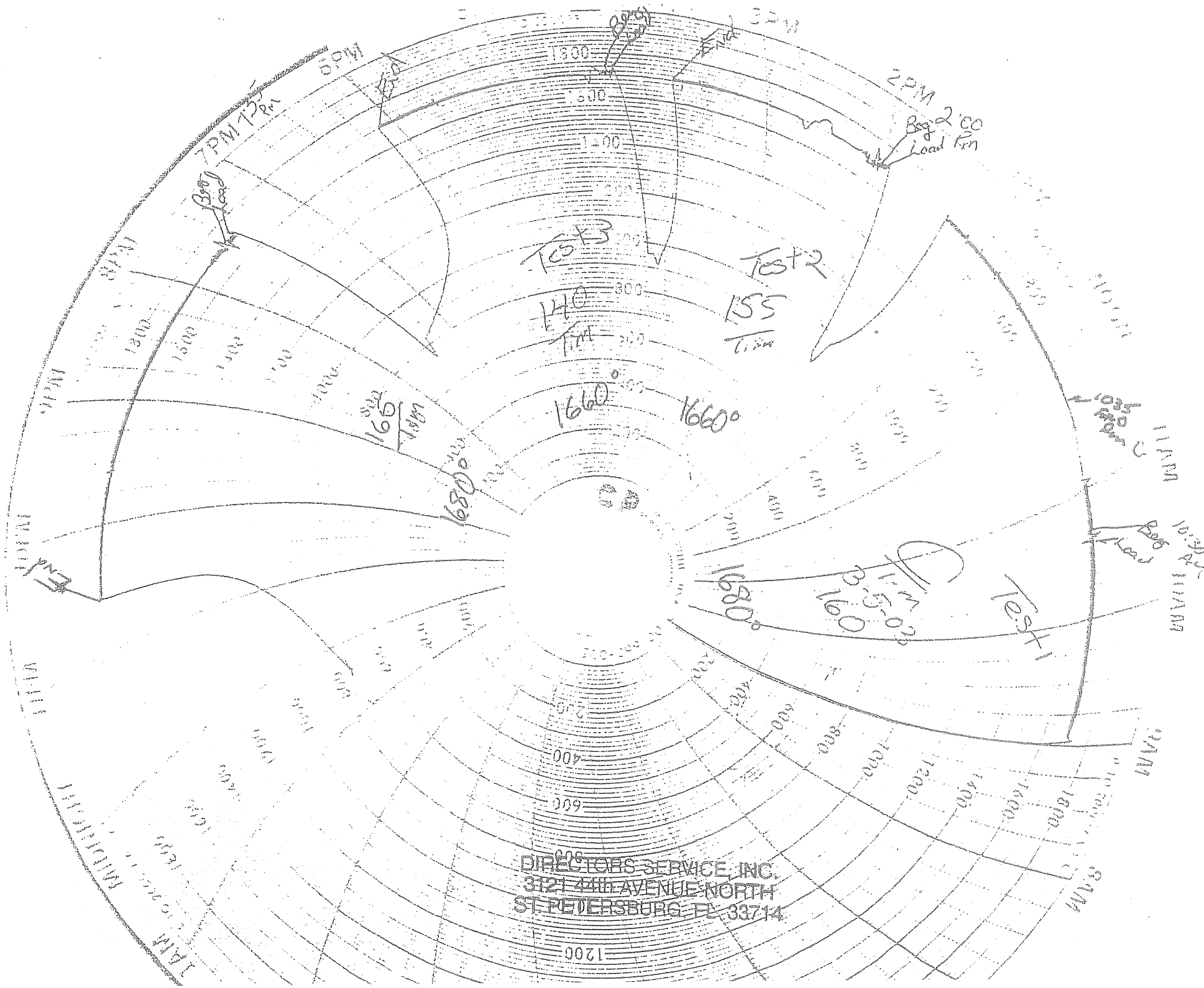
Certified by: FDEP Certified at: Tampa

Date Certified: 3/18/03 Exp. Date: 8/17/03

I certify that all data provided to the person conducting the test was true and correct to the best of my knowledge:

Signature: See Process

Title: Weight Statement



DIRECTORS SERVICE, INC.
3121 44th AVENUE NORTH
ST. PETERSBURG, FL 33714

PROCESS WEIGHT STATEMENT

DATE 3/5/03 SAMPLING TIME : FROM 10:30 A.M. TO 5:30 P.M.

STATEMENT OF PROCESS WEIGHT

COMPANY:	Directors Services, Inc.
MAILING ADDRESS	3121 44th Ave. North
	St. Petersburg, FL 33714
SOURCE IDENTIFICATION	B&L Systems N20 Afcrematory
SOURCE LOCATION	3121 44th Ave. N. St. Petersburg

DATA ON OPERATING CYCLE TIME

START OF OPERATION, TIME		
END OF OPERATION, TIME		
ELAPSED TIME		
IDLE TIME DURING CYCLE		
DESIGN PROCESS RATING	PROCESS WEIGHT RATE (INPUT)	150 lb/hr.
	PRODUCT (OUTPUT)	

DATA ON ACTUAL PROCESS RATE DURING OPERATION CYCLE

MATERIAL	Human remains	RATE	160 lbs (Run 1)
MATERIAL	" "	RATE	155 lbs (Run 2)
MATERIAL	" "	RATE	140 lbs (Run 3)
	AVERAGE PROCESS WEIGHT	RATE	
PRODUCT		RATE	
PRODUCT		RATE	
PRODUCT		RATE	

I certify that the above information is true and correct to the best of my knowledge.

Name (PLEASE PRINT) Tim Gusewaug

Signature Tim Gusewaug

Title Operator

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

PARTICULATE MATTER COLLECTED

Plant: DIRECTORS SERVICE, INC.
Unit No. B & L Systems, Inc. - N20 Series Human Crematory
Test Date: 3/5/03
Analyzed by: KR

Acetone blank container no.	405	Filter blank no.	6639
Acetone blank volume, ml.,(Va)	200	Filter blank tare weight, g.	0.343
Acetone blank final weight, g.	100.5424	Filter blank final weight, g.	0.343
Acetone blank tare weight, g.	100.5423	Filter weight diff., g.	0
Acetone blank weight diff.,g.,(ma)	0.0001		

Run No.	1
Filter No.	6636
Liquid lost during transport, ml.	0
Acetone wash container no.	3
Acetone wash volume, ml. (Vaw)	150
Acetone wash residue, g. (Wa)	0.0001

Container Number	WEIGHT OF PARTICULATE COLLECTED		
	Final Weight	Tare Weight	Weight Gain
1 (Filter)	0.368	0.3403	0.0277
2 (Wash)	98.5728	98.5423	0.0305
		TOTAL	0.0582
		Less acetone blank, g. (Wa)	0.0001
		Weight of particulate matter, g.	0.0581

Run No.	2
Filter No.	6637
Liquid lost during transport, ml.	0
Acetone wash container no.	400
Acetone wash volume, ml. (Vaw)	145
Acetone wash residue, g. (Wa)	0.0001

Container Number	WEIGHT OF PARTICULATE COLLECTED		
	Final Weight	Tare Weight	Weight Gain
1 (Filter)	0.4156	0.3418	0.0738
2 (Wash)	103.396	103.3821	0.0139
		TOTAL	0.0877
		Less acetone blank, g. (Wa)	0.0001
		Weight of particulate matter, g.	0.0876

Run No.	3
Filter No.	6638
Liquid lost during transport, ml.	0
Acetone wash container no.	5
Acetone wash volume, ml. (Vaw)	190
Acetone wash residue, g. (Wa)	0.0001

Container Number	WEIGHT OF PARTICULATE COLLECTED		
	Final Weight	Tare Weight	Weight Gain
1 (Filter)	0.379	0.3428	0.0362
2 (Wash)	103.3169	103.3045	0.0124
		TOTAL	0.0486
		Less acetone blank, g. (Wa)	0.0001
		Weight of particulate matter, g.	0.0485

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

MOISTURE COLLECTED

Plant: Directors Service

Unit: N20
Date: 3/5/03
Run No.: 1

Impinger Number	1	2	3	4	Weighed by:
Final Weight (grams):	105.0	154.0	124.0	278.5	KR
Initial Weight (grams):	100.0	100.0	100.0	257.7	KR
Difference (grams):	5.0	54.0	24.0	20.8	
Total Condensate (grams):				103.8	

Unit: N20
Date: 3/5/03
Run No.: 2

Impinger Number	1	2	3	4	Weighed by:
Final Weight (grams):	112.0	154.0	120.0	246.8	KR
Initial Weight (grams):	100.0	100.0	100.0	233.1	KR
Difference (grams):	12.0	54.0	20.0	13.7	
Total Condensate (grams):				99.7	

Unit: N20
Date: 3/5/03
Run No.: 3

Impinger Number	1	2	3	4	Weighed by:
Final Weight (grams):	100.0	152.0	120.0	271.5	KR
Initial Weight (grams):	100.0	100.0	100.0	252.9	KR
Difference (grams):	0.0	52.0	20.0	18.6	
Total Condensate (grams):				90.6	

SOUTHERN ENVIRONMENTAL SCIENCES, INC.
LABORATORY ANALYSIS REPORT
SULFUR DIOXIDE

For: DIRECTORS SERVICE
Source Name: B&L N20 CREMATORY
Test Date: 05-Mar-03
Lab. Sample Nos.: 1 THROUGH 3

Methodology: All samples were analyzed for SO2 in accordance with EPA Method 6 - Determination of Sulfur Dioxide Emissions From Stationary Sources, 40 CFR 60, Appendix A.

Date Analyzed: 05-Mar-03
Analyst: KEN ROBERTS

Unit	Run No.	Sample No.	Sample Type	Sample Vol.(ml)	Aliquot Size(ml)	Titrant Vol. (ml) 1st	2nd	Avg.	Total mg	
B&L N20	1	IMP 2&3	SO2	500	20	10.7	10.7	10.7	84.8	
B&L N20	2	IMP 2&3	SO2	500	20	1.4	1.4	1.4	11.1	
B&L N20	3	IMP 2&3	SO2	500	20	8	8	8	63.4	
	BLANK					0	0	0	0.0	
										mg/dscm

Note: All results are corrected for the blank.

Barium Perchlorate [Ba(Cl04)2] Standardization:

12.5 ml of 0.0200 N sulfuric acid (H2SO4) in 50 ml of isopropanol required 25.2/25.3 ml (avg.=25.25) ml of Ba(CLO4)2 titrant.

$$\frac{12.5 \text{ ml} \times 0.0200 \text{ N}}{25.25} = 0.00990 \text{ N}$$

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

FIELD DATA SHEET

Company: Directions Services
Source: B&L Systems N20 Crematory
Operator(s): KR/TN/JA

Run Number: 1
Date: 3/5/03
24 hr Time at Start: 1030
24 hr Time at End: 1133
Filter No(s).: 6636
Barometric Pressure ("Hg): ~~30.18~~ 30.01
Elev Diff. Mano. To Barom. (Ft): 0
Ambient Temperature (°F): 75°

Dimensions Dia☒ LxW☐: 18.25"
Static Press. ("H20): -0.05
Meter Box No.: 002
Meter ΔH@: 1.690
Meter Correction Factor: 0.997
Pitot Tube Cp: 0.84
Nozzle ID: Quartz
Nozzle Dia. (Inches): .598
Probe Length/Liner: 3'/Glass

Assumptions
% Moisture: 10
Stack Temp.: 950/850
Meter Temp.: 110
Md/Ms: 105
K Factor: 44.4/47.8

Sample Train Leak Check:
Initial 0.00 CFM @ 15 "Hg
Final 0.008 CFM @ 10 "Hg
Initial Pitot Tube (-) ✓ (+) ✓
Final Pitot Tube (-) ✓ (+) ✓

Moist. Collected:- Imp. No. 1 , Imp. No. 2 & 3 , Imp. No. 4 , Total Filter Tare Wt,

Point No.	Sample Time (min.)	Meter Vol. Vm (ft^3)	Vel. Head ΔP ("H_2O)	Orifice Diff. ΔH ("H_2O)	Stack Temp., Ts (°F)	Meter Temp., Tm (°F)	Hot Box Temp. (°F)	Exit Temp. (°F)	Pump Vacuum ("Hg)	Other
1	0	562.252	.065	2.89	850	89	262	65	7.5	
2	2.5	64.71	.065	2.89	843	91	265	60	7.5	
3	5	67.15	.05	2.39	845	93	251	61	7.0	
4	7.5	69.36	.05	2.39	904	94	256	63	6.5	
5	10	71.52	.025	1.19	926	93	261	62	4.0	
6	12.5	73.05	.03	1.33	936	92	261	62	4.0	
7	15	74.74	.025	1.19	922	91	260	60	4.0	
8	17.5	76.26	.025	1.19	865	91	257	60	4.0	
9	20	77.80	.02	.89	842	91	257	62	4.0	
10	22.5	79.28	.02	.89	803	93	257	62	4.0	
11	25	80.02	.04	1.77	866	95	257	61	5.0	
12	27.5	81.10	.04	1.77	872	97	260	61	5.0	
13	30	84.28	.05	2.22	940	100	250	63	7.0	
14 2	32.5	86.48	.055	2.44	940	101	256	62	7.0	
15 3	35	88.60	.055	2.44	939	103	259	63	7.0	
16 4	37.5	90.95	.045	2.0	1006	104	268	63	7.0	
17 5	40	92.93	.035	1.55	1038	105	269	60	7.0	
18 6	42.5	94.82	.04	1.77	1048	105	269	60	7.0	
19 7	45	96.81	.04	1.77	1045	106	263	62	6.5	
20 8	47.5	~~600.52~~ 98.31	.04	1.77	1000	107	248	62	6.5	
21 9	50	600.50	.05	2.22	950	108	236	62	6.5	
22 10	52.5	602.65	.055	2.44	922	109	246	63	6.5	
23 11	55	604.70	.055	2.44	920	110	240	62	6.0	
24 12	57.5	606.96	.055	2.44	920	109	246	63	6.0	
	60	609.223								

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

FIELD DATA SHEET

Company: Directors Service Inc
Source: N2O AA
Operator(s): KR / TN / JA

Run Number: 2
Date: 3-5-03
24 hr Time at Start: 13:55
24 hr Time at End: 14:55
Filter No(s).: 6637
Barometric Pressure ("Hg): 30.02
Elev Diff. Mano. To Barom. (Ft): 0
Ambient Temperature (°F): 84°

Dimensions Dia☒ LxW☐: 18.25"
Static Press. ("H2O): -0.05
Meter Box No.: 002
Meter ΔH@: 1.690
Meter Correction Factor: 0.997
Pitot Tube Cp: 0.84
Nozzle ID: Quartz
Nozzle Dia. (Inches): 0.598
Probe Length/Liner: 3' / Glass

Assumptions
% Moisture: 10
Stack Temp.: 950/850
Meter Temp.: 100
Md/Ms: 1.04
K Factor: 43.62/46.95

Sample Train Leak Check:
Initial 0.006 CFM @ 15 "Hg
Final 0.006 CFM @ 18 "Hg
Initial Pitot Tube (-) ✓ (+) ✓
Final Pitot Tube (-) ✓ (+) ✓

Moist. Collected:- Imp. No. 1 , Imp. No. 2 & 3 , Imp. No. 4 , Total Filter Tare Wt,

Point No.	Sample Time (min.)	Meter Vol. Vm (ft^3)	Vel. Head ΔP ("H_2O)	Orifice Diff. ΔH ("H_2O)	Stack Temp., Ts (°F)	Meter Temp., Tm (°F)	Hot Box Temp. (°F)	Exit Temp. (°F)	Pump Vacuum ("Hg)	Other
1	0	609.68	.03	1.30	920	89	224	48	4.0	
2	2.5	611.52	.02	.87	927	90	220	48	3.5	
3	5	612.91	.025	1.09	941	90	223	48	4.0	
4	7.5	614.40	.03	1.30	982	90	225	51	4.0	
5	10	615.91	.03	1.30	1022	91	242	55	4.5	
6	12.5	617.50	.03	1.30	1027	91	236	56	4.5	
7	15	619.12	.025	1.09	1031	92	255	57	4.5	
8	17.5	621.63	.03	1.30	1028	93	263	60	4.5	
9	20	622.28	.035	1.52	1034	94	259	61	4.5	
10	22.5	623.92	.025	1.09	956	96	257	61	4.5	
11	25	625.52	.03	1.30	898	97	257	63	4.5	
12	27.5	627.12	.035	1.52	876	98	260	64	4.5	
13 1	30	628.90	.035	1.52	987	99	263	65	6.0	
14 2	32.5	630.73	.045	1.96	1027	101	260	66	6.5	
15	35	632.65	.045	1.96	1018	103	268	66	7.0	
16 4	37.5	634.51	.045	1.96	1014	104	267	67	7.0	
17	40	636.53	.04	1.74	1021	105	270	67	7.0	
18 6	42.5	638.46	.035	1.52	1027	106	266	68	7.5	
19	45	640.31	.04	1.74	1037	107	254	68	7.5	
20 8	47.5	642.21	.045	1.96	1035	108	245	68	8.0	
21	50	644.15	.055	2.39	960	109	246	68	8.0	
22 10	52.5	646.15	.055	2.39	950	110	245	65	9.0	
23	55	648.32	.055	2.39	945	111	247	63	11.0	
24 12	57.5	650.31	.055	2.39	947	112	248	63	11.5	
	60	652.764								

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

FIELD DATA SHEET

Company: Directors Service
Source: N20 AA
Operator(s): KR / TN / JA

Run Number: 3
Date: 3-5-03
24 hr Time at Start: 1610
24 hr Time at End: 1712
Filter No(s).: 6638
Barometric Pressure ("Hg): 30.00
Elev Diff. Mano. To Barom. (Ft): 0
Ambient Temperature (°F): 83

Dimensions Dia☑ LxW☐: 18.25"
Static Press. ("H2O): -0.04
Meter Box No.: 002
Meter ΔH@: 1.690
Meter Correction Factor: 0.997
Pitot Tube Cp: 0.84
Nozzle ID: Quartz
Nozzle Dia. (Inches): 0.548
Probe Length/Liner: 3' / Glass

Assumptions
% Moisture: 10
Stack Temp.: 1000
Meter Temp.: 100
Md/Ms: 1.04
K Factor: 42.13

Sample Train Leak Check:
Initial 0.005 CFM @ 15 "Hg
Final 0.003 CFM @ 10 "Hg
Initial Pitot Tube (-) ✓ (+) ✓
Final Pitot Tube (-) ✓ (+) ✓

Moist. Collected:- Imp. No. 1 , Imp. No. 2 & 3 , Imp. No. 4 , Total Filter Tare Wt,

Point No.	Sample Time (min.)	Meter Vol. Vm (ft^3)	Vel. Head ΔP ("H_2O)	Orifice Diff. ΔH ("H_2O)	Stack Temp., Ts (°F)	Meter Temp., Tm (°F)	Hot Box Temp. (°F)	Exit Temp. (°F)	Pump Vacuum ("Hg)	Other
1	0	653.463	.03	1.26	1009	98	270	64	5.0	
2	2.5	54.99	.025	1.05	1020	98	270	62	5.0	
3	5	656.53	.035	1.47	1048	98	269	57	6.0	
4	7.5	58.22	.035	1.47	1056	98	265	56	6.0	
5	10	59.92	.03	1.26	1055	98	261	56	6.0	
6	12.5	61.60	.035	1.47	1060	100	257	59	6.0	
7	15	63.33	.035	1.47	1000	100	245	61	6.5	
8	17.5	65.03	.04	1.69	945	100	253	62	7.0	
9	20	66.73	.055	2.32	932	100	252	63	7.0	
10	22.5	69.14	.055	2.32	922	100	260	65	7.0	
11	25	71.11	.055	2.32	913	101	265	63	11.0	
12	27.5	73.28	.035	1.47	~~885~~	101	263	62	7.5	
13 1	30	75.33	.025	1.05	1021	99	252	63	6.0	
14 2	32.5	76.68	.025	1.05	1070	99	270	65	6.0	
15 3	35	78.12	.02	.84	1071	99	271	65	6.0	
16 4	37.5	~~80.78~~ 79.45	.02	.84	1075	99	268	64	6.0	
17 5	40	80.78	.025	1.05	1077	99	266	63	6.0	
18 6	42.5	~~82.33~~	.03	1.26	1079	99	266	63	6.0	
19 7	45	83.87	.05	2.10	1079	99	260	62	6.0	
20 8	47.5	85.84	.06	2.53	970	100	262	62	9.0	
21 9	50	87.81	.06	2.53	951	101	262	60	9.0	
22 10	52.5	90.33	.055	2.32	904	101	264	60	9.0	
23 11	55	92.39	.045	1.90	921	101	256	60	8.0	
24 12	57.5	94.44	.045	1.90	924	101	253	61		
	60	696.444								

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

GAS ANALYSIS DATA FORM

Plant Directors Services	
Unit N20	Test No. 1
Date 3/5/03	Sampling Location Stack
Sampling Time (24-hr Clock) 1030 - 1130	
Sample Type: Continuous ☐ Integrated Bag ☒ Grab ☐	
Analytical Method ORSAT	Ambient Temperature 75
Operator K. Roberts	

RUN →	1		2		3		Average Net Volume	Multiplier	Molecular Weight of Stack Gas (Dry Basis) (Md)
GAS ↓	Actual Reading	Net	Actual Reading	Net	Actual Reading	Net			
CO_2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	.44	1.892
O_2 (NET IS ACTUAL O_2 READING MINUS ACTUAL CO_2 READING)	19.3	15.0	19.3	15.0	19.3	15.0	15.0	.32	4.8
CO (NET IS ACTUAL CO READING MINUS ACTUAL O_2 READING)							80.7	.28	22.596
N_2 (NET IS 100 MINUS ACTUAL CO READING)								.28	
								TOTAL	29.29

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

GAS ANALYSIS DATA FORM

Plant Directors Service	
Unit N20 Crematory	Test No. 2
Date 3/5/03	Sampling Location Stack
Sampling Time (24-hr Clock) 1355 - 1455	
Sample Type: Continuous ☐ Integrated Bag ☒ Grab ☐	
Analytical Method Orsat	Ambient Temperature 84 °F
Operator RONelson	

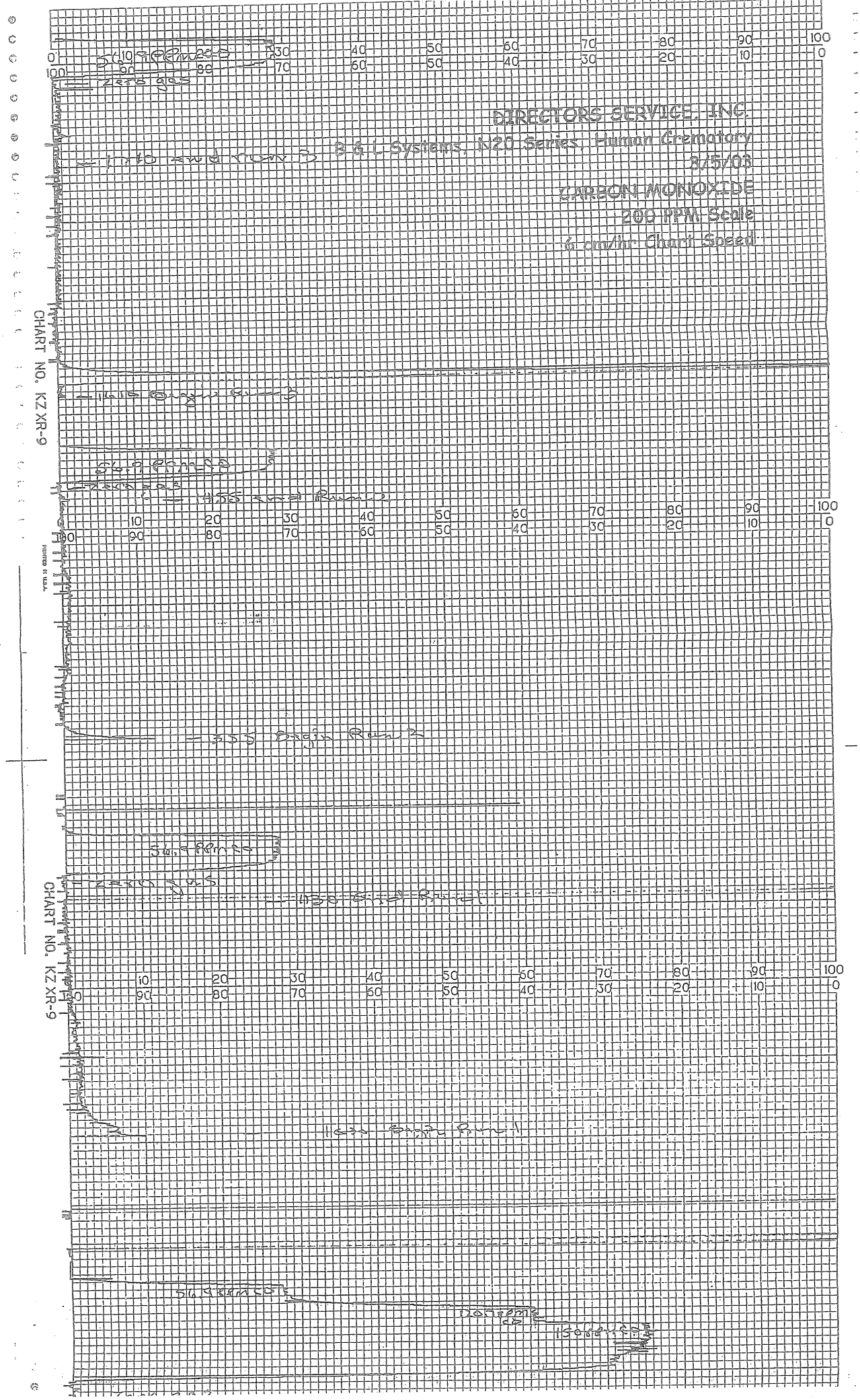
RUN →	1		2		3		Average Net Volume	Multiplier	Molecular Weight of Stack Gas (Dry Basis) (Md)
GAS ↓	Actual Reading	Net	Actual Reading	Net	Actual Reading	Net			
CO_2	4.5	4.0	4.5	4.5	4.5	4.5	4.5	.44	1.98
O_2 (NET IS ACTUAL O_2 READING MINUS ACTUAL CO_2 READING)	19.5	15.0	19.5	15.0	19.5	15.0	15.0	.32	4.8
CO (NET IS ACTUAL CO READING MINUS ACTUAL O_2 READING)							80.5	.28	22.54
N_2 (NET IS 100 MINUS ACTUAL CO READING)								.28	
								TOTAL	29.32

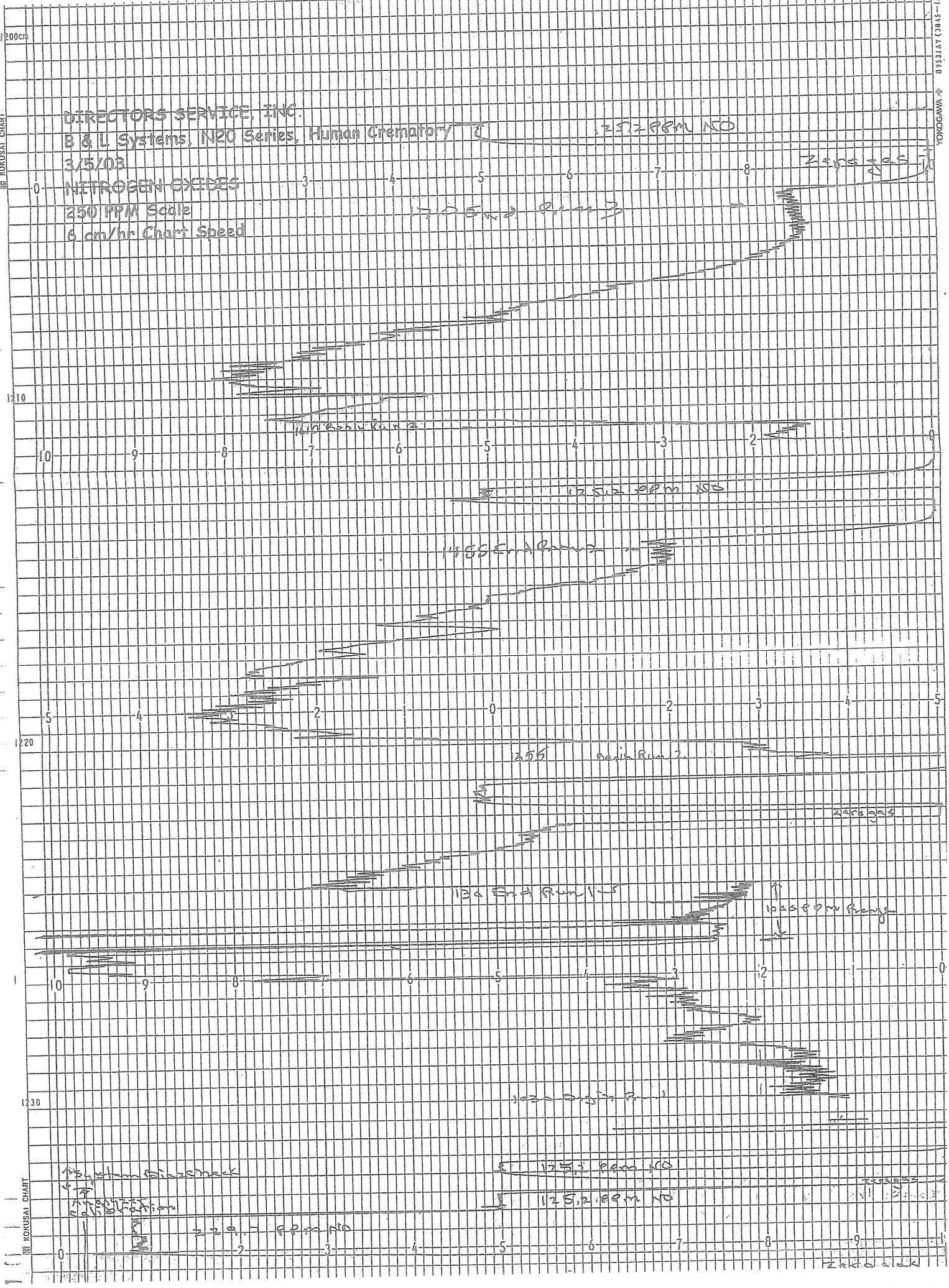
SOUTHERN ENVIRONMENTAL SCIENCES, INC.

GAS ANALYSIS DATA FORM

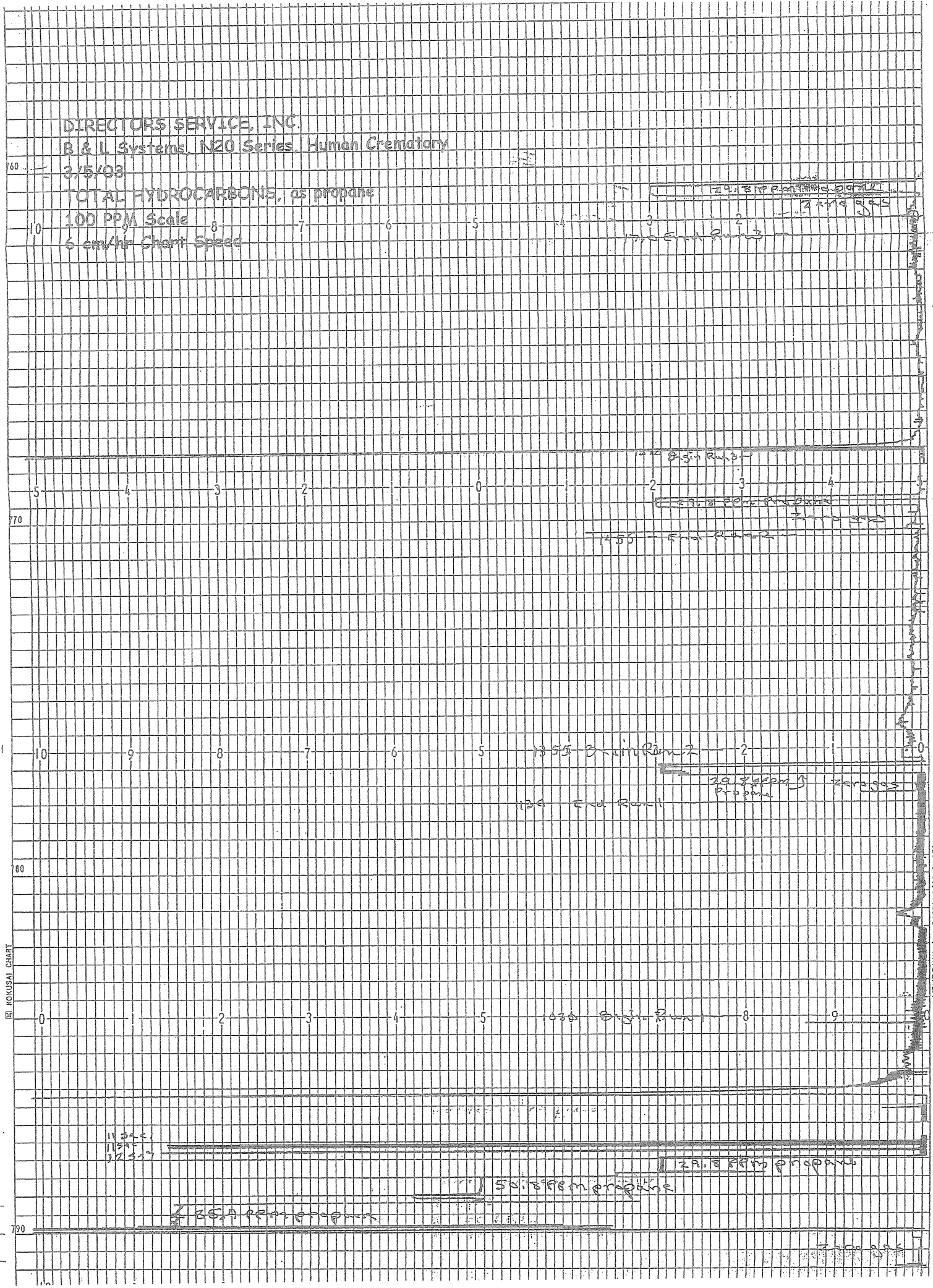
Plant Directors Services Inc.	
Unit Human Crematory	Test No. 3
Date 3/5/03	Sampling Location Stack
Sampling Time (24-hr Clock)	
Sample Type: Continuous ☐ Integrated Bag ☒	Grab ☐
Analytical Method Orsat	Ambient Temperature 80°F
Operator B Nelson	

RUN →	1		2		3		Average Net Volume	Multiplier	Molecular Weight of Stack Gas (Dry Basis) (Md)
GAS ↓	Actual Reading	Net	Actual Reading	Net	Actual Reading	Net			
CO_2	4.0	4.0	4.0	4.0	4.0	4.0	4.0	.44	1.76
O_2 (NET IS ACTUAL O_2 READING MINUS ACTUAL CO_2 READING)	19.5	15.5	19.5	15.5	19.5	15.5	15.5	.32	4.96
CO (NET IS ACTUAL CO READING MINUS ACTUAL O_2 READING)							80.5	.28	22.54
N_2 (NET IS 100 MINUS ACTUAL CO READING)								.28	
								TOTAL	29.26


DIRECTORS SERVICE, INC.
B & L Systems, IN20 Series, Human Crematory
3/5/03
CARBON MONOXIDE
200 PPM Scale
6 cm/hr Chart Speed
CHART NO. KZXR-9
CHART NO. KZXR-9
0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0


DIRECTORS SERVICE, INC.
B & L Systems, N20 Series, Human Crematory
3/5/03
NITROGEN OXIDES
250 PPM Scale
6 cm/hr Chart Speed
KOKUSAI CHART
YOKOGAWA

DIRECTORS SERVICE, INC.
B & L Systems, N20 Series, Human Crematory
3/5/03
TOTAL HYDROCARBONS, as propane
100 PPM Scale
6 cm/hr Chart Speed



SOUTHERN ENVIRONMENTAL SCIENCES, INC.

NOZZLE CALIBRATION

Date: 3/5/03 by: K Roberts

Nozzle ID	Run No.	D_1 (INCHES)	D_2 (INCHES)	D_3 (INCHES)	ΔD (INCHES)	D_{AVG} (INCHES)
Quartz	A1	.598	.598	.599	.001	.598

where: D_1, D_2, D_3 = Nozzle diameter measured on a different diameter (inches).
Tolerance = 0.001 inches

ΔD = Maximum difference in any two measurements (inches).
Tolerance = 0.004 inches

D_{avg} = Average of D_1, D_2, D_3

* * * \

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

TYPE S PITOT TUBE INSPECTION FORM

PITOT TUBE ID NUMBER	003INC	
INSPECTION DATE	04/01/02	
INSPECTED BY	M. Gierke	
PITOT TUBE ASSEMBLY LEVEL ?	YES	NO
PITOT TUBE OPENINGS DAMAGED ?	YES (explain please)	NO

ANGLE	MEASUREMENT	LIMITS
α1	1°	<10°
a2	1°	<10°
b1	1°	<5°
b2	1°	<5°
Y	1°	
θ	2°	
A	.290 inches	
z = A sin Y	.010 inches	< 1/8 inch
w = A sin θ	.021 inches	< 1/32 inch
Pa	.145 inches	
Pb	.145 inches	
Dt	.190 inches	

COMMENTS:

CALIBRATION REQUIRED	YES	NO

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

DRY GAS METER CALIBRATION

Meter Box Number: 002 Barometric Pressure: 29.99
Date: 10/11/2002 Wet Test Meter No.: P-576

Orifice Manometer Setting (Delta H) in. H2O	Gas Volume Wet Test Meter (Vw) ft.^3	Gas Volume Dry Gas Meter (Vd) ft.^3	Temperature Wet Test Meter (Tw) Deg F	Temperature Dry Gas Meter (Td) Deg F	Time (THETA) Min	Yi	Delta H@i in. H2O
0.50	5.442	5.517	84.0	89.0	13.00	0.994	1.626
1.00	8.730	8.871	84.0	91.0	15.00	0.994	1.676
1.50	10.730	10.899	84.0	93.0	15.00	0.997	1.658
2.00	11.378	11.570	85.0	95.0	14.00	0.997	1.713
3.00	11.400	11.616	85.0	98.0	11.50	0.997	1.718
4.00	11.295	11.480	84.0	100.0	10.00	1.003	1.751
						0.997	1.690

Delta H@ Acceptable Range 1.890 to 1.490
Yi Acceptable Range 1.017 to 0.977

$$Yi = \frac{Vw\ Pb\ (Td + 460)}{Vd\ (Pb + DeltaH/13.6)\ (Tw + 460)}$$

$$Delta\ H@ = \frac{.0317\ (DeltaH)}{Pb\ (Td + 460)}\ [(Tw + 460)\ (Theta)/Vw]^2$$

Where:

Vw = Gas Volume passing through the wet test meter, ft.^3.
Vd = Gas Volume passing through the dry gas meter, ft.^3.
Tw = Temperature of the gas in the wet test meter, deg F.
Tdi = Average temperature of the gas in the dry gas meter, deg F.
Delta H = Pressure differential across orifice. in. H20.
Yi = Ratio of accuracy of wet test meter to dry gas meter for each run.
Y = Average ratio of accuracy of wet test meter to dry gas meter for all three runs; tolerance = pretest Y =/- 0.05Y.
Pb = Barometric pressure, in. Hg
Theta = Time of calibration run, min.

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

POSTTEST DRY GAS METER CALIBRATION FORM

Meter Box Number:	002	Wet Test Meter No.:	P-576
Date:	03/07/2003	Pretest Y:	0.997
Barometric Pressure:	30.04	Calibrated by:	mg

Orifice Manometer Setting (Delta H) in. H2O	Gas Volume		Temperature		Time (THETA) Min.	Vacuum Setting in. Hg	Yi
	Wet Test Meter (Vw) ft.^3	Dry Gas Meter (Vd) ft.^3	Wet Test Meter (Tw) Deg F	Dry Gas Meter (Td) Deg F			
2.00	10.000	10.212	76.00	83.00	13.00	10.00	0.987
2.00	10.000	10.185	76.00	85.00	13.00	10.00	0.993
2.00	10.000	10.205	76.00	87.00	13.00	10.00	0.995
						Average	0.992

Acceptable Limits 0.947 to 1.047

$$Yi = \frac{Vw\ Pb\ (Td + 460)}{Vd\ (Pb + DeltaH/13.6)\ (Tw + 460)}$$

Where:

Vw = Gas volume passing through the wet test meter, ft.^3.
Vd = Gas volume passing through the dry gas meter, ft.^3.
Tw = Temperature of the gas in the wet test meter, deg F.
Tdi = Temperature of the inlet gas of the dry gas meter, deg F.
Tdo = Temperature of the outlet gas of the dry gas meter, deg F.
Delta H = Pressure differential across orifice. in. H20.
Yi = Ratio of accuracy of wet test meter to dry gas meter for each run.
Y = Average ratio of accuracy of wet test meter to dry gas meter for all three runs; tolerance = pretest Y =/- 0.05Y.
Pb = Barometric pressure, in. Hg
Theta = Time of calibration run, min.

THERMOMETER CALIBRATIONS

Ref	Wet Test Meter		Dry Gas Meter	
Deg F	Inlet Deg F	Outlet Deg F	Inlet Deg F	Outlet Deg F
75.0	n/a	77.0	77.0	73.0
Difference	n/a	-2.0	-2.0	2.0

Quality Control Limits = +/- 5 Deg F

SOUTHERN ENVIRONMENTAL SCIENCES, INC.
THERMOMETER CALIBRATIONS

ALL TEMPERATURES ARE DEGREES RANKIN

Calibrated By/Date: M. GIERKE 4/1/02

ID No.	Type	Range	ICE BATH			TEPID WATER			BOILING WATER			HOT OIL		
			STD Therm	Temp	Deg or Diff	STD Therm	Temp	Deg or Diff	STD Therm	Temp	Deg or Diff	STD Therm	Temp	Deg or Diff
T1	PT	2000° F	495	496	0.2%	539	537	0.4%	672	670	0.3%	860	861	0.1%
T2	PT	2000° F	495	497	0.4%	539	537	0.4%	673	672	0.1%	870	872	0.2%
T3	PT	2000° F	495	497	0.4%	539	538	0.2%	673	671	0.3%	870	872	0.2%
T4	PT	2000° F	494	496	0.4%	539	538	0.2%	674	672	0.3%	863	864	0.1%
T5	PT	2000° F	494	496	0.4%	539	538	0.2%	672	670	0.3%	860	862	0.2%
T6	PT	2000° F	494	496	0.4%	539	537	0.4%	672	674	0.3%	852	854	0.2%
T7	PT	2000° F	495	497	0.4%	539	538	0.2%	673	671	0.3%	853	854	0.1%
T8	PT	2000° F	495	496	0.2%	539	537	0.4%	674	672	0.3%	864	865	0.1%
T9	PT	2000° F	495	497	0.4%	539	538	0.2%	673	671	0.3%	854	856	0.2%
Lab 14	BM	212° F	494	495	1°	536	535	1°	672	673	1°	-	-	-
I5	BM	250° F	494	495	1°	536	535	1°	672	672	1°	-	-	-
I6	BM	220° F	494	496	2°	536	536	0°	672	672	0°	-	-	-
SS110	BM	220° F	494	496	2°	540	539	2°	670	672	2°	-	-	-
SS300	PT	2000 °F	495	497	0.4%	540	538	0.4%	674	672	0.3%	850	852	0.2%
SS301	PT	2000° F	495	497	0.4%	540	538	0.4%	672	670	0.3%	856	858	0.2%
SS306	PT	2000° F	495	496	0.2%	540	538	0.4%	672	670	0.3%	856	858	0.2%
2.5'PA	PT	2000° F	495	496	0.2%	541	538	0.55%	673	672	0.1%	852	854	0.2%
2.5'PB	PT	2000° F	495	497	0.4%	541	538	0.55%	672	674	0.3%	856	858	0.2%
3'P	PT	2000° F	495	497	0.4%	541	539	0.4%	673	675	0.3%	858	860	0.2%
3'INC	PT	2000° F	494	496	0.4%	540	538	0.4%	676	678	0.3%	852	854	0.2%
5'PA	PT	2000° F	494	496	0.4%	540	539	0.2%	672	674	0.3%	856	858	0.2%
5'PB	PT	2000° F	495	497	0.4%	540	538	0.4%	674	672	0.3%	856	858	0.2%
5'PC	PT	2000° F	495	497	0.4%	540	538	0.4%	674	672	0.3%	856	858	0.2%
5'VP	PT	2000° F	495	497	0.4%	541	540	0.2%	676	678	0.3%	856	858	0.2%
5'INC	PT	2000° F	494	496	0.4%	542	540	0.4%	674	676	0.3%	850	852	0.2%
8'PA	PT	2000° F	494	496	0.4%	541	538	0.55%	676	678	0.3%	856	858	0.2%
8'PB	PT	2000° F	494	495	0.2%	541	539	0.4%	676	678	0.3%	856	858	0.2%
10'P	PT	2000° F	494	495	0.2%	541	539	0.4%	674	676	0.3%	854	856	0.2%

Quality Control Limits: Impinger Thermometers= 2°F, Bimetalic Thermometers(Bm)= 5°F, Pyrometers/Thermocouples(PT)= 1.5%

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

1204 North Wheeler Street St. Plant City, Florida 33566 (813) 752-5014

INSTRUMENT CALIBRATION

TEST DATA	
DATE	03/05/2003
COMPANY	DIRECTOR SERVICE, INC.
SOURCE	B&L SYSTEMS N20 HUMAN CREMATORY
PARAMETER	CARBON MONOXIDE
TECHNICIAN	B. NELSON

INSTRUMENT DATA	MONITOR	RECORDER
MANUFACTURER	TECO	YOKOGAWA
MODEL NO.	48	
SERIAL NO.	48-27158-228	
RANGE (PPM)	1000	6 CM/HR

CALIBRATION GASES			
SUPPLIER	AIR PRODUCTS	AIR PRODUCTS	AIR PRODUCTS
CYLINDER #	SG9170323	SX32489	SG9136062
CONC. (%)	56.9	120.7	150
EXPIRATION DATE	04/24/2004	01/05/2006	06/06/2003

POINT	OBSERVED CONC.	ACTUAL CONC.	PERCENT DIFF.
1	0	0	0.00
2	150	150	0.00
3	121	120.7	0.03
4	55.8	56.9	-0.11

Regression Output:

Constant		-0.4379
Std Err of Y Est		0.7164
R Squared		0.9999
No. of Observations		4
Degrees of Freedom		2
X Coefficient(s)	1.0029	
Std Err of Coef.	0.0062	

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NITROGEN OXIDES ANALYZER CALIBRATION DATA

EPA METHOD 7E

COMPANY	DIRECTORS SERVICE, INC.
SOURCE	B&L SYSTEMS N20 CREMATORY
OPERATOR	BYRON NELSON
DATE	03/05/2003
RUN #'S	ALL
INSTRU. SPAN RANGE	250

	Cylinder value (PPM)	Analyzer calibration responses (PPM)	Absolute difference (PPM)	Difference (% of Span)
Zero	0	0	0	0.0
Mid-range	125.2	126	0.3	0.1
High-range	229.7	229	0.7	0.3

SYSTEM CALIBRATION BIAS AND DRIFT DATA

			Initial Values		Final Values		
		Analyzer calibration response (PPM)	System calibration response (PPM)	System calibration bias (% of span)	System calibration response (PPM)	System calibration bias (% of span)	Drift (% of span)
Run 1	Zero	0	0	0.0	0	0.0	0.0
	Upscale	125.5	125.5	0.0	127.5	0.8	0.8
Run 2	Zero	0	0	0.0	0	0.0	0.0
	Upscale	125.5	127.5	0.8	126	0.2	-0.6
Run 3	Zero	0	0	0.0	-0.5	-0.2	-0.2
	Upscale	125.5	126	0.2	126	0.2	0.0

$$\text{System Calibration Bias} = \frac{\text{System Cal. Response - Analyzer Cal.}}{\text{Span}} \times 100$$