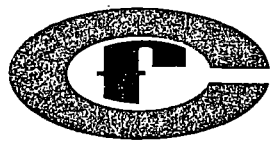


S4ED

P.O. Drawer L.
Plant City, Florida 33564-9007
Telephone: 813/782-1591



CF Industries, Inc.

Plant City Phosphate Complex

March 4, 2005

Mr. Joel Smolen
Florida Department of
Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619-8318

RECEIVED

MAR 14 2005

BUREAU OF AIR REGULATION

**Subject: CF Industries, Inc.
Plant City Phosphate Complex
Permit No. 0570005-019-AC (PSD-FL-339)
"C" Sulfuric Acid Unit
CEMS Certifications and Compliance Test Report**

Dear Mr. Smolen:

In accordance with Permit No. 0570005-019-AC (PSD-FL-339) (i.e., Section III: Emissions Units Specific Conditions 13, 14, and 15) enclosed are copies of the Sulfur Dioxide and Oxygen CEMS Certifications Test Reports for the testing conducted on our "C" Sulfuric Acid Unit on January 25 & 26, 2005. Also, enclosed is the Calibration Drift Report.

If there are any questions concerning the results, please give Michael Messina a call at (813) 364-5639.

Sincerely,

Thomas A. Edwards
Superintendent,
Environmental Affairs

TAE/JMM/gem
U:\ENVRPT\167063a.doc

CC: Trina L. Vielhauer/Chief Bureau of Air Regulation FDEP
Diana Lee/HCEPC
J. M. Messina/Envir. Files
Frank Dlugos

PERMIT NO. 0570005-019-AC (PSD-FL-339)

Emission Unit 007

RELATIVE ACCURACY TESTING

CF INDUSTRIES, INC.

PLANT CITY PHOSPHATE COMPLEX

"C" SULFURIC ACID PLANT

PLANT CITY, FLORIDA

JANUARY 25 & 26, 2005

TEST CONDUCTED BY:

ENVIRONMENTAL LABORATORY
CF Industries, Inc.
Plant City Phosphate Complex
Plant City, Florida 33564

Table of Contents

	<u>Page</u>
1.0 INTRODUCTION	1
2.0 CONTINUOUS EMISSION MONITOR DESCRIPTION	1
3.0 TEST RESULTS	1
4.0 TEST PROCEDURES	2
4.1 Methods	2
4.2 Test Locations	2
4.3 Sampling Train	2
4.4 Sample Collection	3
4.5 Sample Recovery	3
5.0 ANALYTICAL PROCEDURE	3
5.1 Pretest Preparation	3
5.2 Analysis	3
Table 1	4
Table 2	5
APPENDIX	
Project Participants	7
Emissions Test Summaries	8
Process Operational Data	11
Laboratory Data	16
Field Data Sheets	25
Gas Analysis Forms	40
Calibration Data	42
Source Sampling Nomenclature Sheet	51
Calculations	52

1.0 INTRODUCTION

The Environmental Control Laboratory of CF Industries, Inc., Plant City Phosphate Complex, conducted relative accuracy (RA) at the "C" Unit Sulfuric Acid Plant in Plant City, Florida on January 25 & 26, 2005. Testing was performed to determine conformance with EPA Performance Specification 2 and 4.

2.0 CONTINUOUS EMISSION MONITOR DESCRIPTION

The "C" Unit Sulfuric Acid Plant is equipped with a continuous emission monitoring system (CEMS) utilizing an Ametek 4000 Photometric SO₂ analyzer. This is an extractive sampler with a range of 0 to 1000 ppm. The analyzer is equipped with an automatic zero adjustment and adjusts the zero point at one hour intervals. The plant is also equipped with a Yokogawa continuous oxygen monitoring system. This is an extractive sampler with a range of 0 to 24 percent O₂. Gas concentrations are recorded by a data acquisition system in the control room. The SO₂ and O₂ data are utilized to determine the source SO₂ emission in pound of SO₂ per ton of 100 percent sulfuric acid produced.

3.0 TEST RESULTS

Results of the SO₂ relative accuracy tests are summarized in Table 1. In order to be in conformance with Performance Specification 2, the relative accuracy of the SO₂ CEMS must be no greater than 20 percent of the mean value of the reference method test data in terms of the units of the emission standard or 10 percent of the applicable standard, whichever is greater. The relative accuracy is the absolute mean difference between the emission rate determined by the CEMS and the value determined by the reference method plus the 2.5 percent error confidence coefficient of a series of tests divided by the mean of the reference tests or the applicable emission limit. The relative accuracy of this plant, based upon the mean value of the reference method test data was 6.93 percent. The relative accuracy of the "C" Unit Sulfuric Acid Plant was therefore within the allowable limits.

Results of the O₂ relative accuracy tests are summarized in Table 2. The average difference between the reference method and the CEMS data of the nine data sets constitute the relative accuracy. In order to be in conformance with Performance Specification 3, the relative accuracy of the O₂ CEMS must be no greater than 1.0 percent O₂. The relative accuracy of the O₂ CEMS, based upon the above definition, was 0.19 percent. The relative accuracy was therefore within the allowable limits.

4.0 TEST PROCEDURES

4.1 Methods

The SO₂ relative accuracy test was conducted in accordance with Performance Specification 2 – Specifications and Test Procedures for SO₂ and NO₂ Continuous Emission Monitoring Systems in Stationary Sources, 40 CFR 60, Appendix B. The relative accuracy test procedures require that a minimum of nine sets of reference method tests be conducted. Nine sets of data were collected concurrently with the CEMS. Relative accuracy testing was performed in conjunction with a compliance test. Therefore, three runs were performed for a period of 60 minutes per run and six runs were performed for a period of 21 minutes per run. Reference method samples were collected and analyzed in accordance with EPA Method 8 – Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources, 40 CFR 60, Appendix A.

The O₂ relative accuracy test was conducted in accordance with Performance Specification 3 – Specifications and Test Procedures for O₂ and CO₂ Continuous Emission Monitoring Systems, 40 CFR 60, Appendix B. The relative accuracy test procedures require that a minimum of nine sets of reference method tests be conducted. Nine sets of data were collected concurrently with the O₂ CEMS. Oxygen sampling was performed simultaneously with SO₂ sampling in accordance with EPA Method 3B – Gas Analysis for the Determination of Emission Rate Correction Factor or Excess Air, 40 CFR 60, Appendix A.

4.2 Test Locations

During the three runs utilized for the EPA Method 8 compliance test, twenty four sample points were utilized. During the six runs utilized for relative accuracy only, three sample points were utilized for collecting the reference method sulfur dioxide and oxygen samples. The points were located along a measurement line that passed through the centroidal area of the stack. The three sample points were located on the line at 16.7, 50.0, and 83.3 percent of the stack diameter. Velocity traverses were performed at twenty four points during each of these runs for determination of flow rate. The locations of the sampling ports are shown in Figure 1.

4.3 Sampling Train

The sulfur dioxide sampling train consisted of a stainless steel nozzle, a Napp Corporation heated borosilicate glass-lined probe, a glass filter bypass tube, a glass fiber filter, and four impingers arranged as shown in Figure 2. The first impinger was charged with 100 milliliters of 80 percent isopropanol. The second and third impingers were each charged with 100 milliliters of 3 percent hydrogen peroxide and the fourth impinger charged with indicating silica gel desiccant. The impingers were cooled in an ice and water bath during sampling. A Lear Siegler control console was used to monitor the gas flow rates and stack conditions during sampling.

The oxygen sampling train consisted of a stainless steel probe, sample line, pump, and tedlar sampling bag as shown in Figure 3.

4.4 Sample Collection

Prior to sulfur dioxide sampling, the pitot tubes were checked for leaks and the manometers were zeroed. A pretest leak check of the sample line was conducted by sealing the nozzle and applying a 15" vacuum. A leak rate of less than 0.02 cubic feet per minute (CFM) was considered acceptable.

4.5 Sample Recovery

A post test leak check of the sulfur dioxide sampling train was performed at the completion of the run by sealing the nozzle and applying a vacuum equal to or greater than the maximum value reached during the sample run. A leak rate of less than 0.02 CFM or 4 percent of the average sampling rate (whichever is less) was considered acceptable. The probe was then disconnected, the ice bath drained, and the remaining part of the sample train was purged by drawing air through the system for fifteen minutes at the average flow rate used during sampling. The second and third impingers, associated connecting glassware, and back half of the filter holder were rinsed with distilled, deionized water into a 500 milliliter volumetric flask.

5.0 Analytical Procedure

5.1 Pretest Preparation

The 3 percent hydrogen peroxide solution was prepared from 30 percent reagent grade hydrogen peroxide and deionized water on the morning of the test. The 80 percent isopropanol solution was prepared from 100 percent reagent grade isopropanol and deionized water. The impingers were charged as described in section 4.3.

5.2 Analysis

After recovery, the samples were analyzed using procedures outline in EPA Method 8 – Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources, 40 CFR 60, Appendix A. Duplicate results were obtained in milliliters of barium perchlorate titrant. The average of these titration values were used to compute the sulfur dioxide concentrations.

Table 1. SULFUR DIOXIDE RELATIVE ACCURACY TEST RESULTS

Company: CF Industries, Inc., Plant City Phosphate Complex
 Source: "C" Sulfuric Acid Plant
 Date: 1/25-26/05

Run No.	Date	Time	Reference Method (PPM SO2)	CEM (PPM SO2)	Difference (PPM SO2)
1	1/25/05	10:07-10:28	348	365	17
2	1/25/05	11:12-12:31	330	360	30
3	1/25/05	12:58-14:21	337	357	20
4	1/25/05	14:50-16:10	334	356	22
5	1/25/05	16:28-17:15	341	358	17
6	1/26/05	13:44-14:05	335	350	15
7	1/26/05	14:34-14:55	335	352	17
8	1/26/05	15:33-15:54	327	350	23
9	1/26/05	16:24-16:45	336	350	14
Average			336	355	19.4

Std. Dev. 4.978

2.5% Error Confidence Coefficient (CC) = $t_{0.975} \cdot Sd / \text{sq. rt. } N$

CC = 3.816

n = 9

$t_{0.975} = 2.3$ for n = 9

Relative Accuracy (RA) = (mean of difference) + CC / Avg RM

RA = 6.93 %

In order to be in conformance with Performance Specification 2, the relative accuracy of the SO2 CEMS must be no greater than 20 percent of the mean value of the reference method test data in terms of the units of the emission standard or 10 percent of the applicable standard, whichever is greater.

The relative accuracy of this plant based upon the mean value of the reference method test data was 6.93%. The relative accuracy of C SAP was therefore within the allowable limits.

4

Table 2. OXYGEN RELATIVE ACCURACY TEST RESULTS

Company: CF Industries, Inc., Plant City Phosphate Complex

Source: "C" Sulfuric Acid Plant

Date: 1/25-26/2005

Run No.	Date	Time	Reference Method (%O ₂)	CEM (%O ₂)	Difference (%O ₂)
1	1/25/05	10:07-10:28	3.4	3.26	-0.14
2	1/25/05	11:12-12:31	3.5	3.26	-0.24
3	1/25/05	12:58-14:21	3.6	3.25	-0.35
4	1/25/05	14:50-16:10	3.6	3.25	-0.35
5	1/25/05	16:28-17:15	3.6	3.26	-0.34
6	1/26/05	13:44-14:05	3.3	3.27	-0.03
7	1/26/05	14:34-14:55	3.3	3.27	-0.03
8	1/26/05	15:33-15:54	3.4	3.30	-0.10
9	1/26/05	16:24-16:45	3.4	3.29	-0.11
Average			3.46	3.27	-0.19

In order to be in conformance with Performance Specification 3, the relative accuracy of the O₂ CEMS must be no greater than 1.0 percent O₂. The relative accuracy of the O₂ CEMS, based upon the above definition was 0.19 percent O₂. The relative accuracy was therefore within the allowable limits.

5

Appendix

Project Participants

Emissions Test Summaries

Process Operational Data

Laboratory Data

Field Data Sheets

Gas Analysis Forms

Calibration Data

Source Sampling Nomenclature Sheet

Calculations

PROJECT PARTICIPANTS
CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX

H.E. Morris	General Manager
R.C. May	Manager of Engineering
T.A. Edwards	Supt., Environmental Affairs
J.M. Messina	Chief of Environmental Affairs
J.H. Falls	Chief Chemist, Laboratory
F.J. Dlugos	Environmental Supervisor
E. Kretschmar	Analyst II
L. Camp	"A" Class Technician
W. Cherry	"A" Class Technician

C SAP

**PERMIT NO. 0570005-007-AV
EMISSION UNIT 007**

RUN NUMBER	1	5	6
DATE	25-Jan-05	25-Jan-05	26-Jan-05
TIME START	10:07	16:28	13:44
TIME END	10:28	17:15	14:05
BP, INCHES Hg	30.21	30.21	30.21
STACK PRESSURE, INCHES Hg	30.22	30.22	30.22
AVG.SQ.ROOT(VEL. HEAD) IN Hg	0.529	0.5259	0.5176
ORIFICE PRESS. OF METER, IN WATER	1.400	1.390	1.343
AVG STACK TEMP. ,F	155.00	154.67	156.46
STACK, DRY BULB	155.00	154.67	156.46
METER TEMPERATURE, F	82.17	94.50	89.17
VOL. OF GAS, DM CONDITIONS, FT3	14.957	15.149	14.734
VOL. GAS, STP, DRY COND. FT3	14.905	14.760	14.494
STACK GAS MOISTURE, % VOLUME	0	0	0
MW OF STACK GAS, DRY COND.	28.4	28.4	28.4
MW OF STACK GAS, STACK COND.	28.4	28.4	28.4
PITOT CORRECTION FACTOR	0.84	0.84	0.84
STACK GAS VELOCITY, STACK COND. FT3/SEC	32.15	31.96	31.5
STACK AREA, FT2	67.2	67.2	67.2
EFFECTIVE STACK AREA, FT2	67.2	67.2	67.2
STACK GAS FLOW-RATE AT STP, SCFMD	112420	111791	109867
NET TIME OF TEST, MINUTES	21	21	21
SAMPLE NOZZLE AREA, FT2	0.000418	0.000418	0.000418
PERCENT ISOKINETIC	101.5	101.1	101.0
SULFURIC ACID MIST(INCLUDES SO3), MG			
SULFURIC ACID MIST, LBS/HR.			
SULFURIC ACID MIST, LBS/DAY			
SULFUR DIOXIDE, MG	390.88	379.15	365.75
SULFUR DIOXIDE, LBS/HR.	389.16	379.05	365.97
SULFUR DIOXIDE, LBS/DAY	9339.90	9097.24	8783.30
SULFURIC ACID MIST, LBS/TON OF H2SO4 PROD.			
SULFURIC ACID MIST, LBS/TON LIMIT	0.10	0.10	0.10
SULFUR DIOXIDE, LBS/TON OF H2SO4 PROD.			
SULFUR DIOXIDE, LBS/TON LIMIT	3.50	3.41	3.33
SULFUR DIOXIDE, LBS/TON OF H2SO4 (METER IN PLANT)			
SULFUR DIOXIDE, LBS/TON OF H2SO4 (METER IN PLANT)	3.20	3.20	3.20
PRODUCTION RATE TPD	2671	2671	2640
PRODUCTION RATE, TPD LIMIT	2750	2750	2750
REFERENCE METHOD SO2 (ppm)	348	341	335

8

C SAP

**PERMIT NO. 0570005-007-AV
EMISSION UNIT 007**

RUN NUMBER	2	3	4
DATE	25-Jan-05	25-Jan-05	25-Jan-05
TIME START	11:12	12:58	14:50
TIME END	12:31	14:21	16:10
BP, INCHES Hg	30.21	30.21	30.21
STACK PRESSURE, INCHES Hg	30.22	30.22	30.22
AVG.SQ.ROOT(VEL. HEAD) IN Hg	0.5262	0.5204	0.5292
ORIFICE PRESS. OF METER, IN WATER	1.325	1.2971	1.3642
AVG STACK TEMP., F	153.29	153.33	153.04
STACK, DRY BULB	153.29	153.33	153.04
METER TEMPERATURE, F	89.46	97.23	97.9
VOL. OF GAS, DM CONDITIONS, FT3	50.434	50.554	51.465
VOL. GAS, STP, DRY COND. FT3	49.583	49.004	49.836
STACK GAS MOISTURE, % VOLUME	0	0	0
MW OF STACK GAS, DRY COND.	28.4	28.4	28.4
MW OF STACK GAS, STACK COND.	28.4	28.4	28.4
PITOT CORRECTION FACTOR	0.84	0.84	0.84
STACK GAS VELOCITY, STACK COND. FT3/SEC	31.94	31.59	32.11
STACK AREA, FT2	67.2	67.2	67.2
EFFECTIVE STACK AREA, FT2	67.2	67.2	67.2
STACK GAS FLOW-RATE AT STP, SCFMD	111981	110743	112642
NET TIME OF TEST, MINUTES	72	72	72
SAMPLE NOZZLE AREA, FT2	0.000418	0.000418	0.000418
PERCENT ISOKINETIC	98.9	98.8	98.8
SULFURIC ACID MIST(INCLUDES SO3), MG	7.70	9.49	9.13
SULFURIC ACID MIST, LBS/HR.	2.3	2.83	2.72
SULFURIC ACID MIST, LBS/DAY	55.09	67.94	65.38
SULFUR DIOXIDE, MG	1232.98	1245.60	1254.76
SULFUR DIOXIDE, LBS/HR.	367.57	371.55	374.36
SULFUR DIOXIDE, LBS/DAY	8821.70	8917.20	8984.80
SULFURIC ACID MIST, LBS/TON OF H2SO4 PROD.	0.02	0.03	0.02
SULFURIC ACID MIST, LBS/TON LIMIT	0.10	0.10	0.10
SULFUR DIOXIDE, LBS/TON OF H2SO4 PROD.	3.30	3.34	3.36
SULFUR DIOXIDE, LBS/TON LIMIT	3.50	3.50	3.50
SULFUR DIOXIDE, LBS/TON OF H2SO4 (METER IN PLANT)	3.14	3.12	3.11
PRODUCTION RATE TPD	2671	2671	2671
PRODUCTION RATE, TPD LIMIT	2750	2750	2750
VISIBLE EMISSION			0%
VISIBLE EMISSION LIMIT			10%

C SAP

**PERMIT NO. 0570005-007-AV
EMISSION UNIT 007**

RUN NUMBER	7	8	9
DATE	26-Jan-05	26-Jan-05	26-Jan-05
TIME START	14:34	15:33	16:24
TIME END	14:55	15:54	16:45
BP, INCHES Hg	30.21	30.21	30.21
STACK PRESSURE, INCHES Hg	30.22	30.22	30.22
AVG.SQ.ROOT(VEL. HEAD) IN Hg	0.5188	0.5170	0.5134
ORIFICE PRESS. OF METER, IN WATER	1.4270	1.3433	1.4267
AVG STACK TEMP. ,F	157.50	158.25	157.25
STACK, DRY BULB	157.50	158.25	157.25
METER TEMPERATURE, F	96.5	97.5	97.5
VOL. OF GAS, DM CONDITIONS, FT3	15.252	14.809	15.225
VOL. GAS, STP, DRY COND. FT3	14.809	14.35	14.756
STACK GAS MOISTURE, % VOLUME	0	0	0
MW OF STACK GAS, DRY COND.	28.4	28.4	28.4
MW OF STACK GAS, STACK COND.	28.4	28.4	28.4
PITOT CORRECTION FACTOR	0.84	0.84	0.84
STACK GAS VELOCITY, STACK COND. FT3/SEC	31.60	31.51	31.26
STACK AREA, FT2	67.2	67.2	67.2
EFFECTIVE STACK AREA, FT2	67.2	67.2	67.2
STACK GAS FLOW-RATE AT STP, SCFMD	110029	109580	108906
NET TIME OF TEST, MINUTES	21	21	21
SAMPLE NOZZLE AREA, FT2	0.000418	0.000418	0.000418
PERCENT ISOKINETIC	103.1	100.3	103.7
SULFURIC ACID MIST(INCLUDES SO3), MG			
SULFURIC ACID MIST, LBS/HR.			
SULFURIC ACID MIST, LBS/DAY			
SULFUR DIOXIDE, MG	374.12	354.01	374.12
SULFUR DIOXIDE, LBS/HR.	366.93	356.85	364.48
SULFUR DIOXIDE, LBS/DAY	8806.20	8564.30	8747.50
SULFURIC ACID MIST, LBS/TON OF H2SO4 PROD.			
SULFURIC ACID MIST, LBS/TON LIMIT	0.10	0.10	0.10
SULFUR DIOXIDE, LBS/TON OF H2SO4 PROD.	3.34	3.24	3.31
SULFUR DIOXIDE, LBS/TON LIMIT	3.50	3.50	3.50
SULFUR DIOXIDE, LBS/TON OF H2SO4 (METER IN PLANT)	3.20	3.20	3.20
PRODUCTION RATE TPD	2640	2640	2640
PRODUCTION RATE, TPD LIMIT	2750	2750	2750
REFERENCE METHOD SO2 (ppm)	335	327	336

CEMS SO2 Data - SO2 PPM

Run No.	Date	Time of RATA Run (PPM SO2)	Time	CEMS (PPM SO2)	Avg
1	01/25/05	10:07-10:28	1000	365	365
			1015	365	
			1030	365	
2	01/25/05	11:12-12:31	1100	365	360
			1115	360	
			1130	360	
			1145	360	
			1200	360	
			1215	360	
			1230	355	
3	01/25/05	12:58-14:21	1300	355	360
			1315	360	
			1330	355	
			1345	355	
			1400	360	
			1415	355	
4	01/25/05	14:50-16:10	1445	355	357
			1500	355	
			1515	355	
			1530	355	
			1545	355	
			1600	360	
			1630	360	
5	01/25/05	16:28-17:15	1645	355	356
			1700	355	
			1715	360	
			1715	360	
6	01/26/05	13:44-14:05	1345	350	358
			1400	350	
7	01/26/05	14:34-14:55	1430	350	350
			1445	355	
			1500	350	
8	01/26/05	15:33-15:54	1530	350	352
			1545	350	
			1600	350	
			1600	350	
9	01/26/05	16:24-16:45	1630	350	350
			1645	350	
			1645	350	

O2 Data - CEMS %

Run No.	Date	Time of RATA Run (%O2)	Time	CEMS %O2	Avg
1	01/25/05	10:07-10:28	1000	3.26	3.26
			1015	3.23	
			1030	3.28	
2	01/25/05	11:12-12:31	1100	3.24	3.26
			1115	3.28	
			1130	3.28	
			1145	3.25	
			1200	3.26	
			1215	3.23	
			1230	3.25	
3	01/25/05	12:58-14:21	1300	3.28	3.26
			1315	3.23	
			1330	3.26	
			1345	3.24	
			1400	3.23	
			1415	3.25	
4	01/25/05	14:50-16:10	1445	3.25	3.25
			1500	3.24	
			1515	3.25	
			1530	3.26	
			1545	3.27	
			1600	3.23	
			1630	3.25	
5	01/25/05	16:28-17:15	1645	3.26	3.25
			1700	3.27	
			1715	3.27	
			1715	3.27	
			1715	3.27	
6	01/26/05	13:44-14:05	1345	3.27	3.27
			1400	3.27	
7	01/26/05	14:34-14:55	1430	3.26	3.27
			1445	3.26	
			1500	3.30	
8	01/26/05	15:33-15:54	1530	3.35	3.30
			1545	3.29	
			1600	3.27	
			1630	3.29	
9	01/26/05	16:24-16:45	1630	3.29	3.29
			1645	3.29	

“C” Sulfuric Acid Plant Process Operation Data

Test Date: 1/25 & 26/2005

Run No.	1	2	3	4	5	6	7	8	9
Start Time	1007	1112	1258	1450	1628	1344	1434	1533	1624
Stop Time	1028	1231	1421	1610	1715	1405	1455	1554	1645
Production tons/day	2671	2671	2671	2671	2671	2640	2640	2640	2640
Period Average Values from Aspen									
Avg lbs SO2/ton for period	3.19	3.16	3.12	3.11	3.11	3.08	3.08	3.06	3.07
Avg % O2 for period	3.26	3.26	3.25	3.25	3.26	3.27	3.27	3.3	3.29
Avg SO2 ppm for period	365	360	357	356	358	350	352	350	350

PLANT "C"

SO2 MONITORING LOG

DATE: 1-25-05

SO2 Chart Readings

Time	:00	:15	:30	:45	AVG
6:00 AM	380	375	375	375	376.25
7:00 AM	375	375	375	375	375
8:00 AM	SPAN/maint	SPAN/maint	SPAN/maint	SPAN/maint	370
9:00 AM	370	365	365	365	366.25
10:00 AM	365	365	365	365	365
11:00 AM	365	360	360	360	361.25
12:00 PM	360	360	355	360	358.75
1:00 PM	355	360	355	355	356.25
2:00 PM	340	355	355	355	351.25
3:00 PM	355	355	355	355	355
4:00 PM	360	355	360	355	357.50
5:00 PM	355	360	360	360	358.75
6:00 PM	360	360	360	360	360
7:00 PM	360	360	360	360	360
8:00 PM	365	360	365	365	363.75
9:00 PM	370	370	365	365	367.50
10:00 PM	365	360	365	360	362.50
11:00 PM	365	365	370	370	367.50
12:00 AM	360	365	370	365	365
1:00 AM	365	365	365	370	366.25
2:00 AM	370	370	370	370	370
3:00 AM	365	365	365	370	366.25
4:00 AM	370	370	375	370	371.25
5:00 AM	370	370	365	370	367.5

O2 Chart Readings

Time	:00	:15	:30	:45	AVG
6:00 AM	3.18	3.20	3.15	3.27	3.21
7:00 AM	3.21	3.20	3.20	3.20	3.205
8:00 AM	SPAN/maint	SPAN/maint	SPAN/maint	SPAN/maint	3.21
9:00 AM	3.15	3.15	3.25	3.25	3.22
10:00 AM	3.26	3.23	3.28	3.23	3.25
11:00 AM	3.24	3.24	3.24	3.25	3.2425
12:00 PM	3.26	3.23	3.25	3.26	3.25
1:00 PM	3.24	3.23	3.24	3.24	3.2525
2:00 PM	3.23	3.25	3.24	3.25	3.2425
3:00 PM	3.24	3.25	3.26	3.27	3.255
4:00 PM	3.23	3.26	3.25	3.26	3.25
5:00 PM	3.27	3.27	3.25	3.24	3.2575
6:00 PM	3.26	3.27	3.25	3.26	3.2600
7:00 PM	3.23	3.26	3.29	3.26	3.2850
8:00 PM	3.25	3.25	3.22	3.26	3.2450
9:00 PM	3.21	3.23	3.22	3.30	3.2400
10:00 PM	3.23	3.26	3.27	3.28	3.2600
11:00 PM	3.26	3.24	3.24	3.23	3.2425
12:00 AM	3.24	3.26	3.28	3.27	3.2625
1:00 AM	3.25	3.24	3.24	3.23	3.2600
2:00 AM	3.21	3.23	3.23	3.25	3.2300
3:00 AM	3.26	3.28	3.25	3.23	3.2550
4:00 AM	3.24	3.23	3.20	3.23	3.2250
5:00 AM	3.24	3.23	3.24	3.24	3.2375

Lbs SO2/ton H2SO4

Time	AVG
6:00 AM	
7:00 AM	
8:00 AM	
9:00 AM	3.1969
10:00 AM	
11:00 AM	
12:00 PM	
1:00 PM	
2:00 PM	3.113
3:00 PM	
4:00 PM	
5:00 PM	
6:00 PM	
7:00 PM	
8:00 PM	3.1798
9:00 PM	
10:00 PM	
11:00 PM	
12:00 AM	
1:00 AM	
2:00 AM	3.2314
3:00 AM	
4:00 AM	
5:00 AM	

EXIT REIGH TEST		
SHIFT	TIME	%SO2
7:00 AM		
7:00 AM		
7:00 PM		
7:00 PM		

REMARKS: 07:25-08:30 maint +
 span test MAD

Day Shift Operator: *[Signature]*
 Night Shift Operator: *[Signature]*

Lbs SO2/ton H2SO4 = ppm SO2 X .001959
 0.265 - (.0126 X % O2)

To Calculate Lbs/ Ton:
 1) Multiply the hourly average ppm SO2 (from the log sheet) by .001959
 2) Multiply the hourly average % O2 (from the log sheet) by .0126 (b)
 3) Subtract the number calculated in step two (b) from .265 (c)
 4) Divide the number calculated in step one (a) by the number calculated in step three (c).
 This will give Lbs/ Ton H2SO4

.7126 .7249
 .0409 .0407
 .2241 .2243

PLANT C

S02 MONITORING LOG

DATE: 1/26/05

S02 Chart Readings

Time	:00	:15	:30	:45	AVG
6:00 AM	365	365	365	360	363.75
7:00 AM	365	365	365	360	363.75
8:00 AM	365	360	365	360	361.75
9:00 AM	365	365	370	SPAN	366.66
10:00 AM	SPAN	370	370	370	370
11:00 AM	370	370	350	340	357.50
12:00 PM	340	340	315	355	338.50
1:00 PM	355	355	350	350	352.50
2:00 PM	350	350	350	355	351.25
3:00 PM	350	350	350	350	350
4:00 PM	350	350	350	350	350
5:00 PM	350	350	355	355	352.50
6:00 PM	350	350	355	360	353.75
7:00 PM	355	355	350	350	352.50
8:00 PM	355	355	355	355	355
9:00 PM	360	360	360	355	358.75
10:00 PM	370	365	375	375	371.25
11:00 PM	380	380	380	375	378.75
12:00 AM	380	385	380	380	381.25
1:00 AM	380	380	380	380	380
2:00 AM	380	390	370	375	378.75
3:00 AM	375	380	380	380	378.75
4:00 AM	380	380	380	380	380
5:00 AM	380	380	385	380	381.25

O2 Chart Readings

Time	:00	:15	:30	:45	AVG
6:00 AM	3.26	3.26	3.24	3.26	3.255
7:00 AM	3.26	3.28	3.27	3.24	3.24
8:00 AM	3.26	3.25	3.23	3.34	3.27
9:00 AM	3.11	3.27	3.26	SPAN	3.213
10:00 AM	SPAN	3.26	3.24	3.28	3.24
11:00 AM	3.24	3.24	3.35	3.36	3.2975
12:00 PM	3.37	3.36	3.48	3.33	3.335
1:00 PM	3.24	3.25	3.29	3.27	3.2675
2:00 PM	3.27	3.25	3.26	3.26	3.27
3:00 PM	3.30	3.26	3.35	3.29	3.30
4:00 PM	3.27	3.20	3.29	3.29	3.2675
5:00 PM	3.32	3.20	3.24	3.25	3.2775
6:00 PM	3.29	3.36	3.28	3.24	3.2925
7:00 PM	3.29	3.29	3.27	3.27	3.2800
8:00 PM	3.26	3.26	3.26	3.25	3.2575
9:00 PM	3.35	3.27	3.24	3.29	3.2875
10:00 PM	3.26	3.22	3.16	3.17	3.2025
11:00 PM	3.18	3.17	3.17	3.20	3.1800
12:00 AM	3.14	3.16	3.18	3.17	3.1625
1:00 AM	3.17	3.16	3.13	3.17	3.1575
2:00 AM	3.13	3.13	3.26	3.20	3.1800
3:00 AM	3.17	3.20	3.13	3.15	3.1625
4:00 AM	3.13	3.17	3.17	3.15	3.1575
5:00 AM	3.17	3.24	3.12	3.17	3.175

Lbs SO2/ ton H2SO4

Time	AVG.
6:00 AM	
7:00 AM	
8:00 AM	3.1622
9:00 AM	
10:00 AM	
11:00 AM	
12:00 PM	
1:00 PM	
2:00 PM	3.0746
3:00 PM	
4:00 PM	
5:00 PM	
6:00 PM	
7:00 PM	
8:00 PM	3.1045
9:00 PM	
10:00 PM	
11:00 PM	
12:00 AM	
1:00 AM	
2:00 AM	3.2992
3:00 AM	
4:00 AM	
5:00 AM	

EXIT REIGH TEST		
SHIFT	TIME	%SO2
7:00 AM		
7:00 AM		
7:00 PM		
7:00 PM		

REMARKS: Span Test 09:01 - 10:07 AM 7.10

Day Shift Operator: [Signature]
 Night Shift Operator: [Signature]

Lbs SO2/ton H2SO4 = ppm SO2 X .001959
0.265 - (.0126 X % O2)

To Calculate Lbs/ Ton:
 1) Multiply the hourly average ppm SO2 (from the log sheet) by .001959
 2) Multiply the hourly average % O2 (from the log sheet) by .0126 (b)
 3) Subtract the number calculated in step two (b) from .265 (c)
 4) Divide the number calculated in step one (a) by the number calculated in step three (c).
 This will give Lbs/ Ton H2SO4

.6954 .7420
 .0410 .0401
 .2240 .2249

**CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX**

DATE	<u>25-Jan-05</u>		
TIME	<u>10:07 AM</u>	TO	<u>10:28 AM</u>
STACK	<u>C SAP</u>		
RUN	<u>#1</u>		

SAMPLE SOLUTION ANALYSIS

	Acid Mist, SO 3	SO 2
Volume of Sample, ml.	<u>500</u>	<u>500 100</u>
Aliquot, ml.	<u>50</u>	<u>20 20</u>
Normality (of Barium Perchlorate	<u>0.010464</u>	<u>0.010464</u>
Mls. of Barium Perchlorate Titrated	<u>1.20</u>	<u>9.48</u>
Blank, ml.	<u>0.15</u>	<u>0.15</u>
Conversion to Milligrams	<u>5.39</u>	<u>390.88</u>

Analyst

William Y. Chung

cso4titr.xls

**CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX**

DATE	25-Jan-05		
TIME	11:12 AM	TO	12:31 PM
STACK	C SAP		
RUN	#2		

SAMPLE SOLUTION ANALYSIS

	Acid Mist, SO 3	SO 2	
Volume of Sample, ml.	500	500	100
Aliquot, ml.	50	20	20
Normality of Barium Perchlorate	0.010464	0.010464	
Mls. of Barium Perchlorate Titrated	1.65	29.58	
Blank, ml.	0.15	0.15	
Conversion to Milligrams	7.70	1232.98	

Analyst

William F. Chung

cso4titr.xls

**CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX**

DATE	25-Jan-05		
TIME	12:58 PM	TO	2:21 PM
STACK	C SAP		
RUN	#3		

SAMPLE SOLUTION ANALYSIS

	Acid Mist, SO 3	S(SO 2	
Volume of Sample, ml.	500	500	100
Aliquot, ml.	50	20	20
Normality of Barium Perchlorate	0.010464	0.010464	
Mls. of Barium Per- chlorate Titrated	2.00	29.88	
Blank, ml.	0.15	0.15	
Conversion to Milligrams	9.49	1245.55	

Analyst

William F. Chung

cso4titr.xls

**CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX**

DATE	25-Jan-05		
TIME	2:50 PM	TO	4:10 PM
STACK	C SAP		
RUN	#4		

SAMPLE SOLUTION ANALYSIS

	Acid Mist, SO		SO
	3		2
Volume of Sample, ml.	500		500 100
Aliquot, ml.	50		20 20
Normality of Barium Perchlorate	0.010464		0.010464
Mls. of Barium Perchlorate Titrated	1.93		30.10
Blank, ml.	0.15		0.15
Conversion to Milligrams	9.13		1254.76

Analyst

William F. Cherry S

cso4titr.xls

**CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX**

DATE	25-Jan-05		
TIME	4:28 PM	TO	5:15 PM
STACK	C SAP		
RUN	#5		

SAMPLE SOLUTION ANALYSIS

	Acid Mist, SO	3	SO	2
Volume of Sample, ml.	500		500	100
Aliquot, ml.	50		20	20
Normality of Barium Perchlorate	0.010464		0.010464	
Mls. of Barium Perchlorate Titrated			9.20	
Blank, ml.	0.15		0.15	
Conversion to Milligrams			379.15	

Analyst

William F. Cherry

cso4titr.xls

**CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX**

DATE	<u>26-Jan-05</u>			
TIME	<u>1:44 PM</u>	TO	<u>2:05 PM</u>	
STACK	<u>C SAP</u>			
RUN	<u>#6</u>			

SAMPLE SOLUTION ANALYSIS

	Acid Mist, SO	3	SO	2
Volume of Sample, ml.	<u>500</u>		<u>500</u>	<u>100</u>
Aliquot, ml.	<u>50</u>		<u>20</u>	<u>20</u>
Normality of Barium Perchlorate	<u>0.010464</u>		<u>0.010464</u>	
Mls. of Barium Perchlorate Titrated			<u>8.88</u>	
Blank, ml.	<u>0.15</u>		<u>0.15</u>	
Conversion to Milligrams			<u>365.75</u>	

Analyst

William F. Cherry, Jr.

cso4titr.xls

**CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX**

DATE	<u>26-Jan-05</u>		
TIME	<u>2:34 PM</u>	TO	<u>2:55 PM</u>
STACK	<u>C SAP</u>		
RUN	<u>#7</u>		

SAMPLE SOLUTION ANALYSIS

	Acid Mist, SO	3	SO	2
Volume of Sample, ml.	<u>500</u>		<u>500</u>	<u>100</u>
Aliquot, ml.	<u>50</u>		<u>20</u>	<u>20</u>
Normality of Barium Perchlorate	<u>0.010464</u>		<u>0.010464</u>	
Mls. of Barium Perchlorate Titrated			<u>9.08</u>	
Blank, ml.	<u>0.15</u>		<u>0.15</u>	
Conversion to Milligrams			<u>374.12</u>	

Analyst

William F. Chewy I

cso4titr.xls

**CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX**

DATE	<u>26-Jan-05</u>	TO	<u>3:54 PM</u>
TIME	<u>3:33 PM</u>		
STACK	<u>C SAP</u>		
RUN	<u>#8</u>		

SAMPLE SOLUTION ANALYSIS

	Acid Mist, SO	SO
	3	2
Volume of Sample, ml.	<u>500</u>	<u>500 100</u>
Aliquot, ml.	<u>50</u>	<u>20 20</u>
Normality of Barium Perchlorate	<u>0.010464</u>	<u>0.010464</u>
Mls. of Barium Perchlorate Titrated	<u> </u>	<u>8.60</u>
Blank, ml.	<u>0.15</u>	<u>0.15</u>
Conversion to Milligrams	<u> </u>	<u>354.01</u>

Analyst

William F. Cherry Sr

cs04titr.xls

**CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX**

DATE	26-Jan-05		
TIME	4:24 PM	TO	4:45 PM
STACK	C SAP		
RUN	#9		

SAMPLE SOLUTION ANALYSIS

	Acid Mist, SO 3	SO 2	
Volume of Sample, ml.	500	500	100
Aliquot, ml.	50	20	20
Normality of Barium Perchlorate	0.010464	0.010464	
Mls. of Barium Perchlorate Titrated		9.08	
Blank, ml.	0.15	0.15	
Conversion to Milligrams		374.12	

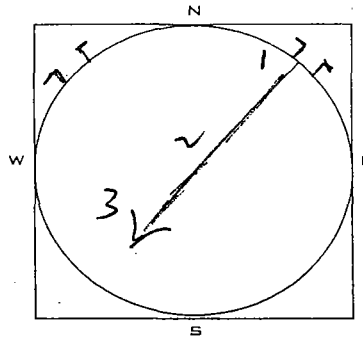
Analyst

William F. Cherry

cso4titr.xls

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER	CFM-1
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/23/05
OPERATOR	FRANZ KUECHNER
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



AMBIENT AIR TEMPERATURE		DEGREES F
BAROMETRIC PRESSURE		INCHES HG
ASSUMED MOISTURE	0	%
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

SCHMATIC OF STACK CROSS SECTION

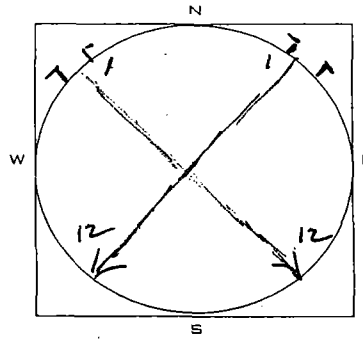
TRAVERSE POINT	CLOCK (TIME)	DRY GAS METER (CUBIC FEET)	PITOT DELTA P (INCHES) (OF WATER)	ORIFICE DELTA H (INCHES) (OF WATER)	DRY GAS TEMPERATURE (DEGREES F)		PUMP VACUUM (INCHES HG) GAUGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
					INLET	OUTLET				
1	10:07 AM	741.907	0.30	1.43	78°	76°	4.5		63°	157°
2	10:14	747.0	0.30	1.43	91°	77°	4.5		66°	154°
3	10:21	752.0	0.28	1.34	93°	78°	4.0		66°	154°
STOP	10:23 AM	756.864								AVG.
		14.957	AVG - Sq Rt. 0.5415	AVG. 1.40	AVG. 82.17					155°

No Leak at 15" (run start) ER

No Leak at 15" (end of run) ER

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER	1
LOCATION	CFM-1 / FLOW
DATE	1/25/05
OPERATOR	ERNEST KUBERSCHMANN
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254

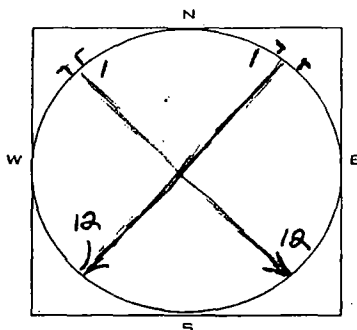


SCHEMATIC OF STACK CROSS SECTION

AMBIENT AIR TEMPERATURE		DEGREES F
BAROMETRIC PRESSURE		INCHES HG
ASSUMED MOISTURE	0	%
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

TRAVERSE POINT	CLOCK (TIME)	DRY GAS METER (CUBIC FEET)	PITOT DELTA P (INCHES) (OF WATER)	ORIFICE DELTA H (INCHES) (OF WATER)	DRY GAS TEMPERATURE (DEGREES F)		PUMP VACUUM (INCHES HG) GAUGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
					INLET	OUTLET				
1	9:50 AM		0.23							153°
2	↓		0.25							153°
3		0.28							153°	
4		0.30 0.28							153°	
5		0.28							154°	
6		0.30							154°	
7		0.30							153°	
8		0.28							154°	
9		0.28							154°	
10		0.28							154°	
11		0.28							154°	
12		0.25							154°	
STOP		10:00 AM								
1	10:40 AM		0.23							154°
2	↓		0.28							156°
3		0.28							154°	
4		0.30							154°	
5		0.30							154°	
6		0.30							156°	
7		0.30							156°	
8		0.30							156°	
9		0.32							156°	
10		0.32							156°	
11		0.30 0.28							156°	
12		0.23							156°	
STOP				0.5290						

PLANT	C SULFURIC
RUN NUMBER	2
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/25/05
OPERATOR	BRUCE KAROSKINAR
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



AMBIENT AIR TEMPERATURE	58	DEGREES F
BAROMETRIC PRESSURE	30.21	INCHES HG
ASSUMED MOISTURE		0%
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

SCHEMATIC OF STACK CROSS SECTION

No Leak at 15" (raw suit) ~~OK~~

No Leak at 15" (raw FDU) ~~OK~~

TRAVERSE POINT	CLOCK (TIME)	DRY GAS METER (CUBIC FEET)	PITOT DELTA P (INCHES) (OF WATER)	ORIFICE DELTA H (INCHES) (OF WATER)	DRY GAS TEMPERATURE (DEGREES F)		PUMP VACUUM (INCHES HG) GAUGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
					INLET	OUTLET				
1	11:12AM	758.409	0.23	1.10	80°	79°	6.0		68°	145°
2	11:15	760.3	0.25	1.19	88°	78°	6.2		67°	152°
3	11:18	762.3	0.25	1.19	91°	78°	6.2		67°	154°
4	11:21	764.3	0.28	1.34	92°	78°	6.9		66°	154°
5	11:24	766.4	0.28	1.34	93°	79°	6.9		66°	154°
6	11:27	768.5	0.30	1.43	94°	79°	7.2		64°	155°
7	11:30	770.6	0.30	1.43	94°	80°	7.2		65°	154°
8	11:33	772.8	0.30	1.43	95°	81°	7.2		67°	154°
9	11:36	774.9	0.30	1.43	96°	82°	7.2		67°	154°
10	11:39	777.2	0.30	1.43	98°	82°	7.2		68°	154°
11	11:42	779.4	0.28	1.34	98°	83°	6.9		67°	154°
12	11:45	781.5	0.23	1.10	98	83°	6.0		66°	154°
STOP	11:48AM	783.467								
1	11:55AM	783.467	0.23	1.10	86°	86°	6.0		68°	147°
2	11:58	785.4	0.25	1.19	97°	85°	6.2		67°	149°
3	12:01	787.3	0.28	1.34	98°	85°	6.8		67°	154°
4	12:04	789.4	0.28	1.34	98°	84°	6.8		66°	155°
5	12:07	791.5	0.28	1.34	99°	85°	6.8		67°	154°
6	12:10	793.6	0.28	1.34	100°	85°	6.8		67°	154°
7	12:13	795.7	0.30	1.43	100°	86°	7.2		67°	155°
8	12:16	798.0	0.33	1.57	101°	86°	7.4		66°	155°
9	12:19	800.2	0.30	1.43	100°	86°	7.2		68°	155°
10	12:22	802.5	0.30	1.43	101°	87°	7.2		67°	155°
11	12:25	804.7	0.28	1.34	101°	88°	6.8		66°	154°
12	12:28	806.9	0.25	1.19	102°	88°	6.2		66°	154°
STOP	12:31	808.843								
			AVG. Sq Rt.	AVG.	AVG.					153.29

50.434

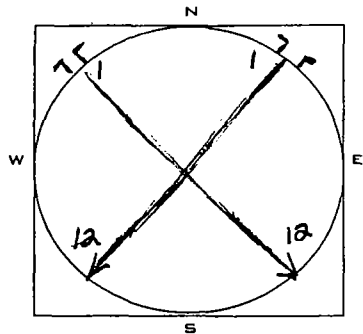
0.5268

1.3246

89.46

STACKS/COMPLIANCE TEST FIELD SHEET.XLS

PLANT	C SULFURIC
RUN NUMBER	3 2
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/05/05
OPERATOR	ERNEST KUBSCHMAR
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



SCHEMATIC OF STACK CROSS SECTION

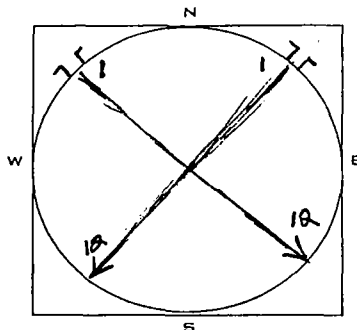
AMBIENT AIR TEMPERATURE	68	DEGREES F
BAROMETRIC PRESSURE	30.21	INCHES HG
ASSUMED MOISTURE	0	%
HEATER BOX SETTING	M/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	M/A	

No Leak at 15' (Pump Start) 4/5

No Leak at 15' (End of Run) 4/5

TRAVERSE POINT	CLOCK (TIME)	DRY GAS METER (CUBIC FEET)	PITOT DELTA P (INCHES) (OF WATER)	ORIFICE DELTA H (INCHES) (OF WATER)	DRY GAS TEMPERATURE (DEGREES F)		PUMP VACUUM (INCHES HG) GAUGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
					INLET	OUTLET				
1	12:58PM	811.611	0.23	1.10	88°	88°	3.0		68°	142°
2	1:02	813.6	0.25	1.19	99°	86°	3.5		67°	152°
3	1:05	815.6	0.28	1.34	101°	87°	3.8		67°	154°
4	1:08	817.7	0.30	1.43	102°	87°	4.0		67°	155°
5	1:11	819.9	0.33	1.57	103°	87°	4.2		66°	155°
6	1:14	822.2	0.28	1.34	103°	87°	3.8		66°	155°
7	1:17	824.3	0.30	1.43	104°	88°	4.0		65°	155°
8	1:20	826.5	0.30	1.43	105°	88°	4.0		66°	155°
9	1:23	828.7	0.30	1.43	106°	89°	4.0		64°	154°
10	1:26	830.9	0.28	1.34	106°	90°	3.8		63°	154°
11	1:29	833.1	0.28	1.34	106°	90°	3.8		64°	154°
12	1:32	834.2	0.23	1.10	106°	90°	3.0		66°	153°
STOP	1:35PM	837.156								
1	1:45PM	837.156	0.23	1.10	94°	91°	3.0		68°	149°
2	1:48	839.1	0.23	1.10	105°	92°	3.0		67°	151°
3	1:51	841.0	0.25	1.19	106°	91°	3.5		66°	154°
4	1:54	843.0	0.25	1.19	107°	92°	3.5		65°	155°
5	1:57	845.0	0.28	1.34	108°	92°	3.8		65°	154°
6	2:00	847.2	0.28	1.34	108°	91°	3.8		64°	154°
7	2:03	849.4	0.28	1.34	108°	92°	3.8		64°	155°
8	2:06	851.5	0.30	1.43	108°	92°	4.0		64°	154°
9	2:09	853.8	0.30	1.43	108°	93°	4.0		65°	155°
10	2:12	856.0	0.28	1.34	108°	93°	3.8		65°	154°
11	2:15	858.2	0.28	1.34	108°	93°	3.8		66°	154°
12	2:18	860.3	0.20	0.95	108°	93°	2.8		67°	153°
STOP	2:21PM	862.165								
		50.554	AVG. Sq. Rt. 0.5204	AVG. 1.2971	AVG. 97.23					AVG. 153.33

PLANT	C SULFURIC
RUN NUMBER	4 3
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/25/05
OPERATOR	ERNEST KRITZSCHMAR
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



AMBIENT AIR TEMPERATURE	64	DEGREES F
BAROMETRIC PRESSURE	30.21	INCHES HG
ASSUMED MOISTURE		0%
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

No Leak at 15" (run start) ~~4.8~~ SCHEMATIC OF STACK CROSS SECTION

No Leak at 15" (end of run) ~~4.8~~

TRAVERSE POINT	CLOCK (TIME)	DRY GAS METER (CUBIC FEET)	PITOT DELTA P (INCHES) (OF WATER)	ORIFICE DELTA H (INCHES) (OF WATER)	DRY GAS TEMPERATURE (DEGREES F)		PUMP VACUUM (INCHES HG) GAUGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
					INLET	OUTLET				
1	2:50 PM	864.107	0.23	1.12	90°	90°	4.0		68°	140°
2	2:53	866.1	0.25	1.21	100°	89°	4.2		67°	153°
3	2:56	868.1	0.25	1.21	102°	88°	4.2		67°	154°
4	2:59	870.1	0.28	1.36	103°	88°	4.5		66°	155°
5	3:02	872.2	0.28	1.36	103°	88°	4.5		66°	155°
6	3:05	874.4	0.28	1.36	104°	89°	4.5		65°	155°
7	3:08	876.5	0.30	1.46	105°	89°	4.8		63°	154°
8	3:11	878.7	0.32	1.60	105°	90°	5.0		63°	154°
9	3:14	881.1	0.33	1.60	106°	91°	5.0		64°	154°
10	3:17	883.3	0.30	1.46	107°	91°	4.8		63°	154°
11	3:20	885.6	0.30	1.46	107°	91°	4.8		63°	154°
12	3:23	887.8	0.23	1.12	107°	92°	4.0		65°	153°
STOP	3:26 PM	889.785								
1	3:34 PM	889.785	0.25	1.21	94°	92°	4.2		66°	147°
2	3:37	891.8	0.25	1.21	105°	92°	4.2		65°	152°
3	3:40	893.8	0.28	1.36	107°	92°	4.5		65°	154°
4	3:43	895.9	0.28	1.36	107°	92°	4.5		64°	154°
5	3:46	898.1	0.28	1.36	107°	92°	4.5		63°	154°
6	3:49	900.2	0.30	1.46	108°	92°	4.8		62°	154°
7	3:52	902.5	0.30	1.46	108°	92°	4.8		62°	155°
8	3:55	904.7	0.33	1.60	108°	92°	5.0		63°	154°
9	3:58	907.0	0.30	1.46	108°	92°	4.8		62°	154°
10	4:01	909.2	0.30	1.46	108°	93°	4.8		61°	154°
11	4:04	911.5	0.28	1.36	109°	93°	4.5		61°	153°
12	4:07	913.6	0.23	1.12	108°	93°	4.0		62°	153°
STOP	4:10 PM	915.572								
			AVG. Sq Rt.	AVG.	AVG.	97.90				AVG.

51.465

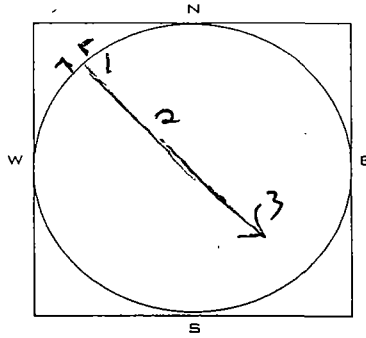
0.5292

1.3642

153.04

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER	5 CRM-2
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/25/05
OPERATOR	BENNET KUETSCHMAL
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



AMBIENT AIR TEMPERATURE		DEGREES F
BAROMETRIC PRESSURE		INCHES HG
ASSUMED MOISTURE	0	%
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

S SCHEMATIC OF STACK CROSS SECTION

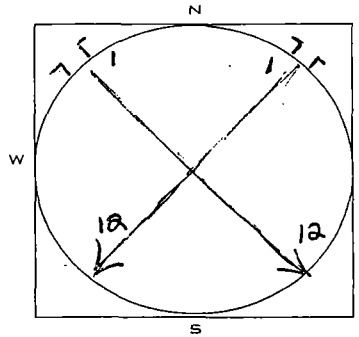
NO Calc of 15" (ROW START) ~~46~~

NO Calc of 15" (END ROW) ~~67~~

TRAVERSE POINT	CLOCK (TIME)	DRY GAS METER (CUBIC FEET)	PITOT DELTA P (INCHES) (OF WATER)	DRIFICE DELTA H (INCHES) (OF WATER)	DRY GAS TEMPERATURE (DEGREES F)		PUMP VACUUM (INCHES HG) GAUGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
					INLET	OUTLET				
1	4:36pm	916.609	0.28	1.36	92°	92°	7.0		67°	155°
2	4:43	921.6	0.28	1.36	102°	89°	7.0		66°	155°
3	4:50	926.6	0.30	1.46	103°	89°	7.5		65°	154°
STOP	4:57pm	931.758								
				1.39		94.50				154.67
		15.149								

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER	5 CRM-2 / PL00
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/25/05
OPERATOR	Emanuel Kraussman
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



SCHEMATIC OF STACK CROSS SECTION

AMBIENT AIR TEMPERATURE		DEGREES F
BAROMETRIC PRESSURE		INCHES HG
ASSUMED MOISTURE		0%
HEATER BOX SETTING	MIP	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

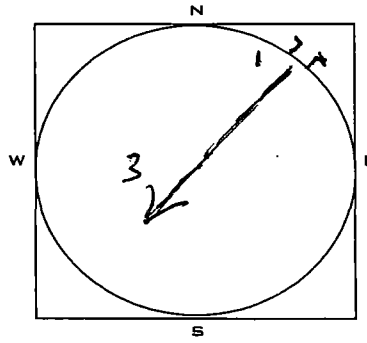
TRAVERSE POINT	CLOCK (TIME)	DRY GAS METER (CUBIC FEET)	PITOT DELTA P (INCHES) (OF WATER)	ORIFICE DELTA H (INCHES) (OF WATER)	DRY GAS TEMPERATURE (DEGREES F)		PUMP VACUUM (INCHES HG) GAUGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
					INLET	OUTLET				
1	4:28 PM		0.23							152°
2		0.25								154°
3		0.28								154°
4		0.28								154°
5		0.23								155°
6		0.28								156°
7		0.30								156°
8		0.33								157°
9		0.30								156°
10		0.30								156°
11		0.28								155°
12		0.23								154°
STOP	4:35									
1	5:07 PM		0.25							151°
2		0.25								153°
3		0.28								154°
4		0.28								155°
5		0.30								156°
6		0.30								155°
7		0.28								156°
8		0.28								156°
9		0.28								156°
10		0.28								157°
11		0.28								156°
12		0.25								155°
STOP	5:15 PM									

AVG - Sq Rt.

5259

INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER	6
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/26/05
OPERATOR	ZENYEST KABITSCHMAN
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



SCHMATIC OF STACK CROSS SECTION

AMBIENT AIR TEMPERATURE		DEGREES F
BAROMETRIC PRESSURE		INCHES HG
ASSUMED MOISTURE		0%
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

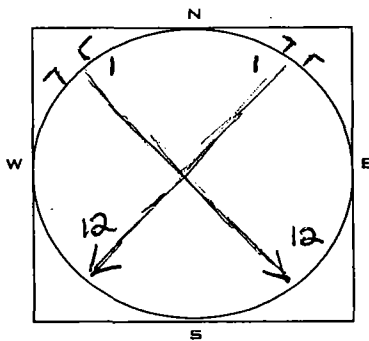
No Leak at 15" IN (Passant) 6/2

No Leak at 15" (END OF RUN) 6/2

TRAVERSE POINT	CLOCK (TIME)	DRY GAS METER (CUBIC FEET)	PITOT DELTA P (INCHES) (OF WATER)	ORIFICE DELTA H (INCHES) (OF WATER)	DRY GAS TEMPERATURE (DEGREES F)		PUMP VACUUM (INCHES HG) GAUGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
					INLET	OUTLET				
1	1:44PM	943.209	0.25	1.21	86°	79°	6.2		63°	158° 159°
2	1:51	952.9	0.28	1.36	97°	82°	7.0		63°	158°
3	1:58	937.8	0.30	1.46	104°	85°	7.3		64°	157°
STOP	2:05PM	962.943		AVG.						
		14.734		1.3433		89.17				

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER	6
LOCATION	CFM 3 / FLOW
DATE	1/26/05
OPERATOR	BRUNET KRISLUMAR
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



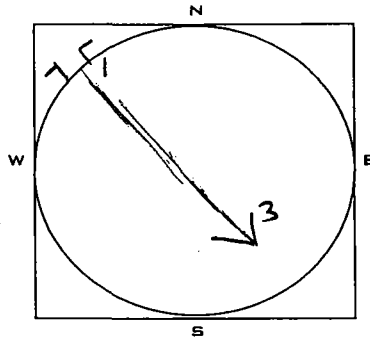
SCHEMATIC OF STACK CROSS SECTION

AMBIENT AIR TEMPERATURE		DEGREES F
BAROMETRIC PRESSURE		INCHES HG
ASSUMED MOISTURE	0%	
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

TRAVERSE POINT	CLOCK (TIME)	DRY GAS METER (CUBIC FEET)	PITOT DELTA P (INCHES) (OF WATER)	ORIFICE DELTA H (INCHES) (OF WATER)	DRY GAS TEMPERATURE (DEGREES F)		PUMP VACUUM (INCHES HG) GAUGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
					INLET	OUTLET				
1	1:35 PM		0.20							151
2			0.23							152
3			0.25							153
4			0.25							154
5			0.28							155°
6			0.28							156
7			0.28							156
8			0.30							156
9			0.33							157°
10			0.30							156°
11			0.30							156°
12	1:40 PM		0.23							155°
STOP										
1	2:08 PM		0.25							156°
2			0.25							157°
3			0.25							158°
4			0.25							158°
5			0.25							158°
6			0.28							159°
7			0.28							158°
8			0.28							159°
9			0.30							158°
10			0.30							159°
11			0.28							159°
12			0.25							159°
STOP	2:15 PM									
			AVG. Sq Rt.							156.46
			0.5176							

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER	7
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/26/05
OPERATOR	BERNARD KNUTSCHMAN
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



AMBIENT AIR TEMPERATURE		DEGREES F
BAROMETRIC PRESSURE		INCHES HG
ASSUMED MOISTURE		0 %
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

SCHEMATIC OF STACK CROSS SECTION

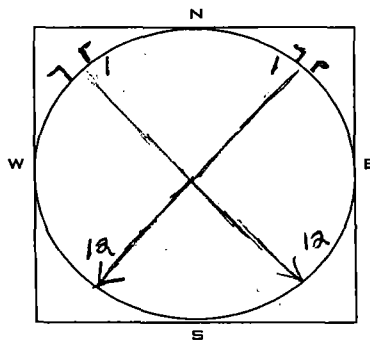
No Leak at 15" (run start) ~~4/2~~

No Leak at 15" (end of run) ~~4/2~~

TRAVERSE POINT	CLOCK (TIME)	DRY GAS METER (CUBIC FEET)	PITOT DELTA P (INCHES) (OF WATER)	DRIFICE DELTA H (INCHES) (OF WATER)	DRY GAS TEMPERATURE (DEGREES F)		PUMP VACUUM (INCHES HG) GAUGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
					INLET	OUTLET				
1	2:34 PM	968.810	0.28	1.36	91°	92°	4.9		64°	160° 158°
2	2:41	973.7	0.30	1.46	106°	90°	5.2		65°	158°
3	2:48	979.0	0.30	1.46	108°	92°	5.2		65°	158°
STOP	2:55 PM	984.062								
		15.252		1.4267		96.50				158°

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER	7
LOCATION	CFM 4 / FLOW
DATE	1/28/05
OPERATOR	BARNET KRATZSCHMAR
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



SCHEMATIC OF STACK CROSS SECTION

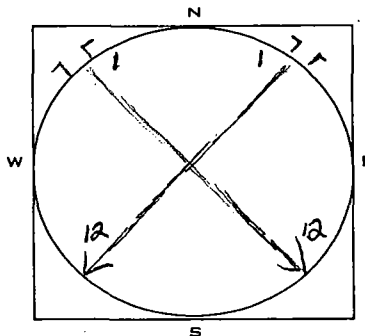
AMBIENT AIR TEMPERATURE		DEGREES F
BAROMETRIC PRESSURE		INCHES HG
ASSUMED MOISTURE	0	%
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

TRAVERSE POINT	CLOCK (TIME)	DRY GAS METER (CUBIC FEET)	PITOT DELTA P (INCHES) (OF WATER)	ORIFICE DELTA H (INCHES) (OF WATER)	DRY GAS TEMPERATURE (DEGREES F)		PUMP VACUUM (INCHES HG) GAUGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)	
					INLET	OUTLET					
1	2:28 PM		0.22							150°	
2			0.23							153°	
3			0.25							153°	
4			0.28							155°	
5			0.28							157°	
6			0.28							158°	
7			0.28							158°	
8			0.28							159°	
9			0.30							159°	
10			0.30							160°	
11			0.28							159°	
12	2:35 PM		0.23							159°	
STOP											
1	2:58 PM		0.25							157°	
2			0.25							157°	
3			0.28							157°	
4			0.28							158°	
5			0.25							158°	
6			0.28							159°	
7			0.28							159°	
8			0.30							159°	
9			0.28							159°	
10			0.28							159°	
11			0.28							159°	
12	3:05		0.25							159°	
STOP											
			AVG. Sq Rt.								157.50

0.5188

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER	8 CEM S/LOW
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/26/05
OPERATOR	ERNEST KARSCHNER
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



SCHEMATIC OF STACK CROSS SECTION

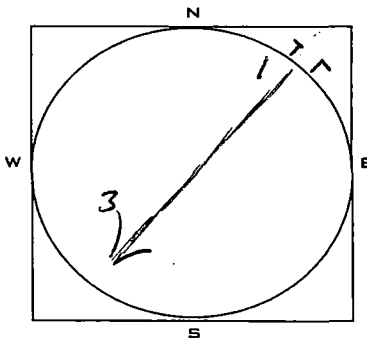
AMBIENT AIR TEMPERATURE		DEGREES F
BAROMETRIC PRESSURE		INCHES HG
ASSUMED MOISTURE		0%
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

TRAVERSE POINT	CLOCK (TIME)	DRY GAS METER (CUBIC FEET)	PITOT DELTA P (INCHES) (OF WATER)	ORIFICE DELTA H (INCHES) (OF WATER)	DRY GAS TEMPERATURE (DEGREES F)		PUMP VACUUM (INCHES HG) GAUGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
					INLET	OUTLET				
1	3:26 PM		0.23							153°
2		0.23								153°
3		0.25								154°
4		0.25								157°
5		0.28								158°
6		0.23								159°
7		0.30								160°
8		0.28								160°
9		0.30								160°
10		0.30								161°
11		0.28								160°
12		3:32 PM		0.23						
STOP										
1	3:57		0.23							156
2		0.23								157°
3		0.25								158°
4		0.28								158°
5		0.28								158°
6		0.28								159°
7		0.28								159°
8		0.30								160°
9		0.30								160°
10		0.28								160°
11		0.28								159°
12		4:05 PM		0.23						
STOP										
										158.25

0.5170

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER	8 <u>CEM 5</u>
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/26/05
OPERATOR	<u>ERNEST KRITSCHMAN</u>
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



SCHEMATIC OF STACK CROSS SECTION

AMBIENT AIR TEMPERATURE		DEGREES F
BAROMETRIC PRESSURE		INCHES HG
ASSUMED MOISTURE	0	%
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	M/P	

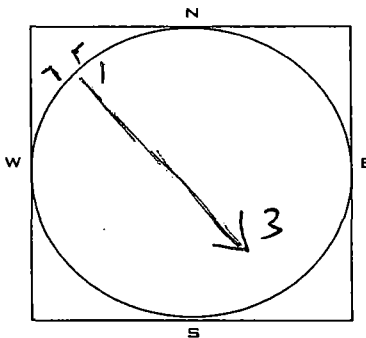
No Leak at 15" (RAW STREET) ~~OK~~

No Leak at 15" (END OF ROW) ~~OK~~

TRAVERSE POINT	CLOCK (TIME)	DRY GAS METER (CUBIC FEET)	PITOT DELTA P (INCHES) (OF WATER)	ORIFICE DELTA H (INCHES) (OF WATER)	DRY GAS TEMPERATURE (DEGREES F)		PUMP VACUUM (INCHES HG) GAUGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
					INLET	OUTLET				
1	3:33PM	985,901	0.25	1.21	92°	92°	3.0		62°	160° 158°
2	3:40PM	890,990.6 98	0.28	1.36	107°	92°	3.3		64°	158°
3	3:47PM	995.6	0.30	1.46	110°	92°	3.5		63°	158°
STOP	3:54PM	1000,710								
		14,809		1.3433		97.50				

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER	9 CEM 6
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/26/05
OPERATOR	BENJAMIN KROTSCHMAN
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



AMBIENT AIR TEMPERATURE		DEGREES F
BAROMETRIC PRESSURE		INCHES HG
ASSUMED MOISTURE	0	%
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

SCHEMATIC OF STACK CROSS SECTION

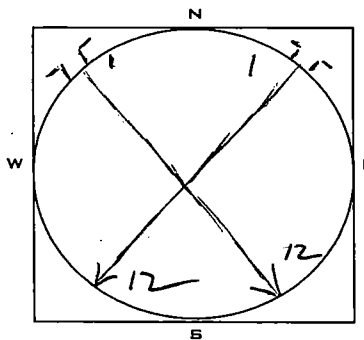
No Leak at 15" (run start) ~~EX~~

No Leak at 15" (end of run) ~~EX~~

TRAVERSE POINT	CLOCK (TIME)	DRY GAS METER (CUBIC FEET)	PITOT DELTA P (INCHES) (OF WATER)	ORIFICE DELTA H (INCHES) (OF WATER)	DRY GAS TEMPERATURE (DEGREES F)		PUMP VACUUM (INCHES HG) GAUGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
					INLET	OUTLET				
1	4:24 PM	003,707	0.28	1.36	94°	93°	6.8		61°	158°
2	4:31	008.6	0.30	1.46	105°	92°	7.0		59°	158°
3	4:38	013.8	0.30	1.46	108°	93°	7.0		60°	158°
STOP	4:45 PM	018,932								
		15.225		1.4267		97.50				

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER	9
LOCATION	CFM 6 / FLOW
DATE	1/26/05
OPERATOR	ERNEST KURTSCHMAN
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



SCHEMATIC OF STACK CROSS SECTION

AMBIENT AIR TEMPERATURE		DEGREES F
BAROMETRIC PRESSURE		INCHES HG
ASSUMED MOISTURE		0%
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

TRAVERSE POINT	CLOCK (TIME)	DRY GAS METER (CUBIC FEET)	PITOT DELTA P (INCHES) (OF WATER)	ORIFICE DELTA H (INCHES) (OF WATER)	DRY GAS TEMPERATURE (DEGREES F)		PUMP VACUUM (INCHES HG) GAUGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
					INLET	OUTLET				
1	4:15 PM		0.23							148°
2			0.23							149°
3			0.25							152°
4			0.25							154°
5			0.25							155°
6			0.28							157°
7			0.28							158°
8			0.30							159°
9			0.28							160°
10			0.28							159°
11			0.28							159°
12			0.23							159°
STOP	4:22 PM									
1	4:47		0.23							156°
2			0.23							158°
3			0.25							158°
4			0.25							159°
5			0.05							159°
6			0.28							159°
7			0.30							159°
8			0.30							160°
9			0.28							160°
10			0.30							159°
11			0.28							159°
12	4:54 PM		0.25							159°
STOP			AVG. Sq Rt.							157.25
			0.5134							

O2 Testing by Orsat

Tedlar
 Bags Orsat
 Leak Leak

Date	Plant	Checked		Checked		Time Collected	Time Analyzed	CO2	O2*	Analyst	AVG
		Yes	No	Yes	No						
1/26/05	1 CSAP	✓		✓		1405	1500	0.0	3.2	FFD	3.3
	2							0.0	3.4		
	3							0.0	3.3		
1/26	1 CSAP					1455	1540	0.0	3.4	FFD	3.3
	2							0.0	3.3		
	3							0.0	3.3		
1/26	1 CSAP					1554	1630	0.0	3.4	FFD	3.4
	2							0.0	3.3		
	3							0.0	3.4		
1/26	1 CSAP					1645	1720	0.0	3.5	FFD	3.4
	2							0.0	3.3		
	3							0.0	3.5		
	1										
	2										
	3										
	1										
	2										
	3										
	1										
	2										
	3										
	1										
	2										
	3										
	1										
	2										
	3										
	1										
	2										
	3										

*O2 is actual O2 reading minus actual CO2 reading

O2 Testing by Orsat

Tedlar
 Bags Orsat
 Leak Leak

Date	Plant	Checked		Checked		Time Collected	Time Analyzed	CO2	O2*	Analyst	AVG
		Yes	No	Yes	No						
1/25/05	1 CSAP	✓		✓		1028	1130	0.0	3.5	FTD	3.4
	2							0.0	3.4		
	3							0.0	3.4		
1/25	1					1231	1340	0.0	3.5	FTD	3.5
	2							0.0	3.4		
	3							0.0	3.5		
1/25	1					1421	1530	0.0	3.5	FTD	3.6
	2							0.0	3.6		
	3							0.0	3.6		
1/25	1					1610	1715	0.0	3.6	EK	3.6
	2							0.0	3.55		
	3							0.0	3.6		
1/25	1					1715	1810	0.0	3.6	EK	3.6
	2							0.0	3.6		
	3							0.0	3.6		
	1										
	2										
	3										
	1										
	2										
	3										
	1										
	2										
	3										
	1										
	2										
	3										
	1										
	2										
	3										

*O2 is actual O2 reading minus actual CO2 reading

Southern Environmental Sciences, Inc.

1204 North Wheeler Street □ Plant City, Florida 33563-2354 □ (813) 752-5014, Fax (813) 752-2475

February 21, 2004

Mr. Mike Messina
CF INDUSTRIES, INC.
Plant City Phosphate Complex
P. O. Drawer L
Plant City, Florida 33564

Re: Meter Box Calibration &
Dry Gas Meter Calibration


Dear Mike:

The attached calibrations were performed on the Lear Seigler control box (serial # C254) and Rockwell dry gas meter (serial # JA631105). All calibrations were performed using a wet test meter that is checked annually using a liquid displacement method as described in "Quality Assurance Handbook for Air Pollution Measurement Systems: Volume III, Stationary Source Specific Methods". A copy of the calibration check is enclosed.

Please let me know if we can be of any further assistance.

Very truly yours,

SOUTHERN ENVIRONMENTAL
SCIENCES, INC.



Mark S. Gierke
Source Testing Manager

MSG/mg

letters\cf

DRY GAS METER CALIBRATION

Meter Box Number: Lear Seigler Barometric Pressure: 30.02
 Serial No: C254 Wet Test Meter No.: P-576
 Date: 02/21/2004 Calibrated By: MG

Orifice Manometer Setting (Delta H) in. H2O	Gas Volume		Temperature		Time (DELTA) Min	Yi	Delta H@ in. H2O
	Wet Test Meter (Vw) ft. ³	Dry Gas Meter (Vd) ft. ³	Wet Test Meter (Tw) Deg F	Dry Gas Meter (Td) Deg F			
0.50	5.000	5.245	64.0	88.75	11.95	0.997	1.509
1.00	6.000	6.278	64.5	91.3	10.23	1.002	1.532
1.50	10.400	10.795	65.0	93.0	14.55	1.011	1.545
2.00	10.000	10.321	65.0	94.5	12.15	1.018	1.550
3.00	10.000	10.285	65.0	96.0	9.80	1.022	1.508
4.00	10.000	10.255	63.0	87.5	8.57	1.011	1.550
						1.010	1.532

Delta H@ Acceptable Range 1.732 to 1.332
 Yi Acceptable Range 1.030 to 0.990

$$Y_i = \frac{V_w P_b (T_d + 460)}{V_d (P_b + \Delta H / 13.6) (T_w + 460)}$$

$$\Delta H @ = \frac{.0317 (\Delta H) [(T_w + 460) (\Theta) / V_w]^2}{P_b (T_d + 460)}$$

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.
- Td = Average temperature of the gas in the dry gas meter, deg F.
- Delta H = Pressure differential across orifice. in. H2O.
- 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
- Pb = Barometric pressure, in. Hg
- Theta = Time of calibration run, min.

SOUTHERN ENVIRONMENTAL SCIENCES, INC.
 1204 North Wheeler Street
 Plant City, Florida 33563
 Phone (813) 752-5014 Fax (813) 752-2475

43

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

WET TEST METER CALIBRATION CHECK

Wet Test Meter #: P-576
 Manufacturer: American Meter
 Date: 01/05/2004

Barometric Pressure: 30.02
 Calibration Factor: 1.00
 Checked by: MG

Gas Volume		Temperature		
Liquid Displaced (Ld) ft. ³	Wet Test Meter (Vw) ft. ³	Ambient (Ta) Deg F	Wet Test Meter (Tw) Deg F	Yi
1.198	1.202	65.0	67.0	1.000
1.198	1.204	65.0	67.0	0.999
1.195	1.204	65.0	68.0	0.998
1.197	1.204	65.0	68.0	1.000
1.199	1.202	65.0	68.0	1.003
1.199	1.204	65.0	67.0	1.000
				1.000

$$Y_i = \frac{V_w P_b (T_w + 460)}{V_d (P_b + \Delta H / 13.6) (T_a + 460)}$$

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.
- Ta = Ambient temperature, deg F.
- Yi = Accuracy of wet test meter to displaced liquid.
- Y = Average accuracy of wet test meter.
- Pb = Barometric pressure, in. Hg

STANDARD DRY GAS METER CALIBRATION

GAS METER MANUF.	ROCKWELL	PERFORMED FOR	C. F. Industries - Plant City
MODEL #	175-S	DATE	02/21/2004
SERIAL #	JA 631105	BAROMETRIC PRESSURE	30.02
WET TEST METER #	P-576	LEAK CHECK	0.00 CFM @ 15" Hg

Approximate Flowrate (CFM)	Gas Volume		Temperature		Dry Gas Meter Delta P ("H2O)	Time (THETA) Min.	Flowrate (CFM)	Dry Gas Meter Coeff. (Yds)	Avg. Gas Meter Coeff. (Yds)
	Wet Test Meter (Vw) ft.^3	Dry Gas Meter (Vd) ft.^3	Wet Test Meter (Tw) Deg F	Dry Gas Meter (Td) Deg F					
0.40	5.000	4.960	68.5	77.0	0.12	10.15	0.494	1.024	
0.40	5.000	4.975	69.5	79.0	0.12	10.97	0.456	1.023	1.024
0.40	5.000	4.965	70.0	79.5	0.12	10.95	0.456	1.025	
0.60	5.000	5.057	70.0	80.0	0.38	8.10	0.617	1.006	
0.60	6.000	6.115	70.0	80.0	0.38	9.68	0.620	0.999	1.004
0.60	5.000	5.048	70.0	80.0	0.38	8.12	0.615	1.008	
0.80	7.000	7.197	69.0	79.5	0.75	8.03	0.873	0.990	
0.80	6.000	6.168	69.0	79.0	0.75	6.87	0.875	0.989	0.988
0.80	5.000	5.151	70.0	79.0	0.75	5.95	0.840	0.985	
1.00	5.000	5.168	69.0	80.0	1.35	4.65	1.077	0.984	
1.00	5.000	5.175	69.0	80.0	1.35	4.72	1.061	0.983	0.985
1.00	5.000	5.152	69.0	80.0	1.35	4.70	1.065	0.987	
1.20	5.000	5.241	69.0	80.0	1.50	3.92	1.277	0.970	
1.20	5.000	5.185	70.0	80.0	1.50	4.05	1.234	0.979	0.975
1.20	5.000	5.198	70.0	80.0	1.50	4.08	1.225	0.976	

$$Q = \frac{P_b \times V_w \times 528}{(T_w + 460) \times \Theta \times 29.92}$$

$$Y_{ds} = \frac{V_w}{V_d} \times \frac{(T_d + 460)}{(T_w + 460)} \times \frac{P_b}{[P_b + (\Delta P / 13.6)]}$$

- 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.
 - Td = Average temperature of the gas in the dry gas meter, deg F.
 - Delta P = Dry gas meter pressure differential, in. H2O.
 - Yds = Dry gas meter Coefficient
 - Pb = Barometric pressure, in. Hg
 - Theta = Time of calibration run, min.

45

STANDARD METER CALIBRATION CURVE

GAS METER MANUF.	ROCKWELL	PERFORMED FOR	C. F. Industries - Plant City
MODEL #	175-S	DATE	02/21/2004
SERIAL #	JA 631105		

FLOWRATE (CFM)	DRY GAS METER COEFF. (Yds)
0.469	1.024
0.617	1.004
0.863	0.988
1.068	0.985
1.245	0.975

Regression Output:

Constant	1.0344084
Std Err of Y Est	0.0022086
R Squared	0.9494629
No. of Observations	5
Degrees of Freedom	3

X Coefficient(s)	-0.025997
Std Err of Coef.	0.0034628

FLOW (CFM)	CORRECTION FACTOR
0.40	1.024
0.45	1.023
0.50	1.021
0.55	1.020
0.60	1.019
0.65	1.018
0.70	1.016
0.75	1.015
0.80	1.014
0.85	1.012
0.90	1.011
0.95	1.010
1.00	1.008
1.05	1.007
1.10	1.006
1.15	1.005
1.20	1.003

SOUTHERN ENVIRONMENTAL SCIENCES, INC.
 1204 North Wheeler Street
 Plant City, Florida 33563
 Phone (813) 752-5014 Fax (813) 752-2475

46

TYPE S PITOT TUBE INSPECTION DATA

Date: August 6, 2004

Pitot Number: 8-6-04-4

Pitot tube assembly level? yes x no

Pitot tube opening damage? yes no x
If yes explain below.

$\alpha 1$ 1 ($< 10^\circ$)

$\alpha 2$ 0 ($< 10^\circ$)

$\beta 1 =$ 0 ($< 5^\circ$)

$\beta 2$ 1 ($< 5^\circ$)

$\gamma =$ 2 $^\circ$

$\theta =$ 0 $^\circ$

$A =$ 0.997 cm (in)

$Z = A \text{ SINE } \gamma =$ 0.035 cm (in) Where Z is < 0.32 cm ($< 1/8$ in)

$W = A \text{ SINE } \theta =$ 0.000 cm (in) Where W is < 0.08 cm ($< 1/32$ in)

$P_a =$ 0.499 cm, in

$P_b =$ 0.499 cm, in

$P = P_a + P_b /$ = 0.499 cm, in

$D_t =$ 0.375 cm, in

$P/D_t =$ 1.329 Where $P / D_p \geq 1.05$ and ≤ 1.50

Comments: Client: CF Industries

Type of Probe and Effective 31-674X-B1

$C_p = 0.84$

ANNUAL LSI STACKBOX (C254) THERMOCOUPLE CALIBRATIONS

Date: 10/15/04

FOR TEMPERATURES 0 TO 110 DEGREES C
NIST Traceable Thermometer # J96-258

FOR TEMPERATURES 110 TO 200 DEGREES C
NIST Traceable Thermometer # 90B-2024

Time: 940-1550

Initial *[Signature]*

Display	Item	Ice Water Point			Ambiont Water Point			Hot Water Point			Hot Oil Point		
		Thermocouple or RTD Reading (Degrees F)	NIST Reading		Thermocouple or RTD Reading (Degrees F)	NIST Reading		Thermocouple or RTD Reading (Degrees F)	NIST Reading		Thermocouple or RTD Reading (Degrees F)	NIST Reading	
			Actual	Con- version to		Actual	Con- version to		Actual	Con- version to		Actual	Con- version to
			Degrees			Degrees			Degrees			Degrees	
C	F	C	F	C	F	C	F						
[1] Stack	Probe 4.0ft. #2405	33.6	2.2	36.0	73	23.4	74.1	153	65.3	149.5	N/A	N/A	N/A
	Probe 6.0ft. #1009	34.1	2.2	36.0	74	23.4	74.1	152	65.3	149.5	N/A	N/A	N/A
	Probe 10.5ft. #2329	35.3	2.2	36.0	74	23.4	74.1	153	65.3	149.5	N/A	N/A	N/A
[2] Probe (Probe Liner Heater)	Probe 4.0ft. #2405	38	2.2	36.0	74	23.4	74.1	149	65.3	149.5	227	109.2	228.6
	Probe 6.0ft. #1009	38	2.2	36.0	73	23.4	74.1	148	65.3	149.5	226	109.2	228.6
	Probe 10.5ft. #2329	35	2.2	36.0	73	23.4	74.1	148	65.3	149.5	226	109.2	228.6
[3] Hot Box	Thermocouple	38	2.2	36.0	73	23.4	74.1	150	65.3	149.5	225	109.2	228.6
	External Sensor	OUT OF RANGE			75	23.4	74.1	150	65.3	149.5	230	109.2	228.6
[4] Umbilical (Coldbox Exit)		35	2.2	36.0	72	23.4	74.1	148	65.3	149.5	N/A	N/A	N/A
[5] DGM Inlet		34	2.2	36.0	71	23.4	74.1	147	65.3	149.5	N/A	N/A	N/A
[6] DGM Exit		34	2.2	36.0	71	23.4	74.1	147	65.3	149.5	N/A	N/A	N/A

POSTTEST DRY GAS METER CALIBRATION DATA FORM (English units)

Test numbers _____ Date 1/28/05 Meter box number C254 Plant C SULFURIC
 Barometric pressure, P_b = 30.24 in. Hg Dry gas meter number 463613 Pretest Y 1.010

Orifice manometer setting, (ΔH), in. H ₂ O	Gas volume		Temperature				Time (θ), min	Vacuum setting, in. Hg	Y_i	Y_i	$V_w P_b (t_d + 460)$	
	Dry test meter (V_w), ft ³	Dry gas meter (V_d), ft ³	Dry test meter (t_w), °F	Dry gas meter								$V_d P_b + \Delta H$
				Inlet (t_{d_i}), °F	Outlet (t_{d_o}), °F	Average (t_d), °F						
1.35	277.686 267.513	039.664 029.181	75° 72°	98° 80°	81° 74°	83.25	15.0	7.5	0.9849	(10.173)(30.24)(543.25) (10.483)(30.339)(533.2)		
1.35	237.814 277.686	030.249 039.664	77° 75°	106° 93°	85° 82°	94.00	15.0	7.5	0.9857	(10.128)(30.24)(554.00) (10.585)(30.339)(536.00)		
1.35	293.015 287.814	060.962 050.249	73° 77°	107° 98°	92° 91°	97.00	15.0	7.5	0.9881	(10.201)(30.24)(557.00) (10.713)(30.339)(535.00)		
										$Y = 0.9863$		

^a If there is only one thermometer on the dry gas meter, record the temperature under t_d .

V_w = Gas volume passing through the wet test meter, ft³.

V_d = Gas volume passing through the dry gas meter, ft³.

t_w = Temperature of the gas in the wet test meter, °F.

t_{d_i} = Temperature of the inlet gas of the dry gas meter, °F.

t_{d_o} = Temperature of the outlet gas of the dry gas meter, °F.

t_d = Average temperature of the gas in the dry gas meter, obtained by the average of t_{d_i} and t_{d_o} , °F.

ΔH = Pressure differential across orifice, in H₂O.

Y_i = 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 $\pm 0.05Y$

P_b = Barometric pressure, in. Hg.

θ = Time of calibration run, min.

Dry test meter number Rockwell-JN631105 : Quality Assurance Handbook M5-2.4A

*Within $\pm 0.05Y$
1/28/05, 2:20 PM
[Signature]*

P.O. Drawer L.
Plant City, Florida 33564-9007
Telephone: 813/782-1591



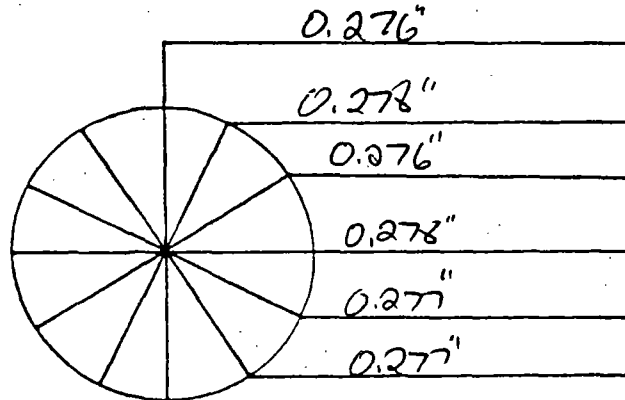
CF Industries, Inc.
Plant City Phosphate Complex

PROBE NOZZLE CALIBRATION DATA

Nozzle Identification Number: 1384

Calibrated by: Ernest Karschman

Date: 1/25/05



Instructions:

Measure to nearest 0.001"

Tolerance:

0.001" for mean of at least three readings.
Maximum deviation between readings ≤ 0.004 ".

Nozzle diameter, D_n : 0.277 In.

Nozzle area A_n : 0.000413 ft²

$$A_n = \frac{\pi}{144} \left(\frac{D_n}{2} \right)^2$$

CF INDUSTRIES, INC.
 PLANT CITY PHOSPHATE COMPLEX
SOURCE SAMPLING NOMENCLATURE SHEET

pb	=	Barometric pressure, in Hg
Ps	=	Stack pressure, in Hg
As	=	Stack area, square feet
As'	=	Effective area of positive stack gas flow, square feet
Ts	=	Stack temperature, °R
Tm	=	Meter temperature, °R
$\sqrt{\Delta P_{ave}}$	=	Average square root of velocity head, in. H ₂ O
Cp	=	S-type pitot tube correction factor
Kp	=	85.48 ft/sec (lb mole - °R) ^{1/2}
Ms	=	Molecular weight of gas at stack conditions
Md	=	Molecular weight of gas at dry conditions
Bwo	=	Proportion by volume of water vapor in gas stream
Vwstd	=	Volume of water vapor in gas sample
V	=	Total volume of liquid collected in impinger and silica gel
P H ₂ O	=	Density of water, 1 gm/ml
M H ₂ O	=	Molecular weight of water, 18 lb/lb mole
R	=	Ideal gas constant, 28.83 inches Hg-cu ft/lb-mole °R
T std	=	Absolute temperature at standard conditions, 528 °R
P std	=	Absolute pressure at standard conditions, 29.92 in. Hg
Vm std	=	Volume of gas sample through dry gas meter (standard conditions) ft ³
Vm	=	Volume of gas sample through the dry gas meter (meter condition)
Δ H	=	Orifice pressure of sampling meter
S.T.P.	=	Standard condition, dry, 528 °R, 29.92 inches Hg
An	=	Sampling nozzle area, square feet
Vs	=	Velocity of stack gas, feet per sec.
Qs	=	Volumetric flow rate, dry basis, standard condition, CFM
C mist	=	Concentration of mist in stack gas, grs/SCF
C SO ₂	=	Concentration of SO ₂ in stack gas, grs/SCF
C NH ₃	=	Concentration of NH ₃ in stack gas, grs/SCF
I	=	Percent isokinetic volume sampled
∅	=	Sampling time (minutes)

$$V_{wstd} = 0.04707 \text{ cuft/ml } (V_1)$$

$$V_{mstd} = V_m \left(\frac{T_{std}}{T_m} \right) \left(\frac{P_{bar} + \frac{\Delta H}{13.6}}{P_{std}} \right)$$

$$B_{wo} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}}$$

$$M_s = M_d (1 - B_{wo}) + 18 (B_{wo})$$

$$V_s(\text{avg}) = K_p C_p \sqrt{P(\text{avg})} \sqrt{\frac{460 + T_s}{M_s P_s}}$$

$$Q_s = 60 (1 - B_{wo}) V_s A_s \left(\frac{T_{std}}{T_s} \right) \left(\frac{P_s}{P_{std}} \right)$$

PERCENT ISOKINETIC

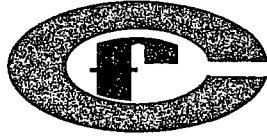
$$I = \frac{T_s (1.667) \left[(0.00267) V_1 + \left(\frac{T_{std}}{T_m} \right) P_{bar} + \frac{\Delta H}{13.6} \right]}{\theta V_s P_s A_n}$$

$$C_s = 0.0154 \text{ grs/mg } \frac{M_f \text{ or } M_n}{V_{mstd}}$$

$$\text{lbs/hr} = (C_s \times Q_s \times 60) / 7000$$

$$\text{lbs/day} = \text{lbs/hr} \times 24 \text{ hrs/day}$$

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CF Industries Inc.
Plant City Phosphate Complex

CALIBRATION DRIFT EVALUATION

Sulfuric Acid Plant C

Continuous Emissions Monitoring System

January 23, 2005 through January 29, 2005

FDEP Facility ID No. 0570005
E.U. ID NO. 007

CALIBRATION DRIFT EVALUATION

The CF Industries, Inc., Instrument Shop tests the calibration of the SO₂ and O₂ Continuous Emissions Monitoring Systems (CEMS) against certified reference gases daily. Tables 1 and 2 show calibration drift test results for Sulfuric Acid Plant C for the period, January 23 through January 29, 2005. Both the SO₂ and O₂ calibration drift results are within the rule specification ranges.

Attachment 1 provides the CEMS Calibration Test Log for the month of January 2005. Attachment 2 provided zero point drift data for the SO₂ and O₂ CEMS.

T.A. Edwards
3/4/2005

Table 1
Calibration Drift Determination - "C" Sulfuric Acid Plant
January 23 - January 29, 2005 - SO2 CEMS

Date	Reference Value ppm (a)	CEMS Response ppm	Calibration Drift ppm	Calibration Drift, % of span value (b)
23-Jan-05	904	897.0	7	0.77
24-Jan-05	904	910.0	6	0.66
25-Jan-05	904	900.0	4	0.44
26-Jan-05	904	896.0	8	0.88
27-Jan-05	904	893.0	11	1.22
28-Jan-05	904	899.0	5	0.55
29-Jan-05	904	898.0	6	0.66

- (a) The zero point is checked daily against the certified SO2 reference gas (0 ppm SO2).
- (b) The maximum calibration drift performance specification for the SO2 CEMS is 2.5% of the span value (40 CFR 60, Appendix B, P.S.2,13.1). The span value is 1000 ppm as specified at 40 CFR 60.84(a).

Table 2
Calibration Drift Determination - "C" Sulfuric Acid Plant
January 23 - January 29, 2005 - O2 CEMS

Date	Reference Value % O2 (a)	CEMS Response % O2	Calibration Drift % O2 (b)
23-Jan-05	15.1	15.0	0.1
24-Jan-05	15.1	15.1	0.0
25-Jan-05	15.1	15.1	0.0
26-Jan-05	15.1	15.1	0.0
27-Jan-05	15.1	15.1	0.0
28-Jan-05	15.1	15.3	0.2
29-Jan-05	15.1	15.2	0.1

- (a) The zero point is checked daily against the certified O2 reference gas (0% O2). The CEMS reading is also checked daily against clean instrument air at 20.9% O2.
- (b) The maximum calibration drift performance specification for the O2 CEMS is 0.5% O2 (40CFR60, Appendix B, P.S.3,13.1).

ATTACHMENT 1 – CEMS CALIBRATION TEST

LOG – January 2005

INSTRUMENT MAINTENANCE PROCEDURE
C & D SULFURIC ACID

39560-Q

PAGE 3

DAILY SO₂ LOG

PLANT C

MONTH Jan 2004 2005

DAY	TECH	O2	ZERO REF. COUNTS	SPAN	%ERROR	DATE OF NEW BOTTLE	LOG SPAN TIME
1	vito	14.7	-2612	908	+0.44		7:10 Am - 7:45 Am
2	v.i.t.	14.7	-2624	913	+0.99		7:15 Am - 7:42 Am
3	vito	14.7	-2626	908	+0.44		7:15 Am - 7:42 Am
4	BVO	14.7	-2638	907	+0.33		7:10 - 7:45 AM
5	BVO	14.7	-2640	905	+0.1		7:08 - 7:45 AM
6	BVO	14.7	-2643	898	-0.66		7:08 - 7:45 AM
7	vito	14.7	-2650	901	-0.36		7:15 Am - 7:47 Am
8	VITO	14.7	-2659	905	+0.1		7:09 Am - 7:39 Am
9	Vito	14.7	-2667	905	+0.1		7:15 Am - 7:45 Am
10	DMW	14.7	-2664	903	-0.1		7:15 Am - 7:45 Am
11	DMW	14.8	-2674	903	-0.1		7:10 AM - 7:40 Am
12	EH	14.7	-2678	902	-0.22		8:05 Am - 8:45 Am
13	Y.O.	14.7	-2689	902	-0.22		07:14 AM - 07:41 A
14	Y.O.	14.7	-2684	897	-0.77		07:12 AM - 07:40 AM
15	Y.O.	14.7	-2694	904	0		7:05 Am - 7:33 Am
16	Y.O.	14.8	-2696	901	-0.36		9:32 Am - 10:01 Am
17	VITO	14.8	-2713	907	+0.33		7:10 Am - 7:40 Am
18	VITO	14.8	-2703	904	+0.44		7:10 Am - 7:40 Am
19	Y.O.	14.8	-2706	902	-0.22		7:27 AM - 7:54 AM
20	Y.O.	14.8	-2718	901	-0.36		7:25 AM - 7:53 AM
21	Y.O.	14.9	-2726	898	-0.6		7:05 Am - 7:35 Am
22	AGC	14.9	-2735	898	-0.6		7:05 Am - 7:35 Am
23	VITO	15.0	-2744	897	-0.77		7:00 Am - 7:39 Am
24	Y.O.	15.1	-2729	910	+0.66		7:11 Am - 7:39 Am
25	MAD	15.1	-2747	900	-0.44		08:02 - 08:30
26	Y.O.	15.1	-2759	896	-0.88		09:11 - 10:07 Am
27	Y.O.	15.1	-2764	893	-1.2		07:11 - 07:38 Am
28	BVO	15.3	-2775	899	-0.5		07:16 - 07:46 AM
29	BVO	15.2	-2781	898	-0.6		07:16 - 07:46 AM
30	BVO	15.2	-2777	895	-0.99		07:04 - 07:35 AM
31	Y.O.	15.3	-2786	897	-0.77		07:13 - 07:40 AM

SO2 BOTTLE #1 BOTTLE #2
 SER# CC152967 PPM 904 SERIAL # _____ PPM _____
 O2 BOTTLE #1 BOTTLE #2
 SER# CC59098 PPM 15.1 SERIAL # CC111217 PPM 15.1 12/1/04

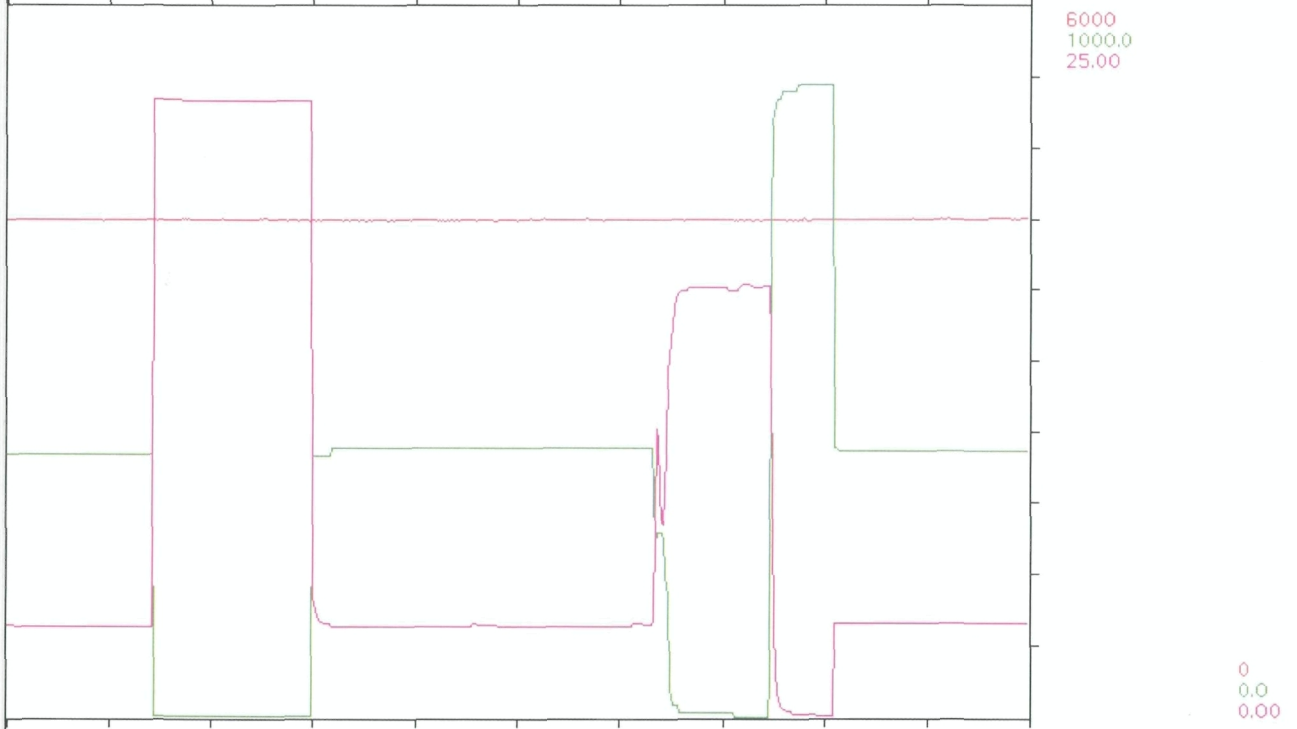
ATTACHMENT 2 – CEMS SO₂ and O₂
Zero Point Graphs from Aspen – January 25-26, 2005

Historical Trend Display 5

Abort Status Modify... Groups... Create new... Tabular Page Zoom Shift

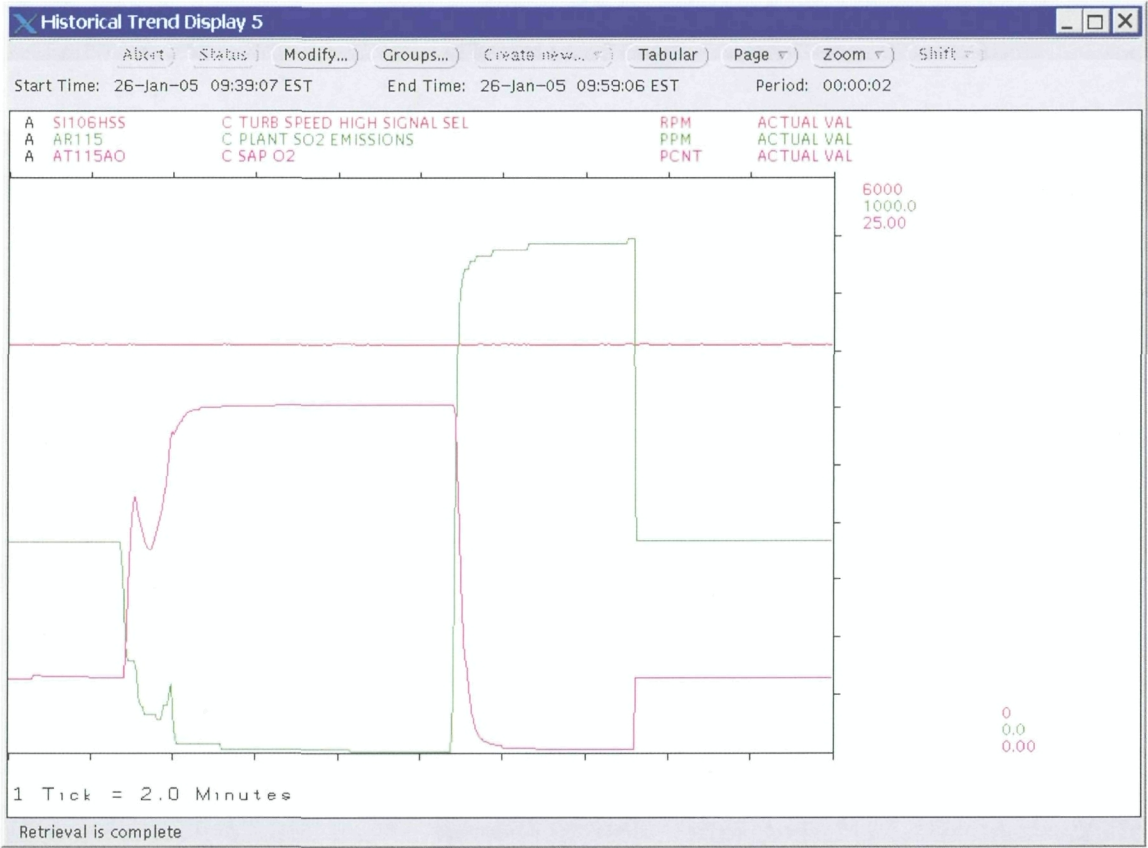
Start Time: 25-Jan-05 07:19:10 EST End Time: 25-Jan-05 08:29:09 EST Period: 00:00:07

A	SI106HSS	C	TURB SPEED HIGH SIGNAL SEL	RPM	ACTUAL VAL
A	AR115	C	PLANT SO2 EMISSIONS	PPM	ACTUAL VAL
A	AT115AO	C	SAP O2	PCNT	ACTUAL VAL



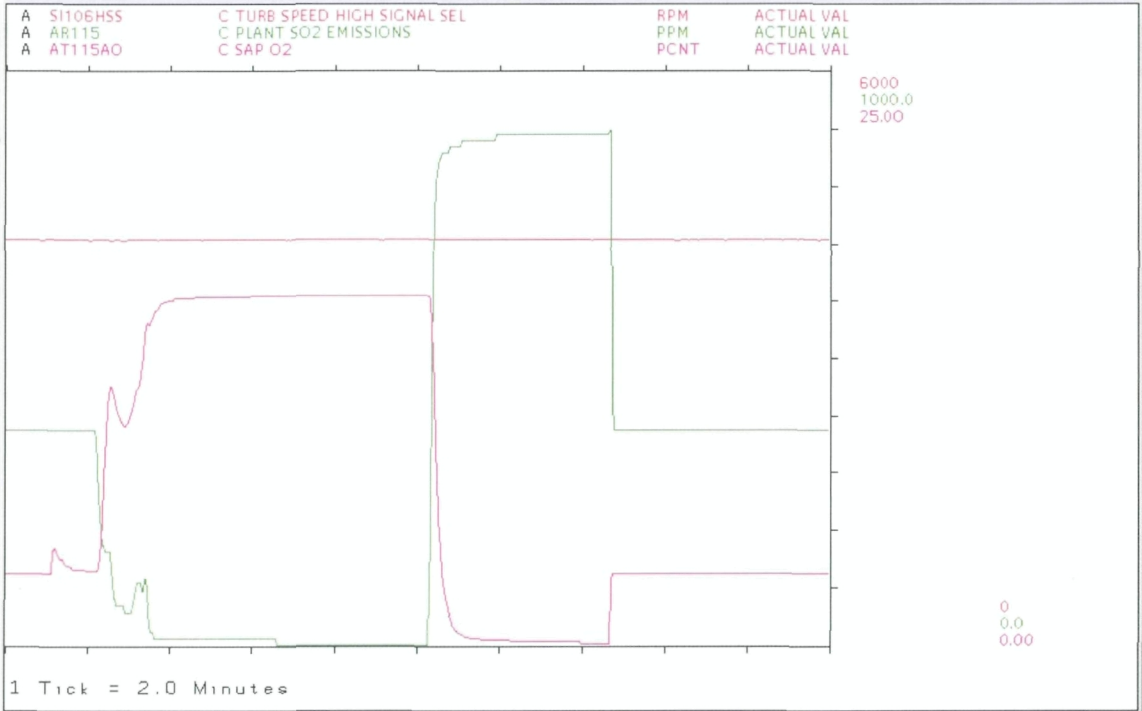
1 Tick = 7.0 Minutes

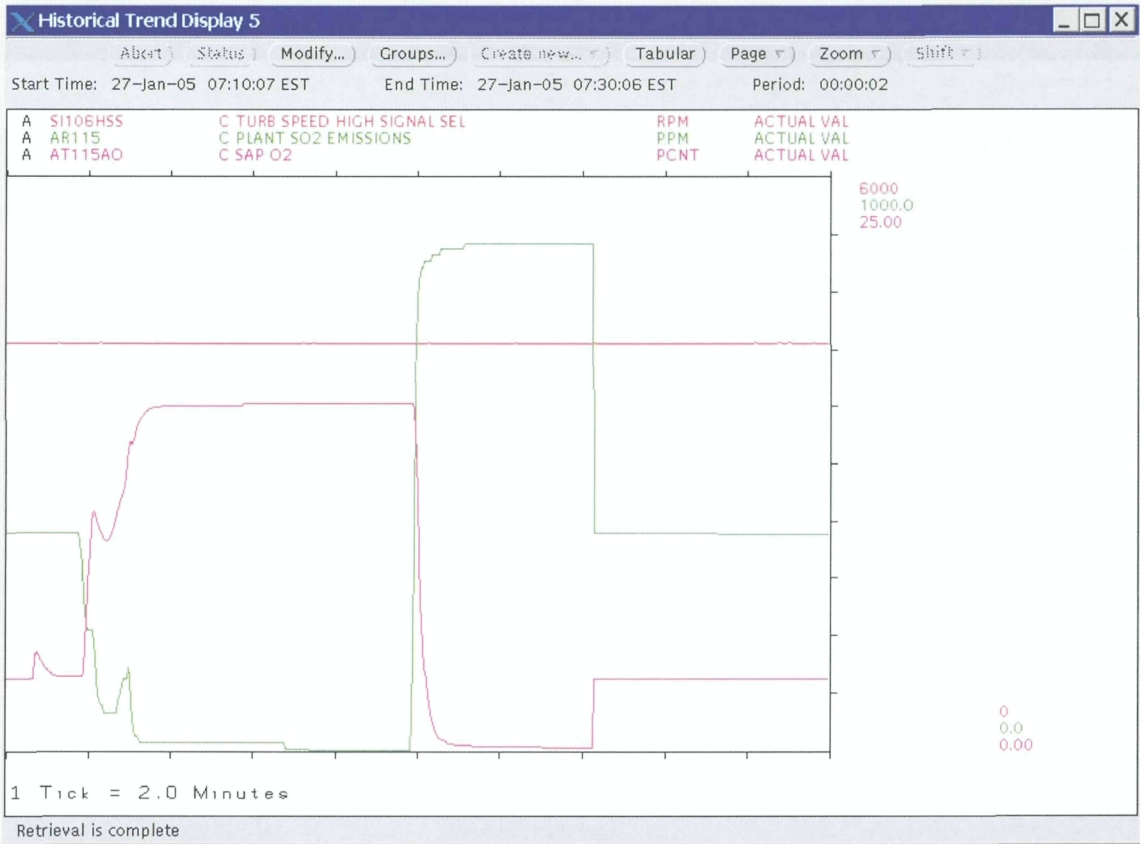
Retrieval is complete



Historical Trend Display 5

About Status Modify... Groups... Create new... Tabular Page Zoom Shift
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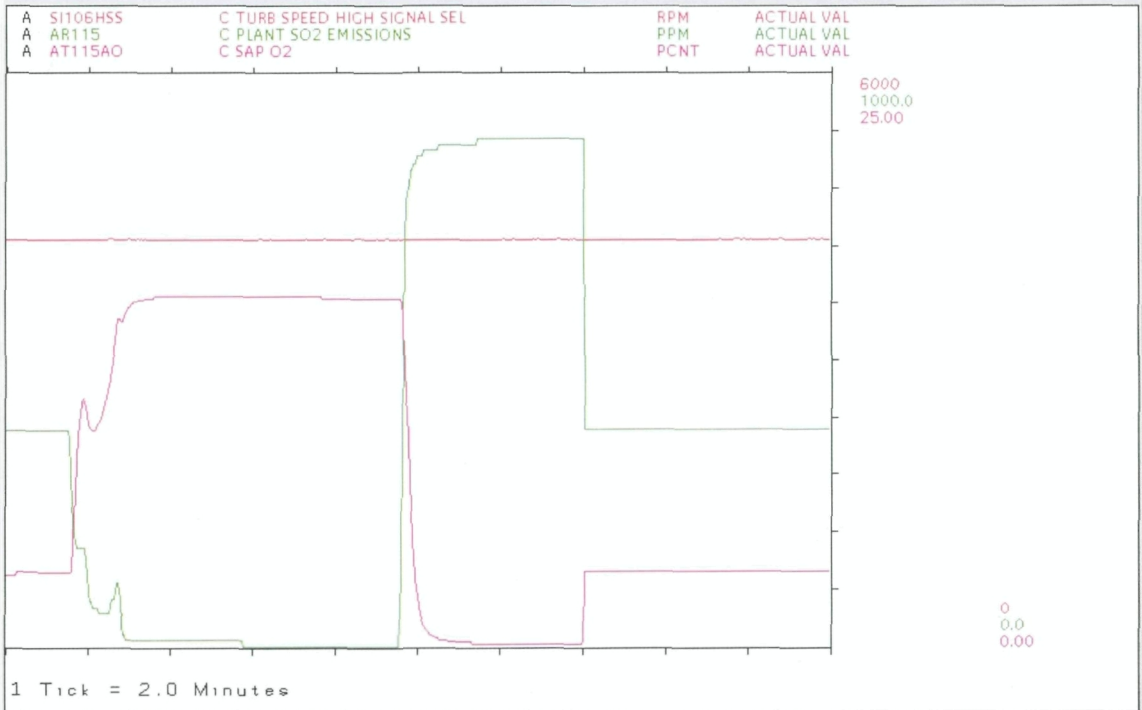






Historical Trend Display 5

Start Time: 30-Jan-05 07:02:39 EST End Time: 30-Jan-05 07:22:38 EST Period: 00:00:02



Retrieval is complete

