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

CF Industries, Inc.
Plant City Phosphate Complex

December 5, 2005

Mr. Syed Arif
Permitting Engineer, Bureau of Air Regulation
Department of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Extension Request/DEP File No. 0570005-019-AC (PSD-FL-339)
Plant City Phosphate Complex

Dear Mr. Arif:

CF Industries, Inc., (CF), provides this letter in response to your request for information dated October 26, 2005. CF, through its consultant, Golder Associates, Inc., had requested an extension of Construction Permit No. 0570005-019-AC, and a minor permit modification to authorize an upgrade of the plants' blowers to allow the achievement of the permitted production rates.

Please review the attached information and call (813)364-5608 if there are additional questions.

Sincerely,

Thomas A. Edwards
Superintendent Environmental Affairs

Attachments

cc: Mara Nasca, DEP-SWD
Alice Harmon, HCEPC
David Buff, Golder Associates, Inc.

CF RESPONSES TO FDEP OCTOBER 26, 2005, INFORMATION REQUEST

The FDEP information requests are repeated below in bold type, followed by the CF responses.

1. **Please submit the compliance tests for both "C" and "D" SAPs.**

   CF Response 1: Copies of the requested compliance tests are enclosed in Attachment 1.

2. **Please submit the Second Quarter 2005 SO_2 CEM/Production Data as required by Specific Condition No. 22 of the construction permit.**

   CF Response 2: Copies of the requested report and the Third Quarter 2005 report are enclosed in Attachment 2.

3. **Specific Condition 10 of the construction permit required CF to install approximately 165,000 liters of cesium promoted vanadium catalyst in the 4^{th} converter pass of the "C" and "D" SAPs. Please provide documentation (work orders, purchases requisitions, etc.) to show that the condition was complied with.**

   CF Response 3: The requested documentation is enclosed in Attachment 3.

4. **Please provide the specifications of the existing blowers as well as the specifications for the replacement blowers. Indicate how much increase in production will take place due to the replacement blowers.**

   CF Response 4: Copies of the existing and proposed blower performance charts are enclosed in Attachment 4, Figures 1 and 2. Figure 3 shows that the achievable production rate is expected to increase from 2,632 tons H_2SO_4 per day to 2,750 tons per day in each plant. The total increase in production for both plants will be 236 tons per day.

5. **The request indicated that D-SAP blower will be replaced by December 2006 and the C-SAP blower by May 2007. Please explain the excessive length of time required for replacing the "C" and "D" SAP blowers.**

   CF Response 5: The requested permit extension to June, 2007, is based on the one-year delivery time for new blowers and the economic need to schedule the blower installations during scheduled maintenance turnarounds. The installation of the blowers during scheduled turnarounds avoids costly production down-time.

6. **The Department in November 2004 issued an authorization letter to CF based on their request for replacing mist eliminators in the Interpass Tower of the D-SAP. This change was to result in a reduction in the plant pressure drop and help CF in achieving the maximum permitted operating rate of 2,750 TPD. Please explain the reasons for not being able to achieve the stated purpose of the request.**

CF Response 6: The expected increase in production to 2,750 TPD for C & D Sulfuric Acid Plants utilized a design that incorporated reduced pressure drop for increased air flow, and cesium catalyst to reduce SO_2 emissions. Installation of the new mist eliminators successfully reduced system pressure drop. However, the existing main blower turbine system has reached the limit of available horsepower. The options are to replace the turbine to increase horsepower or to install a more efficient main blower to better utilize the existing turbine horsepower. Process analysis indicates that replacing the main blower is the preferred alternative.

ATTACHMENT 1 - COMPLIANCE TEST REPORTS

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

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
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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

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 SO_2 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 O_2. Gas concentrations are recorded by a data acquisition sytem in the control room. The SO_2 and O_2 data are utilized to determine the source SO_2 emission in pound of SO_2 per ton of 100 percent sulfuric acid produced.

3.0 TEST RESULTS

Results of the SO_2 relative accuracy tests are summarized in Table 1. In order to be in conformance with Performance Specification 2, the relative accuracy of the SO_2 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 O_2 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 O_2 CEMS must be no greater than 1.0 percent O_2. The relative accuracy of the O_2 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 SO_2 relative accuracy test was conducted in accordance with Performance Specification 2 – Specifications and Test Procedures for SO_2 and NO_2 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 O_2 relative accuracy test was conducted in accordance with Performance Specification 3 – Specifications and Test Procedures for O_2 and CO_2 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 O_2 CEMS. Oxygen sampling was performed simultaneously with SO_2 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 bas 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)= t0.975*Sd/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.

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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 (%O2)	CEM (%O2)	Difference (%O2)
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.

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.	3.50	3.41	3.33
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	2671	2671	2640
PRODUCTION RATE, TPD LIMIT	**2750**	**2750**	**2750**
REFERENCE METHOD SO2 (ppm)	348	341	335

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	12.54.76
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	
			1015	365	
			1030	365	365
2	01/25/05	11:12-12:31	1100	365	
			1115	360	
			1130	360	
			1145	360	
			1200	360	
			1215	360	
			1230	355	360
3	01/25/05	12:58-14:21	1300	355	
			1315	360	
			1330	355	
			1345	355	
			1400	360	
			1415	355	357
4	01/25/05	14:50-16:10	1445	355	
			1500	355	
			1515	355	
			1530	355	
			1545	355	
			1600	360	356
5	01/25/05	16:28-17:15	1630	360	
			1645	355	
			1700	355	
			1715	360	358
6	01/26/05	13:44-14:05	1345	350	
			1400	350	350
7	01/26/05	14:34-14:55	1430	350	
			1445	355	
			1500	350	352
8	01/26/05	15:33-15:54	1530	350	
			1545	350	
			1600	350	350
9	01/26/05	16:24-16:45	1630	350	
			1645	350	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	
			1015	3.23	
			1030	3.28	3.26
2	01/25/05	11:12-12:31	1100	3.24	
			1115	3.28	
			1130	3.28	
			1145	3.25	
			1200	3.26	
			1215	3.23	
			1230	3.25	3.26
3	01/25/05	12:58-14:21	1300	3.28	
			1315	3.23	
			1330	3.26	
			1345	3.24	
			1400	3.23	
			1415	3.25	3.25
4	01/25/05	14:50-16:10	1445	3.25	
			1500	3.24	
			1515	3.25	
			1530	3.26	
			1545	3.27	
			1600	3.23	3.25
5	01/25/05	16:28-17:15	1630	3.25	
			1645	3.26	
			1700	3.27	
			1715	3.27	3.26
6	01/26/05	13:44-14:05	1345	3.27	
			1400	3.27	3.27
7	01/26/05	14:34-14:55	1430	3.26	
			1445	3.26	
			1500	3.30	3.27
8	01/26/05	15:33-15:54	1530	3.35	
			1545	3.29	
			1600	3.27	3.30
9	01/26/05	16:24-16:45	1630	3.29	
			1645	3.29	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

SO2 MONITORING LOG

PLANT "C"

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	SPAN/maint	SPAN/maint	375
8:00 AM	SPAN/maint	SPAN/maint	SPAN/maint	370	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	360	355	355	355	356.25
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	368.75

O2 Chart Readings

Time	:00	:15	:30	:45	AVG
6:00 AM	3.18	3.20	2.15	3.27	3.21
7:00 AM	3.21	3.20	SPAN/maint	SPAN/maint	3.205
8:00 AM	SPAN/maint	SPAN/maint	SPAN/maint	3.24	3.24
9:00 AM	3.19	3.19	3.25	3.25	3.22
10:00 AM	3.26	3.23	3.28	3.23	3.25
11:00 AM	3.24	3.28	3.27	3.25	3.2625
12:00 PM	3.26	3.23	3.25	3.26	3.25
1:00 PM	3.28	3.23	3.26	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	3.26	3.24	3.2575
6:00 PM	3.26	3.27	3.25	3.26	3.2600
7:00 PM	3.33	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	3.28	3.2425
12:00 AM	3.24	3.24	3.28	3.27	3.2625
1:00 AM	3.25	3.24	3.24	3.23	3.2400
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	3.21	3.24	3.2375

Time	Lbs SO2/ ton H2SO4 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 & Spantest 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 numbercalculated in step one (a) by the number calculated in step three (c).

This will give Lbs/ Ton H2SO4

.7126 .7246
.0409 .0407
.2241 .2243

SO2 MONITORING LOG

PLANT C

DATE: 1/26/05

SO2 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	360	360	365	360	361.25
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	3.25	3.27	3.24	3.255
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	3.385
1:00 PM	3.24	3.25	3.29	3.27	3.2625
2:00 PM	3.27	3.29	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	3.2625
5:00 PM	3.22	3.30	3.26	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	3.19	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	3.155
5:00 AM	3.17	3.24	3.12	3.17	3.175

Time	Lbs SO2/ ton H2SO4 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 09:41 - 10:02 AM 7.18

Day Shift Operator:

Night Shift Operator:

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 numbercalculated 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	25-Jan-05		
TIME	10:07 AM	TO	10:28 AM
STACK	C SAP		
RUN	#1		

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	1.20	9.48
Blank, ml.	0.15	0.15
Conversion to Milligrams	5.39	390.88

Analyst William T. 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 Perchlorate Titrated	2.00	29.88	
Blank, ml.	0.15	0.15	
Conversion to Milligrams	9.49	1245.55	

Analyst William F. Chung Jr

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_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	1.93	30.10	
Blank, ml.	0.15	0.15	
Conversion to Milligrams	9.13	1254.76	

Analyst William T. Cheney Jr.

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 T. Chaney S

cso4titr.xls

CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX

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

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		8.88
Blank, ml.	0.15	0.15
Conversion to Milligrams		365.75

Analyst William F. Clancy Jr.

cso4titr.xls

CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX

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

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. Chaney Jr

cso4titr.xls

CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX

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

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		8.60	
Blank, ml.	0.15	0.15	
Conversion to Milligrams		354.01	

Analyst William F. Chaney Jr.

cso4titr.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

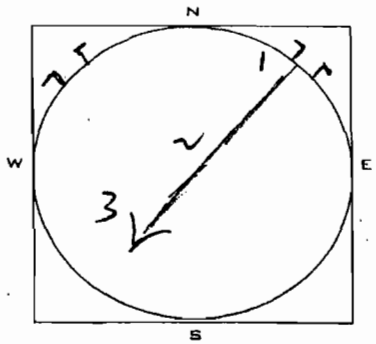
	Acid Mist, SO_3	SO_2
Volume of Sample, ml.	500	500 100
Aliquot, ml.	50	20 20
Normality of Barium Perchlorate	0.010464	0.010464
Mls. of Barium Perchlorate Titrated		9.08
Blank, ml.	0.15	0.15
Conversion to Milligrams		374.12

Analyst William T. Clancy

cso4titr.xls

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER	1
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/28/05
OPERATOR	[illegible] KRUEGER
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

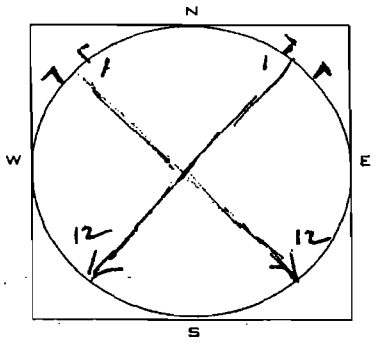
No Leak at 15" (Run Start) EB

No Leak at 4" (Field of Run) EB

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	10:07AM	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	10:28 AM	756.864								AVG.
			AVG. Sq Rt.	AVG.	AVG.					155°
		14.957	0.5415	1.40		82.17				

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

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



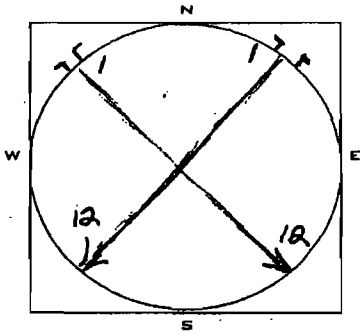
SCHEMATIC OF STACK CROSS SECTION

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	9:50AM		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	10:00AM									
1	10:40AM		0.23							154°
2			0.28							156°
3			0.28							154°
4			0.30							154°
5			0.30							155°
6			0.30							155°
7			0.30							155°
8			0.30							155°
9			0.32							156°
10			0.32							156°
11			~~0.30~~ 28							156°
12			0.23							156°
STOP										
			0.5290							

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

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



SCHEMATIC OF STACK CROSS SECTION

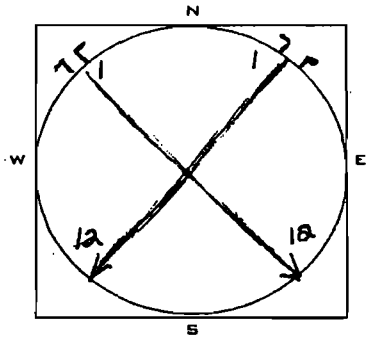
AMBIENT AIR TEMPERATURE	58 DEGREES F
BAROMETRIC PRESSURE	30.21 INCHES HG
ASSUMED MOISTURE	0 %
HEATER BOX SETTING	N/A DEGREES F
PROBE TIP DIAMETER	0.277 INCHES
PROBE LENGTH	10.5 FEET
PROBE HEATER SETTING	N/A

No Leak at 15" (Run start) ✓ — No Leak at 15" (End of Run) ✓

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
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	0.20	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	0.5262	1.3246	89.46					

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

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



AMBIENT AIR TEMPERATURE	68	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	

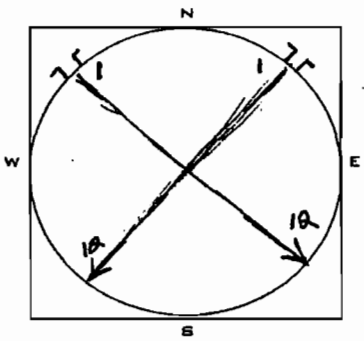
SCHEMATIC OF STACK CROSS SECTION

No Leak at 15" (Run START) OK

No Leak at 15" (Run & Run) 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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
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	835.2	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	0.80	0.95	108°	92°	2.8		67°	153°
STOP	2:21PM	862.165								
			AVG. Sq Rt.	AVG.	AVG 97.23					AVG.
		50.554	0.5204	1.2971						153.33

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



SCHEMATIC OF STACK CROSS SECTION

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	

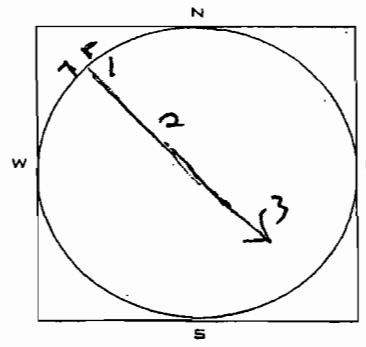
No Leak at 15" (RUN START) GK

No Leak at 15" (END OF RUN) GK

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	2:50PM	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	0.33	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	3:26PM	889.785								
1	3:34PM	885.785	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 CEM-2
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/25/05
OPERATOR	BENNET KOETSCHAU
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	

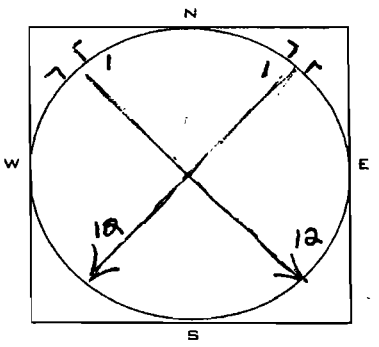
NO Leaks at 15" (RUN START) EST

NO Leaks at 15" (END OF RUN) EST

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
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 CEM-2 / FLOW
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/25/05
OPERATOR	BRANDT KRAUSCHAAR
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		

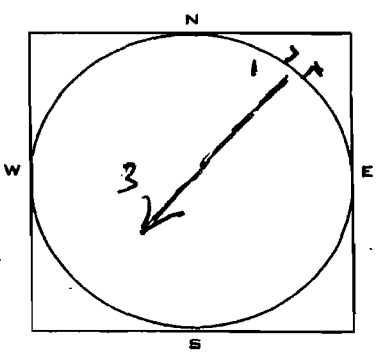
TRAVERSE POINT	CLOCK (TIME)	DRY GAS METER (CUBIC FEET)	PITOT DELTA P (INCHES) (OF WATER)	ORIFICE DELTA H (INCHES) (OF WATER)	DRY GAS TEMPERATURE (DEGREES F) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	4:28PM		0.23							152°
2			0.25							154°
3			0.28							154°
4			0.28							154°
5			0.28							155°
6			0.28							156°
7			0.30							156
8			0.33							157
9			0.30							956
10			0.30							156
11			0.28							155
12			0.23							154
STOP	4:35									
1	5:07PM		0.25							~~151~~ ~~150~~
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	5:15PM									
			AVG - Sq Rt.							

.5259

154.96

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER 6	CEM-3
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/26/05
OPERATOR	Ernest Kretschman
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	

No Leak at 15 in (Run Start) EK

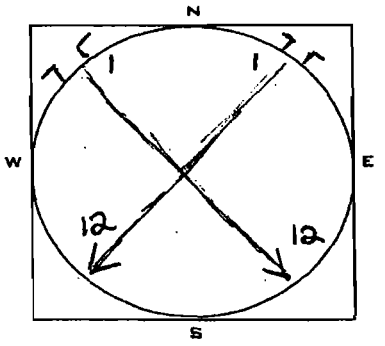
No Leak at 15" (End of Run) EK

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	1:44PM	948.209	0.25	1.21	86°	79°	6.2		63°	~~158°~~ 159°
2	1:51	952.7	0.28	1.36	~~97°~~	82°	7.0		63°	158°
3	1:58	957.8	0.30	1.46	104°	85°	7.3		64°	157°
STOP	2:05PM	962.943		AVG.						
				1.3433		89.17				
		14.734								

STACKS/COMPLIANCE TEST FIELD SHEET.XLS

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER 6	CPM 3 / FLOW
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/26/05
OPERATOR	BRUNET / GROSSMAN
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



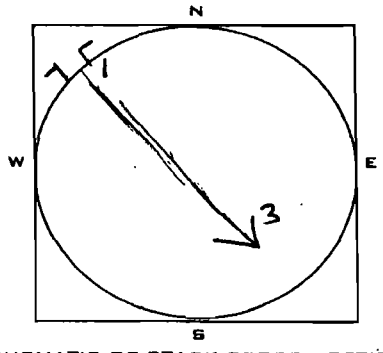
SCHEMATIC OF STACK CROSS SECTION

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	1:35PM		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	1:40PM		0.23							155°
STOP										
1	2:08PM		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	2:15PM									
			AVG. Sq Rt. 0.5176							156.46

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER 7	CBM 4
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/26/05
OPERATOR	ERNEST KNOESCHMAN
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	

No Leak @ 15" (Run Start) EB

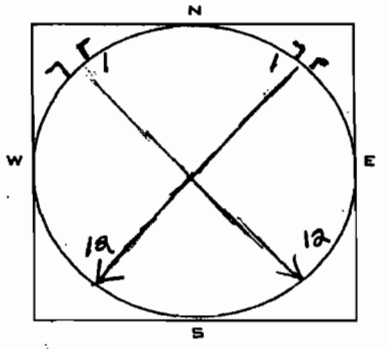
No Leak @ 15" (End of Run) EB

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	2:34 PM	968.810	0.08	1.36	91°	92°	4.9		64°	~~180°~~ ~~160°~~ 158°
2	2:41	973.18	0.30	1.46	106°	90°	5.2		65°	~~158°~~ 158°
3	2:48	979.0	0.30	1.46	108°	98°	5.2		65°	158°
STOP	2:55 PM	984.062								
		15.252		1.4267		96.50				~~158°~~

STACKS/COMPLIANCE TEST FIELD SHEET.XLS

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

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



SCHEMATIC OF STACK CROSS SECTION

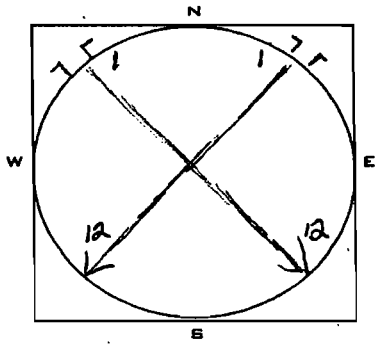
AMBIENT AIR TEMPERATURE		DEGREES F
BAROMETRIC PRESSURE		INCHES HG
ASSUMED MOISTURE	0	%
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	2:28PM		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	2:35PM		0.23							159°
STOP										
1	2:58PM		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	C&M S/FLOW
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/26/05
OPERATOR	BRUCE KABISCHMAN
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



SCHEMATIC OF STACK CROSS SECTION

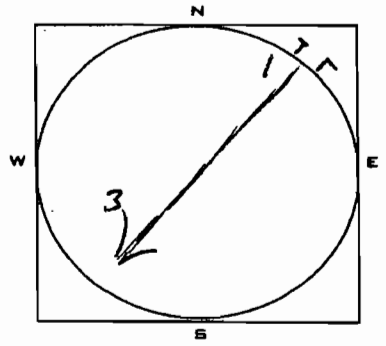
AMBIENT AIR TEMPERATURE		DEGREES F
BAROMETRIC PRESSURE		INCHES HG
ASSUMED MOISTURE	0	%
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	3:26PM		0.23							153°
2			0.23							153°
3			0.25							154°
4			0.25							157°
5			0.28							158°
6			0.28							159°
7			0.30							160°
8			0.28							160°
9			0.30							160°
10			0.30							161°
11			0.28							160°
12	3:32PM		0.23							160°
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	4:05PM		0.23							159°
STOP										
										158.25

0.5170

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

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



SCHEMATIC OF STACK CROSS SECTION

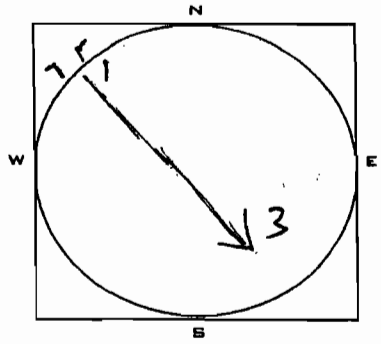
AMBIENT AIR TEMPERATURE		DEGREES F
BAROMETRIC PRESSURE		INCHES HG
ASSUMED MOISTURE	0	%
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

No Leak at 15" (Prior start) OK — No Leak at 15" (End of Run) 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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	3:33PM	985.901	0.25	1.21	92°	92°	3.0		62°	~~160°~~ 158° OK
2	3:40PM	~~990.~~ 990.6 OK	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	BRUNEST KRETSCHMAN
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	

No Leak at 15" (RUN START) GBS

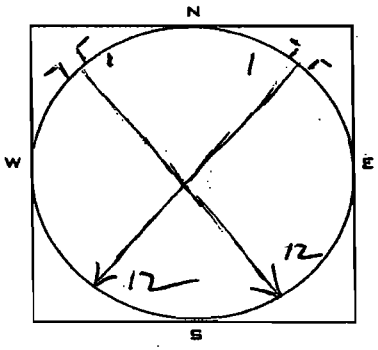
No Leak at 15" (ZERO & RUN) EX

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	4:24PM	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	4:45PM	018.932								
				1.4267		97.50				
		15.225								

STACKS/COMPLIANCE TEST FIELD SHEET.XLS

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER 9	CEM 6 / FLOW
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/26/05
OPERATOR	ERNEST KRETSCHMAR
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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	4:15PM		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	4:22PM									
1	4:47		0.23							156°
2			0.23							158°
3			0.25							158°
4			0.25							159°
5			0.25							159°
6			0.28							159°
7			0.30							159°
8			0.30							160°
9			0.28							160°
10			0.30							159°
11	✓		0.23							159°
12	4:54PM		0.25							159°
STOP			AVG. Sq Rt.							
			0.5134							157.25

O2 Testing by Orsat

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

*O2 is actual O2 reading minus actual CO2 reading

O2 Testing by Orsat

Date		Plant	Tedlar Bags Leak Checked Yes	Tedlar Bags Leak Checked No	Orsat Leak Checked Yes	Orsat Leak Checked No	Time Collected	Time Analyzed	CO2	O2*	Analyst	AVG
1/25/05	1	CSAP	✓		✓		1028	1130	0.0	3.5	[illegible]	3.4
	2						"		0.0	3.4		
	3						"		0.0	3.4		
1/25	1						1231	1340	0.0	3.5	[illegible]	3.5
	2						"		0.0	3.4		
	3						"		0.0	3.5		
1/25	1						1421	1530	0.0	3.5	[illegible]	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											
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	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

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

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

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

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.
- Td = 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
- 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

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

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

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

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

	Gas Volume		Temperature						
pproximate Flowrate (CFM)	Wet Test Meter (Vw) ft.^3	Dry Gas Meter (Vd) ft.^3	Wet Test Meter (Tw) Deg F	Dry Gas Meter (Td) Deg F	Dry Gas Meter Delta P ("H2O)	Time (THETA) Min.	Flowrate (CFM)	Dry Gas Meter Coeff. (Yds)	Avg. Gas Meter Coeff. (Yds)
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	

$$Q = \frac{Pb \times Vw \times 528}{(Tw + 460) \times Theta \times 29.92}$$

$$Yds = \frac{Vw}{Vd} \times \frac{(Td + 460)}{(Tw + 460)} \times \frac{Pb}{[Pb + (Delta\ P/13.6)]}$$

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. H20.

Yds = Dry gas meter Coefficient

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

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

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 °) $\alpha 2$ 0 (<10°)

$\beta 1$ = 0 (< 5°) $\beta 2$ 1 (< 5°)

γ = 2 ° θ = 0 ° A = 0.997 cm (in)

Z = A SINE γ = 0.035 cm (in) Where Z is <0.32 cm (<1/8 in)

W = A SINE θ = 0.000 cm (in) Where W is <0.08 cm (<1/32 in)

Pa = 0.499 cm, in Pb = 0.499 cm, in

P = Pa + Pb / = 0.499 cm, in

Dt = 0.375 cm , in P/Dt = 1.329 Where P / Dp $\geq$ 1.05 and $\leq$ 1.50

Comments: Client: CF Industries

Type of Probe and Effective 31-674X-B1

Cp = 0.84

ANNUAL LSI STACKBOX (C254) THERMOCOUPLE CALIBRATIONS

Date: 10/15/04

Time: 940-1550

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

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

Initial

Display	Item	Ice Water Point			Ambiont Water Point			Hot Water Point			Hot Oil Point		
		Thermocouple or RTD Reading (Degrees F)	NIST Reading Actual	Con-version to Degrees C	Thermocouple or RTD Reading (Degrees F)	NIST Reading Actual	Con-version to Degrees C	Thermocouple or RTD Reading (Degrees F)	NIST Reading Actual	Con-version to Degrees C	Thermocouple or RTD Reading (Degrees F)	NIST Reading Actual	Con-version to Degrees C
				F			F			F			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_2O	Gas volume: Dry test meter (V_w), ft^3	Gas volume: Dry gas meter (V_d), ft^3	Temperature: Dry test meter (t_w), °F	Temperature: Dry gas meter: Inlet (t_{d_i}), °F	Temperature: Dry gas meter: Outlet (t_{d_o}), °F	Temperature: Dry gas meter: Average (t_d)[a], °F	Time (θ), min	Vacuum setting, in. Hg	Y_i	Y_i = $V_w P_b (t_d + 460)$ / $V_d P_b + \frac{\Delta H}{13.6}(t_w + 460)$
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)(533.50)
1.35	287.814 277.686	050.249 039.664	77° 75°	106 98°	89 83°	94.00	15.0	7.5	0.9857	(10.128)(30.24)(554.00) (10.585)(30.339)(536.00)
1.35	298.015 287.814	060.962 050.249	73° 77°	107° 98°	92° 91°	97.00	15.0	7.5	0.9881	(10.801)(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.

Within ±0.05Y
1/28/05, 2:20PM

V_w = Gas volume passing through the wet test meter, ft^3.

V_d = Gas volume passing through the dry gas meter, ft^3.

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 H_2O.

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 ±0.05Y

P_b = Barometric pressure, in. Hg.

θ = Time of calibration run, min.

Dry test meter number Rockwell-JN631105

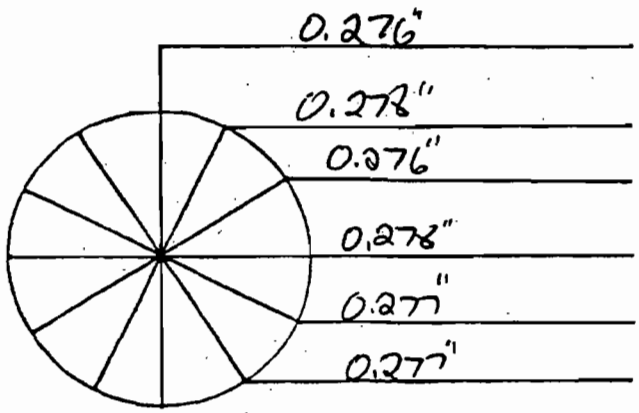
P.O. Drawer L
Plant City, Florida 33564-9007
Telephone: 813/782-1591

CF Industries, Inc.
Plant City Phosphate Complex

PROBE NOZZLE CALIBRATION DATA

Nozzle Identification Number: 1384

Calibrated by: Ernest Krasemann 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: 0.000 418 ft^2

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

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
$\sqrt{\Delta}$ Pave	=	Average square root of velocity head, in. H_2O
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 ge
P H_2O	=	Density of water, 1 gm/ml
M H_2O	=	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
Ø	=	Sampling time (minutes)

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

$$Vmstd = Vm \left(\frac{Tstd}{Tm} \right) \left(\frac{Pbar + \frac{\Delta H}{13.6}}{Pstd} \right)$$

$$Bwo = \frac{Vwstd}{Vwstd + Vmstd}$$

$$Ms = Md\ (1 - Bwo) + 18\ (Bwo)$$

$$Vs(avg) = Kp\ Cp \sqrt{P(avg)} \sqrt{\frac{460 + Ts}{Ms\ Ps}}$$

$$Qs = 60\ (1 - Bwo)\ Vs\ As \left(\frac{Tstd}{Ts} \right) \left(\frac{Ps}{Pstd} \right)$$

PERCENT ISOKINETIC

$$I = \frac{Ts\ (1.667) \left[(0.00267)\ V_1 + \left(\frac{Tstd}{Tm} \right) Pbar + \frac{\Delta H}{13.6} \right]}{\theta\ Vs\ Ps\ An}$$

$$Cs = 0.0154 \text{ grs/mg } \frac{Mf \text{ or } Mn}{Vmstd}$$

$$lbs/hr = (Cs \times Qs \times 60) / 7000$$

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

J. H. Falls
3/15/93

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

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

DAILY SO_2 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	+.44		710 Am - 745 Am
2	VITO	14.7	-2624	913	+.99		115 Am - 742 Am
3	VITO	14.7	-2626	909	+.44		715 Am - 742 Am
4	BVO	14.7	-2638	907	+.33		7:10 - 7:45 AM
5	BVO	14.7	-2640	905	+.1		7:08 - 7:45 AM
6	BVO	14.7	-2643	898	-.66		7:08 - 7:45 AM
7	VITO	14.7	-2650	901	-.36		7:15 Am - 747 Am
8	VITO	14.7	-2659	905	+0.1		7:09 Am - 739 Am
9	VITO	14.7	-2667	905	+0.1		7:15 Am - 745 Am
10	DMWTP	14.7	-2664	903	-0.1		7:15 Am - 7:45 Am
11	DMWTP	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 A
13	YQ	14.7	-2689	902	-0.22		07:14 am - 07:41 A
14	YQ	14.7	-2684	897	-.77		07:12 am - 07:40 AM
15	YQ	14.7	-2694	904	0		7:05 A - 7:33 Am
16	YQ	14.8	-2696	901	-.36		9:32 A - 10:01 Am
17	VITO	14.9	-2713	907	+.33		7:10 A - 740 A.
18	VITO	14.8	-2703	904	+.44		710 Am - 740 Am
19	YQ	14.8	-2706	902	-0.22		7:27 AM - 7:54 AM
20	YQ	14.8	-2718	901	-.36		7:25 Am - 7:53 Am
21	YQ	14.9	-2726	898	-.6		7:05 Am - 7:35 Am
22	AGC	14.9	-2735	898	-.6		7:05 A - 735 Am
23	VITO	15.0	-2744	897	-.77		7:00 Am 739 Am
24	YQ	15.1	-2729	910	+.66		7:11 A - 7:39 Am
25	MAD	15.1	-2747	900	-.44		08:02 - 08:30
26	YQ	15.1	-2759	896	-.88		09:41 - 10:07 Am
27	YQ	15.1	-2764	893	-1.2		07:11 - 07:38 Am
28	BVO	15.3	-2775	899	-.5		07:16 - 07:46 AM
29	BVO	15.2	-2781	898	-.6		07:16 - 07:46 AM
30	BVO	15.2	-2777	895	-.99		07:04 - 07:35 AM
31	YQ	15.3	-2786	897	-.77		07:13 - 07:40 AM

SO2 BOTTLE #1
SER# CC152967 PPM 904

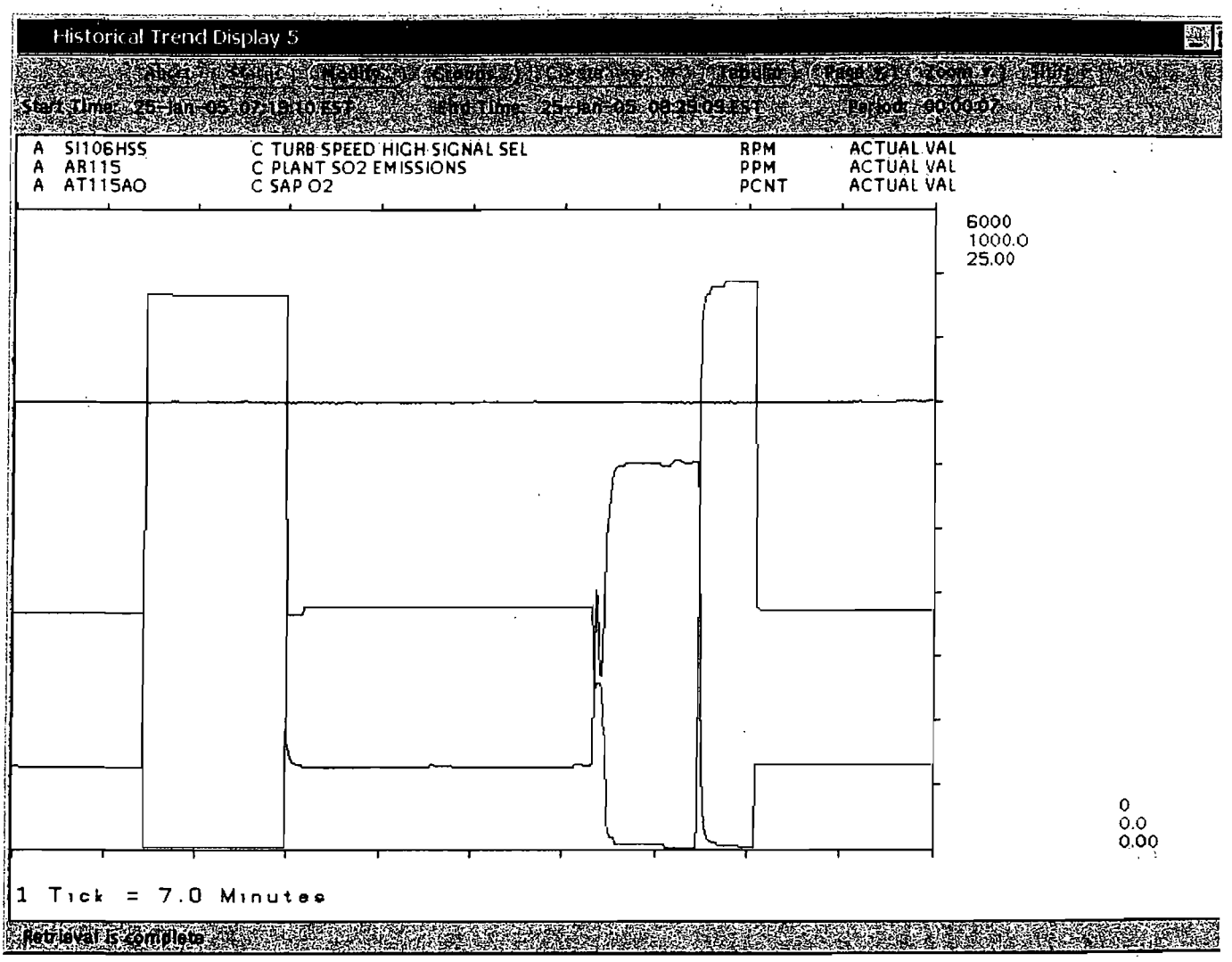
BOTTLE #2
SERIAL # _____ PPM _____

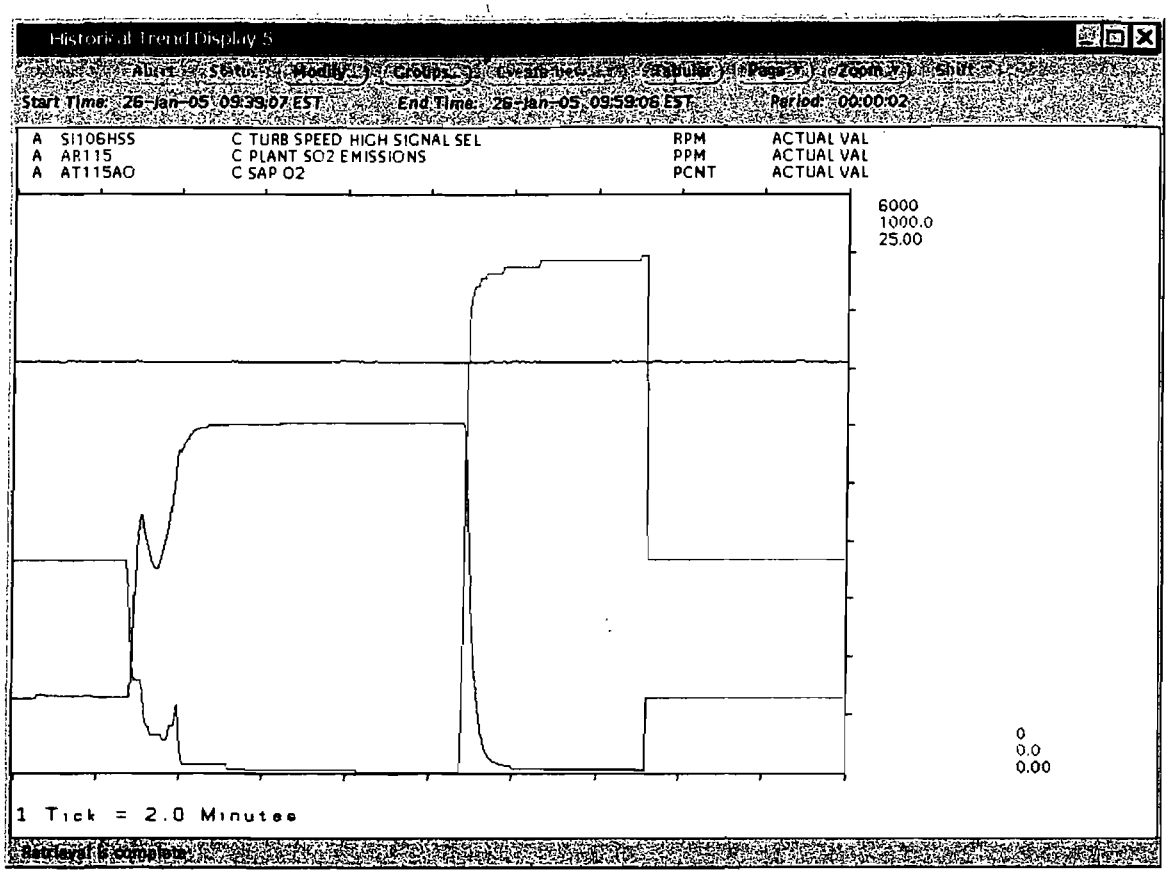
O2 BOTTLE #1
SER# CC59098 PPM 15.1

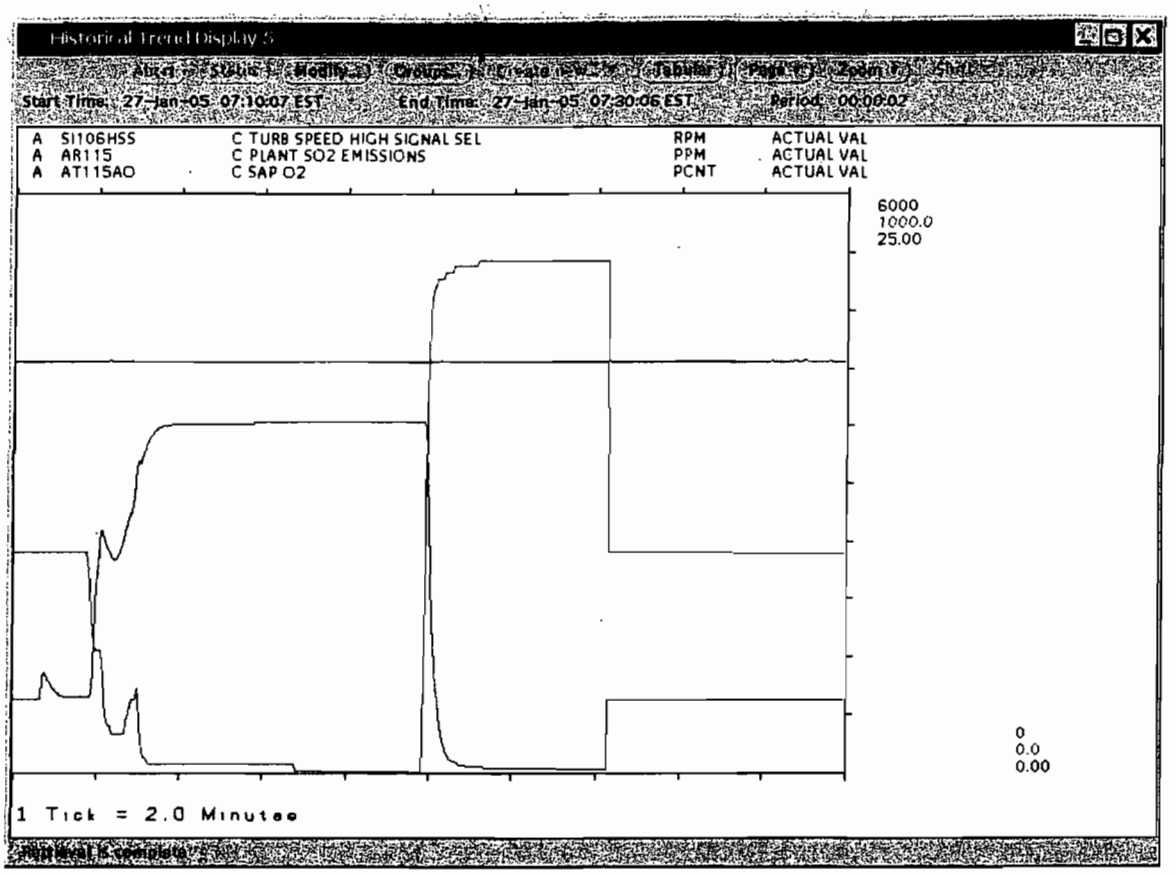
BOTTLE #2
SERIAL # CC111217 PPM 15.1 12/1/04

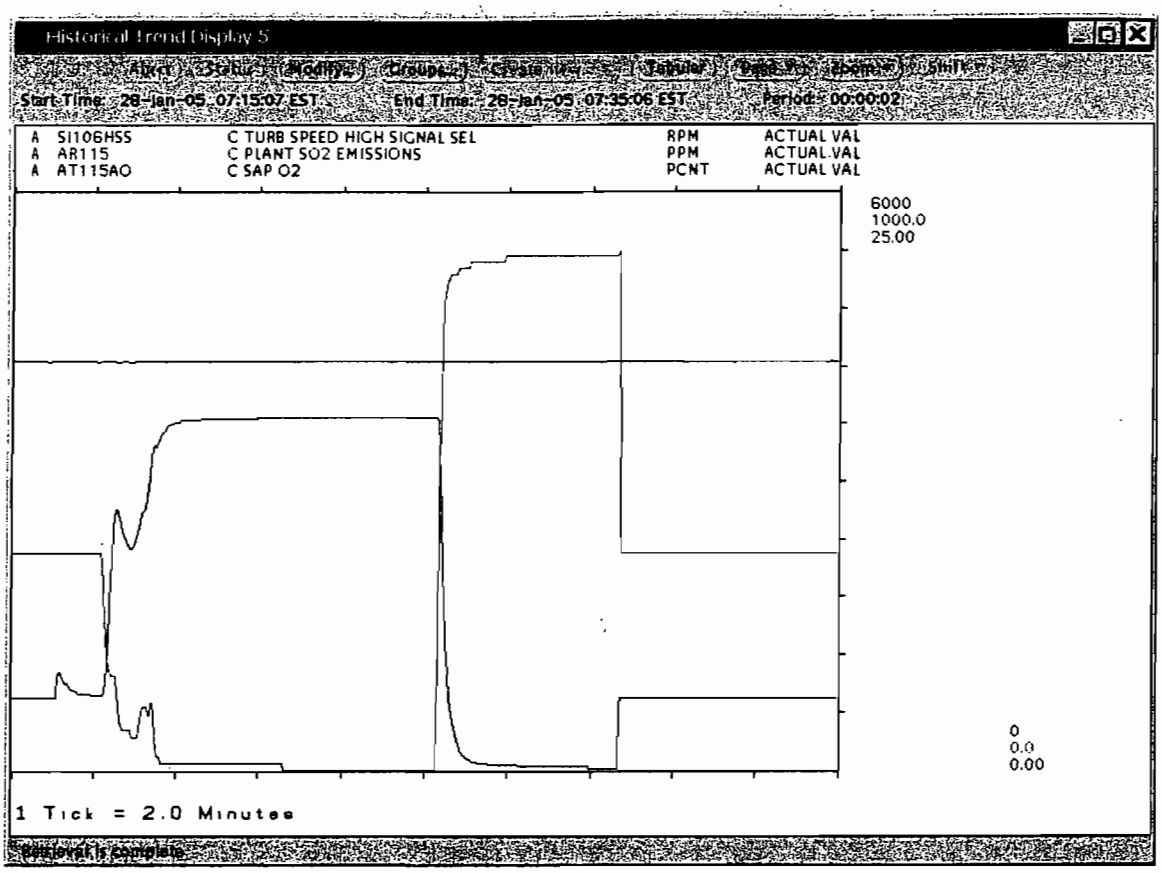
ATTACHMENT 2 – CEMS SO2 and O2

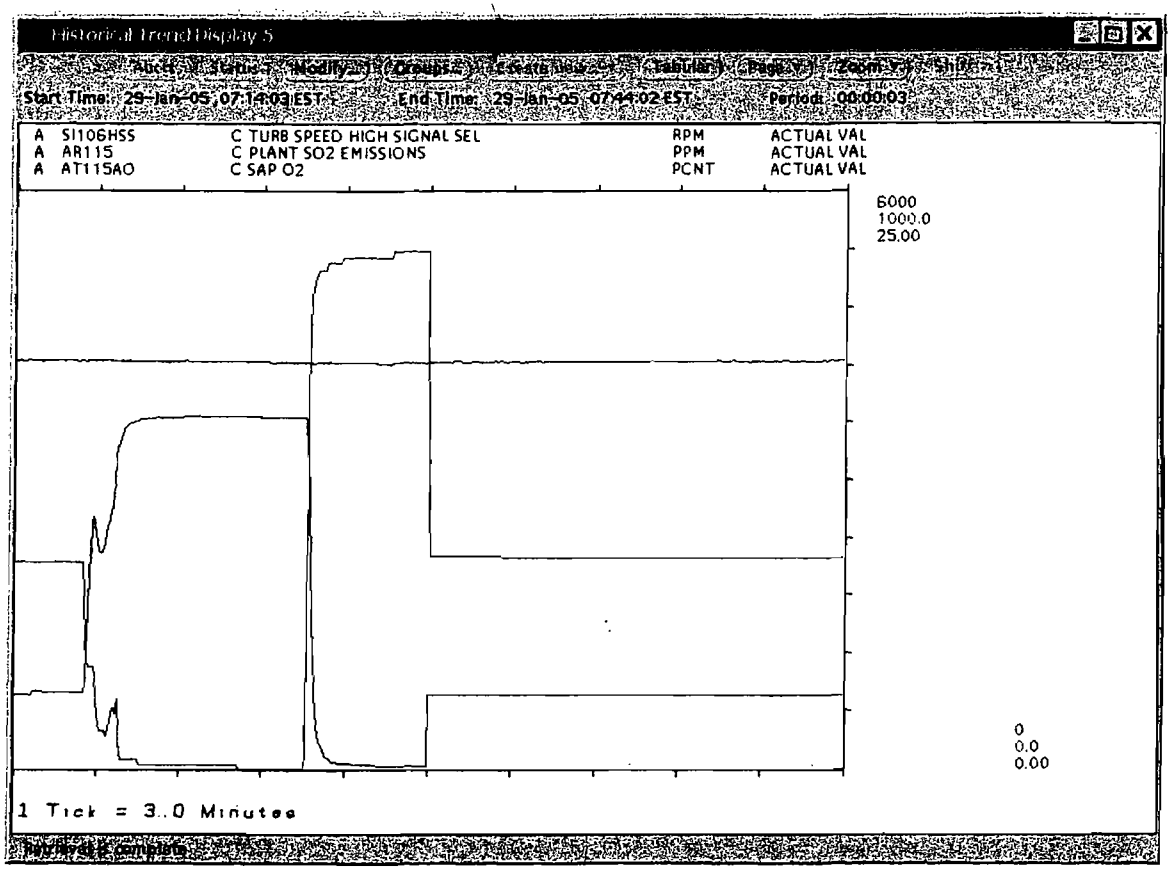
Zero Point Graphs from Aspen – January 25-26, 2005


Historical Trend Display 5
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
6000
1000.0
25.00
0
0.0
0.00
1 Tick = 7.0 Minutes
Retrieval is complete


Historical Trend Display 5
Alert
Status
Modify
Groups
Create New
Tabular
Page
Zoom
Shift
Start Time: 26-Jan-05 09:39:07 EST
End Time: 26-Jan-05 09:59:08 EST
Period: 00:00:02
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
6000
1000.0
25.00
0
0.0
0.00
1 Tick = 2.0 Minutes


Historical Trend Display 3
Start Time: 27-Jan-05 07:10:07 EST
End Time: 27-Jan-05 07:30:06 EST
Period: 00:00:02
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
6000
1000.0
25.00
0
0.0
0.00
1 Tick = 2.0 Minutes


Historical Trend Display 5
Alert...
Status...
Modify...
Groups...
Create...
Tabular...
Print...
Zoom...
Shift...
Start Time: 28-Jan-05 07:15:07 EST
End Time: 28-Jan-05 07:35:06 EST
Period = 00:00:02
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
6000
1000.0
25.00
0
0.0
0.00
1 Tick = 2.0 Minutes
Retrieval is complete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Start Time: 29-Jan-05 07:14:03 EST
End Time: 29-Jan-05 07:44:02 EST
Period: 00:00:03
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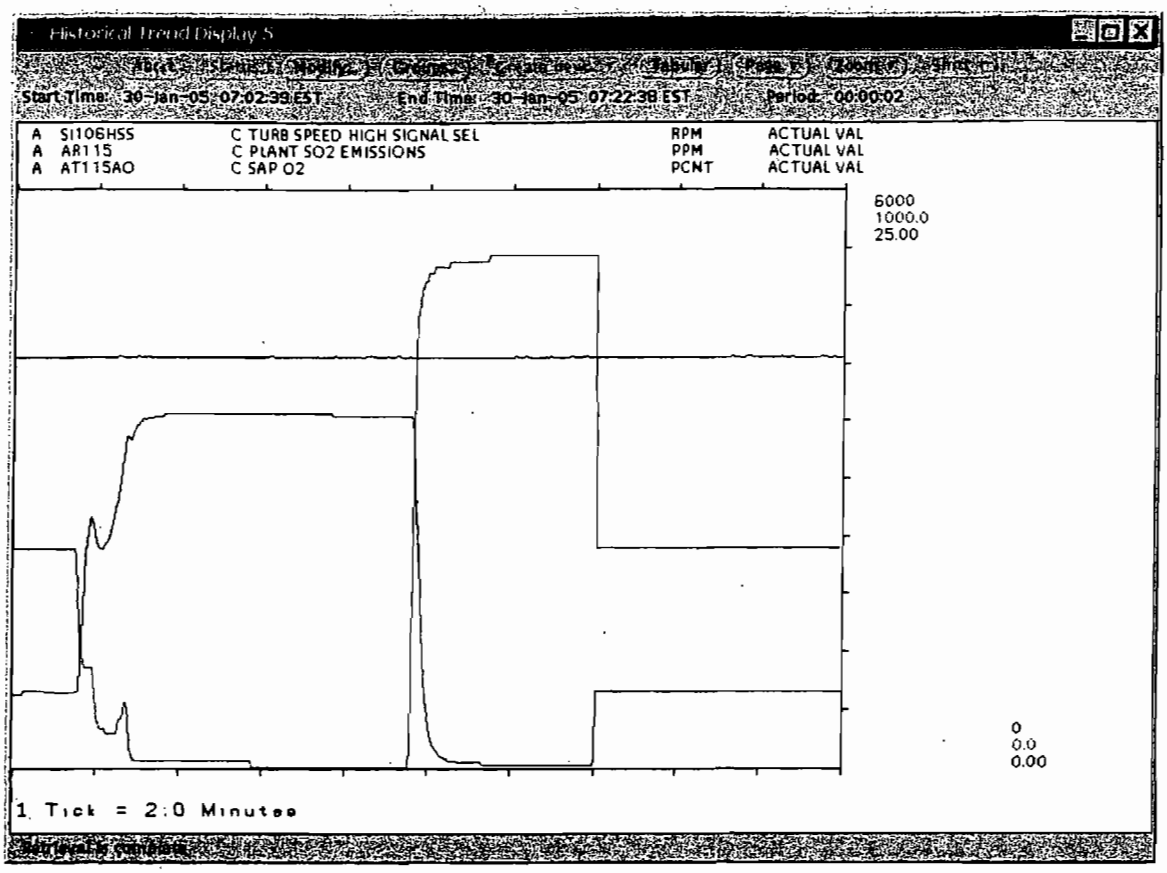
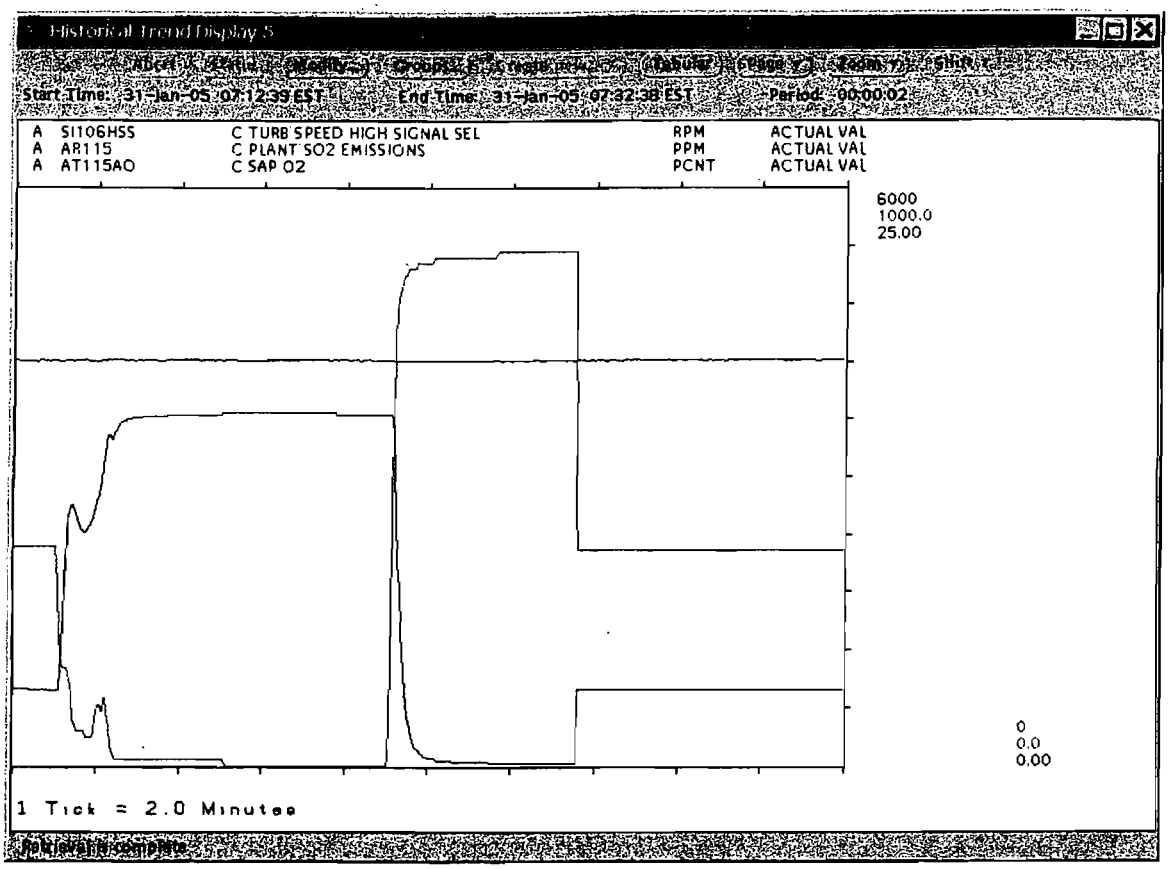
A AR115 C PLANT SO2 EMISSIONS PPM ACTUAL VAL
A AT115AO C SAP O2 PCNT ACTUAL VAL
6000
1000.0
25.00
0
0.0
0.00
1 Tick = 3..0 Minutes


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
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
6000
1000.0
25.00
0
0.0
0.00
1 Tick = 2:0 Minutes


Historical Trend Display 5
Start Time: 31-Jan-05 07:12:39 EST
End Time: 31-Jan-05 07:32:38 EST
Period: 00:00:02
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
6000
1000.0
25.00
0
0.0
0.00
1 Tick = 2.0 Minutes

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

CF Industries Inc.
Plant City Phosphate Complex

February 28, 2005

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

SUBJECT: "C" SAP Plant-Compliance Test
Permit No. 0570005-007-AV
Emission Unit 007

Dear Mr. Smolen:

Enclosed are duplicate copies of the recent Stack Test run at CF Industries, Inc., Plant City Phosphate Complex, on our "C" Sulfuric Acid Plant. Also, enclosed is a copy of the report for nitrogen oxides emissions testing. Southern Environmental Sciences, Inc. was contracted to perform this testing.

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/JHF/gm
u:\ENVRPT\167063.doc

Enclosures
cc: Diana Lee/HCEPC
R.C. May
J.M. Messina
F.J. Dlugos

PERMIT NO. 0570005-007-AV

Emission Unit 007

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

INTRODUCTION:

The Environmental Control Laboratory of CF Industries, Inc., Plant City Phosphate Complex, conducted emission tests at "C" Unit Sulfuric Acid Plant in Plant City, Florida, on January 25 and 26, 2005. Three 72-minute test runs were performed. The purpose of the test was to obtain emission data demonstrating compliance with Hillsborough County and State of Florida DEP Performance Standards. The measurements were made for sulfuric acid mist (including SO_3) and sulfur dioxide at the stack outlet to the atmosphere. The results were within the permitted limits.

Complete results are given in Appendix A.

PROCESS DESCRIPTION:

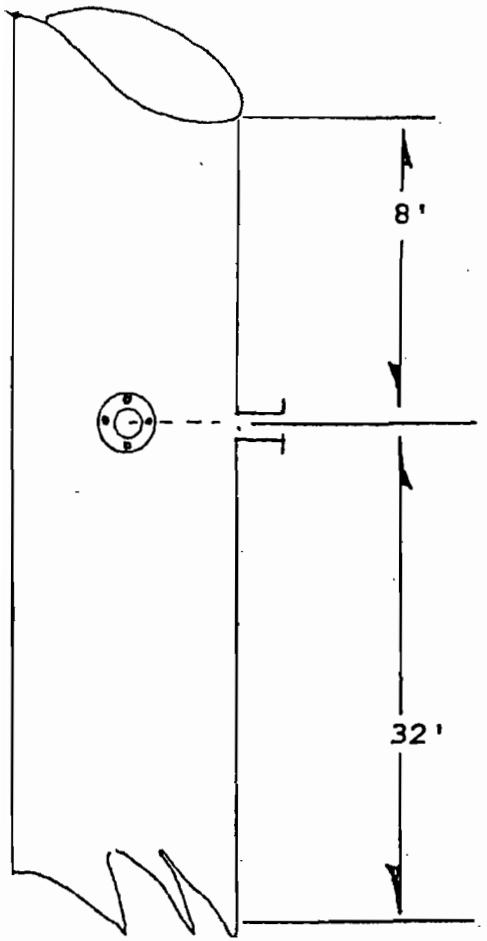
Sulfuric acid is produced by burning molten sulfur with dry air in a combustion chamber. The SO_2 gas stream is passed through a catalyst bed of vanadium where the SO_2 gas is converted to SO_3. The SO_3 gas is then absorbed with 98% H_2SO_4 to produce more H_2SO_4.

The principal reaction takes place as follows:

1. $2S + 2\ O_2$ ------->(Catalyst) $2\ SO_2$
2. $2\ SO_2 + O_2$ --------->(H_2SO_4) $2\ SO_3$
3. $SO_3 + H_2O$ ---------> H_2SO_4

LOCATION OF SAMPLING POINTS

The sampling sites and number of traverse points were selected as per Figure 1-2 EPA Method 1 specified in 40 CFR 60, Appendix A.



Traverse Point Number	Distance from inside wall
1	2.33"
2	7.44"
3	13.10"
4	19.65"
5	27.75"
6	39.52"
7	71.48"
8	83.25"
9	91.35"
10	97.90"
11	103.56"
12	108.67"

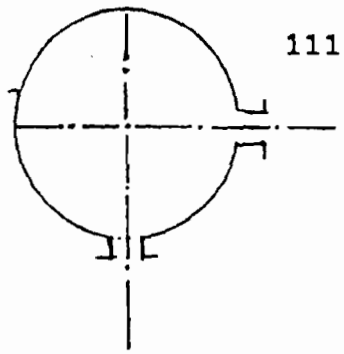


FIGURE 1

SAMPLE POINT DESCRIPTION
"C" SAP PRODUCTION

JTL
11/6/98

SAMPLING AND ANALYTICAL PROCEDURES

The methods described in EPA Methods 1, 2, 3, 8 & 9 contained in 40 CFR 60, Appendix A and adopted by reference in Chapter 62-297.401 F.A.C. are used when testing during compliance by CF Industries, Inc.

APPENDIX "A"

EMISSION CALCULATIONS AND RESULTS

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
$\sqrt{\Delta}$ Pave	=	Average square root of velocity head, in. H_2O
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_2O	=	Density of water, 1 gm/ml
M H_2O	=	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
Ø	=	Sampling time (minutes)

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

$$Vmstd = Vm \left(\frac{Tstd}{Tm} \right) \left(\frac{Pbar + \frac{\Delta H}{13.6}}{Pstd} \right)$$

$$Bwo = \frac{Vwstd}{Vwstd + Vmstd}$$

$$Ms = Md (1 - Bwo) + 18 (Bwo)$$

$$Vs(avg) = Kp\ Cp \sqrt{P(avg)} \sqrt{\frac{460 + Ts}{Ms\ Ps}}$$

$$Qs = 60 (1 - Bwo)\ Vs\ As \left(\frac{Tstd}{Ts} \right) \left(\frac{Ps}{Pstd} \right)$$

PERCENT ISOKINETIC

$$I = \frac{Ts\ (1.667) \left[(0.00267)\ V_1 + \left(\frac{Tstd}{Tm} \right) Pbar + \frac{\Delta H}{13.6} \right]}{\theta\ Vs\ Ps\ An}$$

$$Cs = 0.0154 \text{ grs/mg } \frac{Mf \text{ or } Mn}{Vmstd}$$

$$lbs/hr = (Cs \times Qs \times 60) / 7000$$

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

J. H. Falls
3/15/93

C SAP

PERMIT NO. 0570005-007-AV
EMISSION UNIT 007

RUN NUMBER	1	2	3
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	12.54.76
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%**

EMISSION CALCULATIONS

Date: January 25, 2005 Unit: C SAP Run #3

$$Vwstd = 0.04707 \text{ Cuft/ml} \times (v1)$$

$$= 0.04707 \text{ Cuft/ml} \times 0 \text{ ml}$$

$$= \mathbf{0.000} \text{ Cuft.}$$

$$Vmstd = Vm \frac{[\ Tstd\ ]}{[\ Tm + 460]} \frac{[\ Pbar + (\hat{}\ H / 13.6\ )\ ]}{[\ Pstd\ ]} Yi$$

$$= 51.465 \text{ Cuft} \times \frac{[\ 528\ ]}{[460 + 97.9]} \times \frac{[(30.21 + (1.3642 / 13.6))\ ] \times 1.01}{[\ 29.92\ ]}$$

$$= \mathbf{49.836} \text{ Cuft.}$$

$$Bwo = \frac{Vwstd}{Vwstd + Vmstd}$$

$$\frac{0.000}{0 + 51.464} \times 100$$

0.00 %

$$Ms = Md\ (\ 1 - Bwo\ ) + 18\ (Bwo)$$

$$= 28.4 \times (\ 1 - 0.0\ ) + 18 \times 0.0$$

$$= \mathbf{28.40}$$

$$Vs\ (avg) = Kp\ Cp\ P(avg\ sq\ rt)\ (460 + Ts) / (Ms\ Ps)$$

$$= 85.48 \times 0.84 \times 0.5292 \times (460 + 153) / (28.4 \times 30.22)$$

$$= \mathbf{32.11} \text{ ft/sec}$$

$$Qs = 60\ (1 - Bwo)\ VsAs\ (Tstd / Ts)\ (Ps / Pstd)$$

$$= 60\ (1 - 0.0) \times 32.11 \times 67.2 \times (528 / (460 + 153.04) \times (30.22 / 29.92)$$

$$= \mathbf{112,642} \text{ scfm}$$

$$Cs = 0.0154 \text{ grs/mg} \times (\text{total mg of sample}) / Vmstd$$

= 0.0154 grs/mg x 1254.76 mg / 49.836 cuft

= **0.3877** grs/cuft

lbs/hr = (Cs x Qs x 60 min/hr) / 7000 grs/lb

= (0..3877 x 112642 x 60) / 7000

= **374.36** lbs/hr SO_2

lbs/day = lbs/hr x 24 hrs/day

= 374.36 x 24

= **8984.76** lbs/day SO_2

Cs = 0.0154 grs/mg x (total mg of sample) / Vmstd

= 0.0154 grs/mg x 9.13 mg / 49.836 cuft

= **0.0028** grs/cuft

lbs/hr = (Cs x Qs x 60 min/hr) / 7000 grs/lb

= (0.0028 x 112642 x 60) / 7000

= **2.72** lbs/hr SO_3 + Acid Mist

lbs/day = lbs/hr x 24 hrs/day

= 2.72 x 24

= **65.38** lbs/day SO_3 + Acid Mist

Percent Isokinetics:

$$I = \frac{Ts\ (1.667)\ ((0.00267)\ V1) + (VmYi / Tm)\ ((Pbar + (\Delta H / 13.6)))}{0\ Vs\ Ps\ An}$$

$$= \frac{(460 + 153.04)\ (1.667)\ ((0.00267 \times 0) + (51.465 / (460 + 97.9) \times ((30.21 + (1.3642 / 13.6)))}{72 \times 32.11 \times 30.22 \times 0.000418}$$

= **98.8** %

RUN NO. 1
11:12 AM TO 12:31 PM (1/25/05)

TIME	SO2 MONITOR READING (ppm)	O2 Monitor (%)	SO2 (#/TON)
11:15 AM	360	3.28	3.15
11:30 AM	360	3.28	3.15
11:45 AM	360	3.25	3.15
12:00 PM	360	3.26	3.15
12:15 PM	360	3.23	3.14
12:30 PM	355	3.25	3.10
		AVERAGE	3.14

RUN NO. 2
12:58 PM TO 2:21 PM (1/25/05)

TIME	SO2 MONITOR READING (ppm)	O2 Monitor (%)	SO2 (#/TON)
1:00 PM	355	3.28	3.11
1:15 PM	360	3.23	3.14
1:30 PM	355	3.26	3.11
1:45 PM	355	3.24	3.10
2:00 PM	360	3.23	3.14
2:15 PM	355	3.25	3.10
		AVERAGE	3.12

RUN NO. 3
2:50 AM TO 4:10 AM (1/25/05)

TIME	SO2 MONITOR READING (ppm)	O2 Monitor (%)	SO2 (#/TON)
2:45 PM	355	3.25	3.10
3:00 PM	355	3.24	3.10
3:15 PM	355	3.25	3.10
3:30 PM	355	3.26	3.11
3:45 PM	355	3.27	3.11
4:00 PM	360	3.23	3.14
4:15 PM	355	3.26	3.11
		AVERAGE	3.11

$Es = (CsS) / [0.265 - (0.0126\%O2)]$

where:
Es = emission rate of SO2, (lb/ton of 100% H2SO4 produced)
Cs = concentration of SO2, (lb/dscf)
S = acid production rate factor, (11,800 dscf/ton of 100% H2SO4 produced)
%O2 = oxygen concentration, percent dry basis

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	SPAN/maint	SPAN/maint	375
8:00 AM	SPAN/maint	SPAN/maint	SPAN/maint	370	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	360	355	355	355	356.25
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	368.75

O2 Chart Readings

Time	:00	:15	:30	:45	AVG
6:00 AM	3.18	3.20	3.19	3.27	3.21
7:00 AM	3.21	3.20	SPAN/maint	SPAN/maint	3.2075
8:00 AM	SPAN/maint	SPAN/maint	SPAN/maint	3.24	3.24
9:00 AM	3.19	3.19	3.25	3.25	3.22
10:00 AM	3.26	3.23	3.28	3.23	3.25
11:00 AM	3.24	3.26	3.24	3.25	3.2625
12:00 PM	3.26	3.23	3.25	3.26	3.25
1:00 PM	3.28	3.23	3.26	3.24	3.2575
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	3.26000
7:00 PM	3.33	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	3.28	3.2425
12:00 AM	3.24	3.22	3.28	3.27	3.2625
1:00 AM	3.25	3.24	3.24	3.23	3.2400
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	3.21	3.24	3.2375

Time	Lbs SO2/ ton H2SO4 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 MAO

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 numbercalculated in step one (a) by the number calculated in step three (c).

This will give Lbs/ Ton H2SO4 _____

12.

.7126 .7245
.0409 .0407
.2241 .2243

Production Rate

DATE: January 25, 2005 SAMPLING TIME FROM: 11:12 AM TO 4:10 PM

STATEMENT OF PROCESS WEIGHT:

COMPANY NAME: CF INDUSTRIES, INC. PLANT CITY PHOSPHATE COMPLEX
MAILING ADDRESS: P.O. DRAWER L PLANT CITY, FL 33564
SOURCE IDENTIFICATION: "C" SAP PRODUCTION FACILITY
SOURCE LOCATION: "C" SAP PRODUCTION STACK

PERMIT SOURCE: 0570005-007-AV
Emission Unit 007

DATA ON OPERATING CYCLE TIME:

	1/25/2005 RUN #1	1/25/2005 RUN #2	1/25/2005 RUN #3	
START OF OPERATION, TIME	11:12 AM	12:58 PM	2:50 PM	
END OF OPERATION, TIME	12:31 PM	2:21 PM	4:10 PM	
ELAPSED TIME	72 MIN	72 MIN	72 MIN	
IDLE TIME DURING CYCLE	0	0	0	

DESIGN PROCESS RATING:

PROCESS WEIGHT RATE (INPUT) 37.42 TPH PRODUCT (OUTPUT) 114.58 TPH

DATA ON ACTUAL PROCESS RATE DURING OPERATION CYCLE:

	RUN #1	RUN #2	RUN #3
MATERIAL: SULFUR, TPH	36.34	36.34	36.34
MATERIAL:			
MATERIAL:			

TOTAL PROCESS WEIGHT RATE:	RUN #1	RUN #2	RUN #3
PRODUCT: SULFURIC ACID, TPD	2671	2671.0	2671.0

I certify that the above statement is true to the best of my knowledge and belief:

Signature: Tim Farrell

Title: Prod. Supt.

c&dsaprate.xls

VISIBLE EMISSION OBSERVATION FORM

No. |

COMPANY NAME	CF Industries, Inc. Plant City, Complex
STREET ADDRESS	10608 Paul Buchman Highway
	10 miles North of Plant City
CITY	Plant City
STATE	FL
ZIP	33564
PHONE (KEY CONTACT)	(813) 782-1591 (x290)
SOURCE ID NUMBER	0570005007

PROCESS EQUIPMENT "C"	Sulfuric Acid Production Facility
OPERATING MODE	Normal
CONTROL EQUIPMENT	Double Absorption Tower
OPERATING MODE	Normal

DESCRIBE EMISSION POINT	Circular Stack Opening 8 Feet in diameter
HEIGHT ABOVE GROUND LEVEL	~199.5'
HEIGHT RELATIVE TO OBSERVER	Start ~180' End ~180'
DISTANCE FROM OBSERVER	Start ~400' End ~400'
DIRECTION FROM OBSERVER	Start ENE End ENE

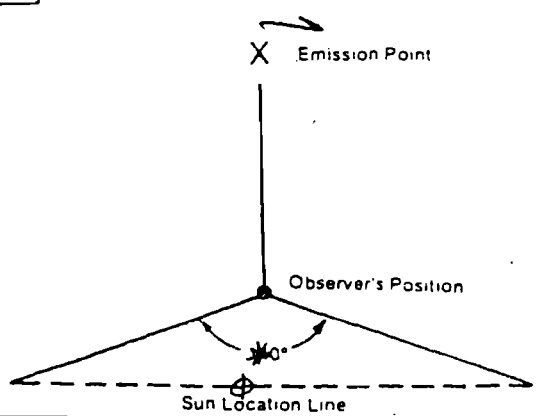
DESCRIBE EMISSIONS	Start None End None
EMISSION COLOR	Start N/A End N/A
IF WATER DROPLET PLUME	Attached ☐ Detached ☐
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED	Start ~4' From Stack opening End ~4' From Stack opening

DESCRIBE PLUME BACKGROUND	Start Blue SKY End Blue SKY
BACKGROUND COLOR	Start Blue End Blue
SKY CONDITIONS	Start Sunny End Sunny
WIND SPEED	Start 5-10mpH End 5-10mpH
WIND DIRECTION	Start out of NW End out of NW
AMBIENT TEMP	Start 64° End 65°
WET BULB TEMP	
RH, percent	39

Stack with Plume
Sun
Wind

SOURCE LAYOUT SKETCH

Draw North Arrow



OBSERVATION DATE	START TIME	END TIME
1/25/05	1447	1517

SEC / MIN	0	15	30	45	COMMENTS
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

OBSERVER'S NAME (PRINT)	William Cherry Jr
OBSERVER'S SIGNATURE	William T. Cherry
DATE	1/25/05
ORGANIZATION	CF Industries, Inc. Plant City, Complex
CERTIFIED BY	Eastern Technical Associates
DATE	8/11/2004

ADDITIONAL INFORMATION

CONTINUED ON VEO FORM NUMBER: 2

VISIBLE EMISSION OBSERVATION FORM

No. 2

COMPANY NAME	CF Industries, Inc. Plant City, Complex
STREET ADDRESS	10608 Paul Buchman Highway
	10 miles North of Plant City
CITY	Plant City
STATE	FL
ZIP	33564
PHONE (KEY CONTACT)	(813) 782-1591 (x290)
SOURCE ID NUMBER	0570005 007

PROCESS EQUIPMENT "C"	Sulfuric Acid Production Facility
OPERATING MODE	Normal
CONTROL EQUIPMENT	Double Absorption Tower
OPERATING MODE	Normal

DESCRIBE EMISSION POINT	Circular Stack opening 8 Feet in Diameter
HEIGHT ABOVE GROUND LEVEL	~199.5'
HEIGHT RELATIVE TO OBSERVER	Start ~180' End ~180'
DISTANCE FROM OBSERVER	Start ~400' End ~400'
DIRECTION FROM OBSERVER	Start ENE End ENE

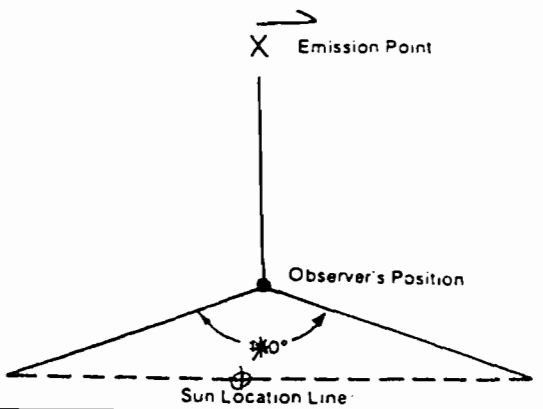
DESCRIBE EMISSIONS	Start None End None
EMISSION COLOR	Start N/A End N/A
IF WATER DROPLET PLUME	Attached ☐ Detached ☐
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED	Start ~4' From Stack opening End ~4' From Stack opening

DESCRIBE PLUME BACKGROUND	Start Blue Sky	End Blue Sky	
BACKGROUND COLOR	Start Blue	End Blue	
SKY CONDITIONS	Start Sunny	End Sunny	
WIND SPEED	Start 5-10mpH	End 5-10mpH	
WIND DIRECTION	Start W	End	
AMBIENT TEMP	Start 65°	End 65°	
WET BULB TEMP			
RH, percent	39		

Stack with Plume
Sun
Wind

SOURCE LAYOUT SKETCH

Draw North Arrow



ADDITIONAL INFORMATION

OBSERVATION DATE	START TIME	END TIME
1/25/05	1518	1548

SEC / MIN	0	15	30	45	COMMENTS
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

OBSERVER'S NAME (PRINT)	William F. Cherry JR.
OBSERVER'S SIGNATURE	William F. Cherry Jr.
DATE	1/25/05
ORGANIZATION	CF Industries, Inc. Plant City, Complex
CERTIFIED BY	Eastern Technical Associates
DATE	8/11/2004

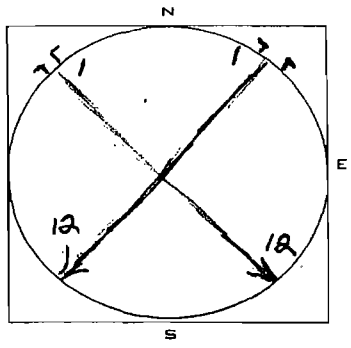
CONTINUED ON VEO FORM NUMBER

APPENDIX "B"

FIELD DATA

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

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



SCHEMATIC OF STACK CROSS SECTION

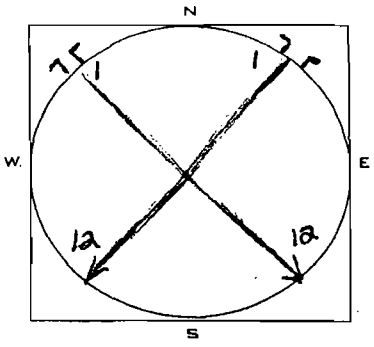
AMBIENT AIR TEMPERATURE	58	DEGREES F
BAROMETRIC PRESSURE	30.21	INCHES HG
ASSUMED MOISTURE	0	%
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.277	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

No Leak at 15" (Run start) ✓ — No Leak at 15" (end of Run) ✓

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
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°	185°	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	96°	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	0.5262	1.3246	89.46					

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER	2
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	1/25/05
OPERATOR	ERNEST KNOTSCHMAR
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	N/A DEGREES F
PROBE TIP DIAMETER	0.277 INCHES
PROBE LENGTH	10.5 FEET
PROBE HEATER SETTING	N/A

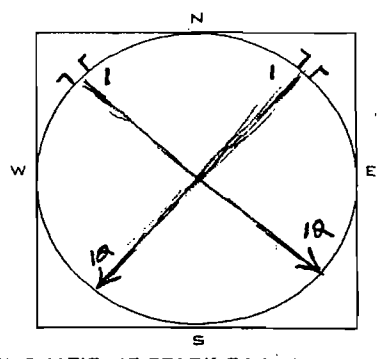
No Leak at 15" (RUN START) ✓ ✓

No Leak at 15" (END OF RUN) ✓ ✓

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
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	835.2	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°	92°	2.8		67°	153°
STOP	2:21PM	862.165								
			AVG. Sq Rt.	AVG.	AVG. 97.23					AVG.
		50.554	0.5204	1.2971						153.33

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	C SULFURIC
RUN NUMBER	3
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	11/25/05
OPERATOR	ERNEST KRETSCHMAR
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



SCHEMATIC OF STACK CROSS SECTION

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) KK

No Leak at 15" (END OF RUN) KK

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	2:50PM	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	~~86~~ 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	0.33	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	3:26PM	889.785								
1	3:34PM	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

SAMPLE CHAIN OF CUSTODY

Plant Name: CF INDUSTRIES, INC. PLANT CITY PHOSPHATE COMPLEX

Source Identification: "C" SULFURIC ACID PRODUCTION FACILITY

Date Sampled: 25-Jan-05 Sampling Time: 11:12 AM 4:10 PM

Test for: MOISTURE, SO3 & ACID MIST, SO2, AND VISIBLE EMISSION

SAMPLE RECOVERY

Sample Run	Description
1	#1 COLD BOX ASSEMBLY
2	#2 COLD BOX ASSEMBLY
3	#3 COLD BOX ASSEMBLY

Person engaged in sample recoveries:

Signature: Lloyd D. Camp Jr.

Title: "A" CLASS TECHNICIAN, ANALYST II

Location at which recovery was made: C SAP STACK

Laboratory person receiving samples:

Signature: William T. Clancy S

Title: "A" CLASS TECHNICIAN

ANALYSIS

Constituent	Method	Date	Time	Signature(s)
SO3 & ACID MIST	EPA METHOD 8	1/25/05	12:30 - 18:30	William T. Clancy S
SO2	EPA METHOD 8	1/25/05	12:30 - 18:30	William T. Clancy S
VISIBLE EMISSION	EPA METHOD 9	1/25/05	14:47 - 15:48	William T. Clancy S

custody.xls

CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX

DATE	25-Jan-05		
TIME	2:50 PM	TO	4:10 PM
STACK	C SAP		
RUN	#3		

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	1.93	30.10
Blank, ml.	0.15	0.15
Conversion to Milligrams	9.13	1254.76

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	#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	2.00	29.88
Blank, ml.	0.15	0.15
Conversion to Milligrams	9.49	1245.55

Analyst William T. Chung S

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	#1		

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 T. Chung Sr

cso4titr.xls

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 °) $\alpha 2$ 0 (<10°)

$\beta 1$ = 0 (< 5°) $\beta 2$ 1 (< 5°)

γ = 2 ° θ = 0 ° A = 0.997 cm (in)

Z = A SINE γ = 0.035 cm (in) Where Z is <0.32 cm (<1/8 in)

W = A SINE θ = 0.000 cm (in) Where W is <0.08 cm (<1/32 in)

Pa = 0.499 cm, in Pb = 0.499 cm, in

P = Pa + Pb / = 0.499 cm, in

Dt = 0.375 cm , in P/Dt = 1.329 Where P / Dp $\geq$ 1.05 and $\leq$ 1.50

Comments: Client: CF Industries

Type of Probe and Effective 31-674X-B1

Cp = 0.84

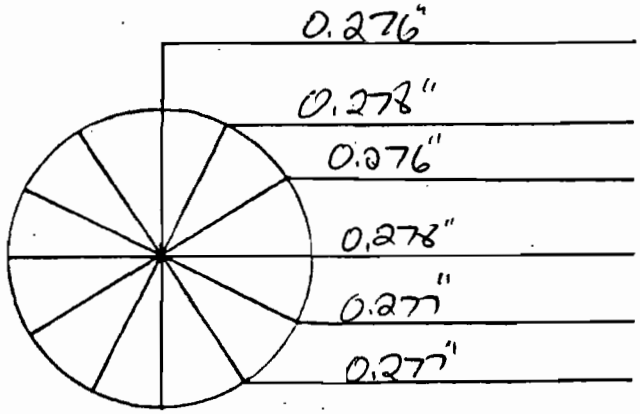
P.O. Drawer L.
Plant City, Florida 33564-9007
Telephone: 813/782-1591

CF Industries, Inc.
Plant City Phosphate Complex

PROBE NOZZLE CALIBRATION DATA

Nozzle Identification Number: 1334

Calibrated by: Brent Kretschmar 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: 0.0004338 ft^2

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

ANNUAL LSI STACKBOX (C254) THERMOCOUPLE CALIBRATIONS

Date: 10/15/04

Time: 940-1550

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

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

Initial

Display	Item	Ice Water Point			Ambiont Water Point			Hot Water Point			Hot Oil Point		
		Thermocouple or RTD Reading (Degrees F)	NIST Reading Actual	Con-version to Degrees C	Thermocouple or RTD Reading (Degrees F)	NIST Reading Actual	Con-version to Degrees C	Thermocouple or RTD Reading (Degrees F)	NIST Reading Actual	Con-version to Degrees C	Thermocouple or RTD Reading (Degrees F)	NIST Reading Actual	Con-version to Degrees C
[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

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

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

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

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

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.
- Td = 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
- 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

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

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

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

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

	Gas Volume		Temperature						
pproximate Flowrate (CFM)	Wet Test Meter (Vw) ft.^3	Dry Gas Meter (Vd) ft.^3	Wet Test Meter (Tw) Deg F	Dry Gas Meter (Td) Deg F	Dry Gas Meter Delta P ("H2O)	Time (THETA) Min.	Flowrate (CFM)	Dry Gas Meter Coeff. (Yds)	Avg. Gas Meter Coeff. (Yds)
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	

$$Q = \frac{Pb \times Vw \times 528}{(Tw + 460) \times Theta \times 29.92}$$

$$Yds = \frac{Vw}{Vd} \times \frac{(Td + 460)}{(Tw + 460)} \times \frac{Pb}{[Pb + (Delta\ P/13.6)]}$$

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. H20.

Yds = Dry gas meter Coefficient

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

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.
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Plant City, Florida 33563
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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_2O	Gas volume: Dry test meter (V_w), ft^3	Gas volume: Dry gas meter (V_d), ft^3	Temperature: Dry test meter (t_w), °F	Temperature: Dry gas meter: Inlet (t_{d_i}), °F	Temperature: Dry gas meter: Outlet (t_{d_o}), °F	Temperature: Dry gas meter: Average (t_d)[a], °F	Time (θ), min	Vacuum setting, in. Hg	Y_i	Y_i $\frac{V_w P_b (t_d + 460)}{V_d \left(P_b + \frac{\Delta H}{13.6}\right)(t_w + 460)}$
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)(533.50)
1.35	287.814 277.686	050.249 039.664	77° 75°	106 98°	89 83°	94.00	15.0	7.5	0.9857	(10.128)(30.24)(554.00) (10.585)(30.339)(536.00)
1.35	298.015 287.814	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.

Within ±0.05y
1/28/05, 2:20PM
Evan Katulin

V_w = Gas volume passing through the wet test meter, ft^3.

V_d = Gas volume passing through the dry gas meter, ft^3.

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 H_2O.

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 ±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

APPENDIX "C"

PROJECT PARTICIPANTS

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

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

CF Industries, Inc.
Plant City Phosphate Complex

May 25, 2005

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

Subject: CF Industries, Inc.
Plant City Phosphate Complex
Permit No. 0570005-019-AC(PSD-FL-339)
"D" 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 "D" Sulfuric Acid Unit on April 19, 20 & 21, 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 008

RELATIVE ACCURACY TESTING

CF INDUSTRIES, INC.

PLANT CITY PHOSPHATE COMPLEX

"D" SULFURIC ACID PLANT

PLANT CITY, FLORIDA

April 19, 20 & 21, 2005

TEST CONDUCTED BY:

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

Table of Contents

1.0 INTRODUCTION

The Environmental Laboratory of CF Industries, Inc., Plant City Phosphate Complex, conducted relative accuracy (RA) at the "D" Unit Sulfuric Acid Plant in Plant City, Florida on April 19, 20 & 21, 2005. Testing was performed to determine conformance with EPA Performance Specification 2 and 4.

2.0 CONTINUOUS EMISSION MONITOR DESCRIPTION

The "D" Unit Sulfuric Acid Plant is equipped with a continuous emission monitoring system (CEMS) utilizing an Ametek 4000 Photometric SO_2 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 O_2. Gas concentrations are recorded by a data acquisition system in the control room. The SO_2 and O_2 data are utilized to determine the source SO_2 emission in pound of SO_2 per ton of 100 percent sulfuric acid produced.

3.0 TEST RESULTS

Results of the SO_2 relative accuracy tests are summarized in Table 1. In order to be in conformance with Performance Specification 2, the relative accuracy of the SO_2 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 4.03 percent. The relative accuracy was therefore within the allowable limits.

Results of the O_2 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 O_2 CEMS must be no greater than 1.0 percent O_2. The relative accuracy of the O_2 CEMS, based upon the above definition, was 0.15 percent. The relative accuracy was therefore within the allowable limits.

4.0 TEST PROCEDURES

4..1 Methods

The SO_2 relative accuracy test was conducted in accordance with Performance Specification 2 – Specifications and Test Procedures for SO_2 and NO_2 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 O_2 relative accuracy test was conducted in accordance with Performance Specification 3 – Specifications and Test Procedures for O_2 and CO_2 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 O_2 CEMS. Oxygen sampling was performed simultaneously with SO_2 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: "D" Sulfuric Acid Plant
Date: 4/19-21/05

Run No.	Date	Time	Reference Method (PPM SO2)	CEM (PPM SO2)	Difference (PPM SO2)
1	4/19/05	16:55-17:16	309	325	16
2	4/20/05	15:30-16:56	318	325	7
3	4/20/05	17:27-17:48	318	323	5
4	4/21/05	09:28-09:49	329	338	9
5	4/21/05	10:20-11:46	335	344	9
6	4/21/05	12:03-13:26	343	352	9
7	4/21/05	13:45-14:06	323	335	12
8	4/21/05	14:40-15:01	324	340	16
9	4/21/05	15:35-15:56	326	335	9
Average			325	335	10.2

Std. Dev. 3.768

2.5% Error Confidence Coefficient (CC)= $t_{0.975}$ *Sd/sq.rt. N
CC = 2.888
n = 9
$t_{0.975}$ =2.3 for n = 9

Relative Accuracy (RA) = (mean of difference) + CC)/Avg RM
RA = 4.03 %

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 the continuous monitoring system for this plant, based upon the mean value of the reference method, was 4.03%. This value is within the allowable limits

Table 2. OXYGEN RELATIVE ACCURACY TEST RESULTS

Company: CF Industries, Inc., Plant City Phosphate Complex
Source: "D" Sulfuric Acid Plant
Date: 4/20-21/2005

Run No.	Date	Time	Reference Method (%O2)	CEM (%O2)	Difference (%O2)
1	4/20/05	15:30-16:56	3.27	3.30	0.03
2	4/20/05	17:27-17:48	3.43	3.21	-0.22
3	4/21/05	09:28-09:49	3.50	3.30	-0.20
4	4/21/05	10:20-11:46	3.43	3.25	-0.18
5	4/21/05	12:03-13:26	3.37	3.21	-0.16
6	4/21/05	13:45-14:06	3.37	3.22	-0.15
7	4/21/05	14:40-15:01	3.47	3.27	-0.20
8	4/21/05	15:35-15:56	3.37	3.27	-0.10
9	4/21/05	16:00-16:21	3.43	3.29	-0.14
Average			3.40	3.26	-0.15

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 0.15 percent O2 . The relative accuracy was therefore within the allowable limits.

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

D SAP

PERMIT NO. 0570005-007-AV
EMISSION UNIT 008

STACK BOX			
RUN NUMBER	1	2	3
DATE	19-Apr-05	20-Apr-05	20-Apr-05
TIME START	4:55 PM	3:30 PM	5:27 PM
TIME END	5:16 PM	4:56 PM	5:48 PM
BP, INCHES Hg	30.10	30.06	30.05
STACK PRESSURE, INCHES Hg	30.12	30.08	30.06
AVG.SQ.ROOT(VEL. HEAD) IN Hg	0.5103	0.5121	0.5152
ORIFICE PRESS. OF METER, IN WATER	1.340	1.299	1.310
AVG STACK TEMP., F	163.7	163.1	165.0
STACK, DRY BULB	163.7	163.1	165.0
METER TEMPERATURE, F	100.2	104.5	105.83
VOL. OF GAS, DM CONDITIONS, FT3	15.071	49.916	14.783
VOL. GAS, STP, DRY COND. FT3	14.309	46.959	13.871
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	31.29	31.40	31.65
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	107493	107868	108320
NET TIME OF TEST, MINUTES	21	72	21
SAMPLE NOZZLE AREA, FT2	0.000407	0.000407	0.000407
PERCENT ISOKINETIC	104.7	99.9	100.7
SULFURIC ACID MIST(INCLUDES SO3), MG		11.93	
SULFURIC ACID MIST, LBS/HR.		3.62	
SULFURIC ACID MIST, LBS/DAY		86.82	
SULFUR DIOXIDE, MG	332.82	1124.89	332.8
SULFUR DIOXIDE, LBS/HR.	330.03	341.08	343.07
SULFUR DIOXIDE, LBS/DAY	7920.7	8186.0	8233.6
SULFURIC ACID MIST, LBS/TON OF H2SO4 PROD.		0.03	
SULFURIC ACID MIST, LBS/TON LIMIT		**0.10**	
SULFUR DIOXIDE, LBS/TON OF H2SO4 PROD.	3.03	3.16	3.18
SULFUR DIOXIDE, LBS/TON LIMIT	**3.50**	**3.50**	**3.50**
SULFUR DIOXIDE, LBS/TON OF H2SO4 PROD. (METER IN PLANT)	3.02	2.94	2.95
PRODUCTION RATE, TPD	2607	2593	2593
PRODUCTION RATE, TPD LIMIT	**2750**	**2750**	**2750**

D SAP

PERMIT NO. 0570005-007-AV
EMISSION UNIT 008

STACK BOX						
RUN NUMBER	4	5	6	7	8	9
DATE	21-Apr-05	21-Apr-05	21-Apr-05	21-Apr-05	21-Apr-05	21-Apr-05
TIME START	9:28 AM	10:20 AM	12:03 PM	1:45 PM	2:40 PM	3:35 PM
TIME END	9:49 AM	11:46 AM	1:26 PM	2:06 PM	3:01 PM	3:56 PM
BP, INCHES Hg	30.06	30.06	30.02	30.02	29.99	29.97
STACK PRESSURE, INCHES Hg	30.08	30.08	30.03	30.04	30.01	29.99
AVG.SQ.ROOT(VEL. HEAD) IN Hg	0.5121	0.5132	0.5071	0.5119	0.509	0.5068
ORIFICE PRESS. OF METER, IN WATER	1.267	1.303	1.286	1.257	1.290	1.290
AVG STACK TEMP., F	163.0	161.8	158.7	161.7	162.7	162.7
STACK, DRY BULB	163.0	161.8	158.7	161.7	162.7	162.7
METER TEMPERATURE, F	96.17	114.2	113.3	112.0	108.0	107.2
VOL. OF GAS, DM CONDITIONS, FT3	14.127	50.487	49.891	14.547	14.762	14.708
VOL. GAS, STP, DRY COND. FT3	13.489	46.695	46.156	13.487	13.770	13.731
STACK GAS MOISTURE, % VOLUME	0	0	0	0	0	0
MW OF STACK GAS, DRY COND.	28.4	28.4	28.4	28.4	28.4	28.4
MW OF STACK GAS, STACK COND.	28.4	28.4	28.4	28.4	28.4	28.4
PITOT CORRECTION FACTOR	0.84	0.84	0.84	0.84	0.84	0.84
STACK GAS VELOCITY, STACK COND. FT3/SEC	31.41	31.44	31.01	31.38	31.24	31.12
STACK AREA, FT2	67.2	67.2	67.2	67.2	67.2	67.2
EFFECTIVE STACK AREA, FT2	67.2	67.2	67.2	67.2	67.2	67.2
STACK GAS FLOW-RATE AT STP, SCFMD	107859	108192	107104	107860	107109	106611
NET TIME OF TEST, MINUTES	21	72	72	21	21	21
SAMPLE NOZZLE AREA, FT2	0.000407	0.000407	0.000407	0.000407	0.000407	0.000407
PERCENT ISOKINETIC	98.3	99.0	98.8	98.3	101.1	101.3
SULFURIC ACID MIST(INCLUDES SO3), MG		10.56	9.30			
SULFURIC ACID MIST, LBS/HR.		3.23	2.85			
SULFURIC ACID MIST, LBS/DAY		77.51	68.37			
SULFUR DIOXIDE, MG	335.05	1180.29	1194.13	328.35	336.39	337.29
SULFUR DIOXIDE, LBS/HR.	353.64	360.99	365.77	346.61	345.38	345.68
SULFUR DIOXIDE, LBS/DAY	8787.3	8663.7	8778.4	8318.7	8289.1	8296.4
SULFUR DIOXIDE, LBS/TON OF H2SO4 PROD.	3.28	3.35	3.39	3.21	3.20	3.20
SULFUR DIOXIDE, LBS/TON LIMIT	**3.50**	**3.50**	**3.50**	**3.50**	**3.50**	**3.50**
SULFUR DIOXIDE, LBS/TON OF H2SO4 PROD. (METER IN PLANT)	3.03	3.11	3.18	3.03	3.07	3.01
METHOD 8 MEASURED SO2 CONC. (PPM)	329	335	343	323	324	326
CONTINUOUS MONITOR SO2 CONC. (PPM)	338	344	352	335	340	335
PRODUCTION RATE, TPD	2590	2590	2590	2590	2590	2590
PRODUCTION RATE, TPD LIMIT	**2750**	**2750**	**2750**	**2750**	**2750**	**2750**

CEMS SO2 Data - SO2 PPM

Run No.	Date	Time of RATA Run (PPM SO2)	Time	CEMS (PPM SO2)	Avg
1	04/19/05	16:55-17:16	1700	325	
			1715	325	325
2	04/20/05	15:30-16:56	1530	325	
			1545	325	
			1600	330	
			1615	325	
			1630	320	
			1645	325	
			1700	325	325
3	04/20/05	17:27-17:48	1730	320	
			1745	325	323
4	04/21/05	09:28-09:49	0930	335	
			0945	Span test	
			1000	340	338
5	04/21/05	10:20-11:46	1015	340	
			1030	335	
			1045	340	
			1100	340	
			1115	345	
			1130	350	
			1145	355	344
6	04/21/05	12:03-13:26	1200	360	
			1215	360	
			1230	355	
			1245	350	
			1300	355	
			1315	340	
			1330	345	352
7	04/21/05	13:45-14:06	1345	335	
			1400	335	335
8	04/21/05	14:40-15:01	1445	340	
			1500	340	340
9	04/21/05	15:35-15:56	1530	335	
			1545	335	335

tag	time	21m avg
ai515ao	4/21/2005 16:00:00	3.29

tag	time	21m max
ai515ao	4/21/2005 16:00:00	3.31

tag	time	21m min
ai515ao	4/21/2005 16:00:00	3.27

tag	time	21m avg
ar515	4/21/2005 16:00:00	331.84

tag	time	21m max
ar515	4/21/2005 16:00:00	334.41

tag	time	21m min
ar515	4/21/2005 16:00:00	329.22

Date	Time	Run Time	Average O2	Max O2	Min O2	Average SO2	Max SO2	Min SO2
19-Apr	1655-1716	21 min	3.30	3.34	3.26	320	326	315
20-Apr	1530-1656	1hr 26 min	3.30	3.31	3.25	328	333	323
20-Apr	1727-1748	21 min	3.21	3.23	3.20	349	353	340
21-Apr	0928-0949	21 min	3.24	3.26	3.24	292	656	-1
21-Apr	1020-1146	1hr 26 min	3.25	3.36	3.17	343	354	334

Span Test on ppm SO2 from approximately 9:43 a.m. to 9:58 a.m.

Date	Time	Run Time	Average O2	Max O2	Min O2	Average SO2	Max SO2	Min SO2
21-Apr	0928-0943	15 min	3.30	3.34	3.26	339	340	336

Excludes Span test data

Date	Time	Run Time	Average O2	Max O2	Min O2	Average SO2	Max SO2	Min SO2
21-Apr	1203-1326	1hr 23min	3.21	3.28	3.18	352	360	339
21-Apr	1345-1406	21 min	3.22	3.23	3.21	336	338	329
21-Apr	1440-1501	21 min	3.27	3.28	3.24	339	341	334
21-Apr	1535-1556	21 min	3.27	3.29	3.25	335	336	332
21-Apr	1600-1621	21 min	3.29	3.31	3.27	332	334	329

"D" Sulfuric Acid Plant Process Operation Data

Test Date: 4/19, 20 & 21/2005

Run No.	1	2	3	4	5	6	7	8	9	10
Date	4/19/05	4/20/05	4/20/05	4/21/05	4/21/05	4/21/05	4/21/05	4/21/05	4/21/05	4/21/05
Start Time	1655	1530	1727	0928	1020	1203	1345	1440	1535	1600
Stop Time	1716	1656	1748	0949	1146	1326	1406	1501	1556	1621
Production tons/day	2610	2593	2593	2590	2590	2590	2590	2590	2590	2590
Period Average Values from Aspen										
Avg lbs SO2/ton for period	3.03	3.16	3.18	3.03	3.11	3.18	3.03	3.07	3.01	
Avg % O2 for period		3.30	3.21	3.30	3.25	3.21	3.22	3.27	3.27	3.29
Avg SO2 ppm for period	325	325	323	338	344	352	335	340	335	

SO2 READINGS

PLANT "D" MONITOR - PPM SO2

DATE 4/19/05

TIME	:00	:15	:30	:45	AVG.
6:00 am	370	370	370	370	370
7:00 am	375	SPAN TEST	SPAN TEST	375	375
8:00 am	375	375	380	370	375
9:00 am	370	370	365	370	368.75
10:00 am	365	365	365	365	365
11:00 am	365	370	370	375	370
12:00 pm	370	370	375	370	371.25
1:00 pm	375	370	375	370	372.5
2:00 pm	375	375	370	SPAN TEST	373.33
3:00 pm	SPAN TEST	375	375	370	373.33
4:00 pm	370	345	315	310	335
5:00 pm	325	325	325	325	325
6:00 pm	325	330	330	330	328.75
7:00 pm	335	345	340	330	337.50
8:00 pm	325	325	320	320	322.50
9:00 pm	325	325	330	330	327.50
10:00 pm	325	330	325	335	328.75
11:00 pm	330	330	330	335	331.25
12:00 am	335	335	340	335	336.25
1:00 am	330	335	335	335	333.75
2:00 am	325	330	335	335	331.25
3:00 am	335	335	340	345	338.75
4:00 am	340	330	335	335	335
5:00 am	335	335	340	335	336.25

EXIT REICH TEST		
SHIFT	TIME	% SO2
7:00am		
7:00am		
7:00pm		
7:00pm		

CF = Conversion Factor

0.1306 $\frac{1.000 - 0.015}{R - S}$

=lbs. SO2/tons H2SO4 per PPM SO2

Where : R = Inlet % SO2
S = Monitor % SO2
(PPM SO2/1000)

INLET GAS SO2

SHIFT	TIME	BURNER TEMP.	% SO2	C F #	SO2/TON	SIGNATURE
7am-7pm	8:00 am	2049	11.9	.007044	3.3915	W. Bell
7am-7pm	2:00 pm	2052	11.7	.007233	3.462375	W. Bell
7pm-7am	3:00 am	2035	11.8	.007134	3.40855	Don Cecil
7pm-7am	6:00 am	[illegible]	[illegible]	.007134	3.40855	Don Cecil

REMARKS

Span Test 7:07 - 7:33 AM Y.L.
Span test 7:35 - 3:05 PM D

SO2 READINGS

PLANT D MONITOR - PPM SO2 DATE 4/20/05

TIME	:00	:15	:30	:45	AVG.
6:00 am	340	330	345	340	338.75
7:00 am	355	350	SPAN TEST	388	351.66
8:00 am	330	330	335	336	332.5
9:00 am	330	330	340	336	333.75
10:00 am	340	335	330	330	333.75
11:00 am	330	336	332	330	331.25
12:00 pm	330	330	330	336	331.25
1:00 pm	336	326	330	330	327.5
2:00 pm	330	340	330	330	332.5
3:00 pm	325	330	325	326	326.25
4:00 pm	330	325	320	326	325
5:00 pm	326	326	320	325	323.75
6:00 pm	330	330	335	330	331.25
7:00 pm	335	345	350	350	345
8:00 pm	340	340	340	345	341.25
9:00 pm	345	345	345	340	343.75
10:00 pm	340	345	345	345	343.75
11:00 pm	345	340	340	340	341.25
12:00 am	340	345	340	340	341.25
1:00 am	340	340	340	345	341.25
2:00 am	340	340	345	340	341.25
3:00 am	345	350	350	340	346.25
4:00 am	345	340	340	345	342.50
5:00 am	340	345	340	345	342.5

EXIT REICH TEST		
SHIFT	TIME	% SO2
7:00am		
7:00am		
7:00pm		
7:00pm		

CF = Conversion Factor

$$0.1306 \frac{1.000 - 0.015}{R - S}$$

=lbs. SO2/tons H2SO4 per PPM SO2

Where : R = Inlet % SO2
S = Monitor % SO2
(PPM SO2/1000)

INLET GAS SO2

SHIFT	TIME	BURNER TEMP.	% SO2	C F #	SO2/TON	SIGNATURE
7am-7pm	8:Am	2040	11.8	0.009184	3.01422	Jim Parker
7am-7pm	2:Pm	2038	11.8	0.009134	3.01422	Jim Parker
7pm-7am	8:Pm	2042	11.9	.009042	3.07428	Don Leach
7pm-7am	2:Am	2040	11.9	.009042	3.07428	Don Leach

REMARKS

Span test 07:17 - 07:42 Am Y.D.

SO2 READINGS

PLANT "D" MONITOR - PPM SO2

DATE 4/21/05

TIME	:00	:15	:30	:45	AVG.
6:00 am	345	346	346	346	345
7:00 am	346	SPAN TEST	SPAN TEST	346	346
8:00 am	340	335	340	340	336.75
9:00 am	335	335	335	SPAN TEST	335
10:00 am	340	340	335	340	338.75
11:00 am	340	346	350	355	347.5
12:00 pm	360	360	355	350	356.25
1:00 pm	355	340	346	335	343.75
2:00 pm	335	340	340	340	338.75
3:00 pm	340	335	335	335	336.25
4:00 pm	330	335	330	335	332.5
5:00 pm	335	335	340	335	336.25
6:00 pm	335	335	335	340	336.25
7:00 pm	340	340	345	345	342.50
8:00 pm	345	345	345	345	345
9:00 pm	345	350	340	345	345
10:00 pm	345	345	345	340	343.75
11:00 pm	340	335	340	340	338.75
12:00 am	340	335	335	335	336.25
1:00 am	335	340	335	335	336.25
2:00 am	340	340	340	335	338.75
3:00 am	340	345	340	340	341.25
4:00 am	345	345	350	340	345
5:00 am	340	340	345	345	342.5

EXIT REICH TEST		
SHIFT	TIME	% SO2
7:00am		
7:00am		
7:00pm		
7:00pm		

CF = Conversion Factor

$0.1306 \frac{1.000 - 0.015}{R - S}$

=lbs. SO2/tons H2SO4 per PPM SO2

Where : R = Inlet % SO2
S = Monitor % SO2
(PPM SO2/1000)

INLET GAS SO2

SHIFT	TIME	BURNER TEMP.	% SO2	C F #	SO2/TON	SIGNATURE
7am-7pm	8:Am	2037	11.9	0.009042	3.07428	Jim Parker
7am-7pm	2:Pm	2039	11.9	0.009041	3.028735	Jim Parker
7pm-7am	8:pm	2037	11.9	.009042	3.11949	Don Leach
7pm-7am	2:Am	2037	11.9	.009042	3.07428	Don Leach

REMARKS

Spuntest 07:13 - 07:41 Y.Q

Spuntest 09:32 - 09:55 Y.Q

CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX

DATE	19-Apr-05		
TIME	4:55 PM	TO	5:16 PM
STACK	D SAP		
RUN	#1		

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	0.011158	0.011158	
Mls. of Barium Perchlorate-Titrated		7.60	
Blank, ml.	0.15	0.15	
Conversion to Milligrams		332.82	

Analyst William F. Chancy S.

dso4titr.xls

CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX

DATE	20-Apr-05		
TIME	3:30 PM	TO	4:56 PM
STACK	D 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	0.011158	0.011158	
Mls. of Barium Perchlorate Titrated		25.33	
Blank, ml.	0.15	0.15	
Conversion to Milligrams		1124.89	

Analyst William F. Chung Jr.

dso4titr.xls

CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX

DATE	20-Apr-05		
TIME	5:27 PM	TO	5:48 PM
STACK	D SAP		
RUN	#3		

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	0.011158	0.011158
Mls. of Barium Perchlorate Titrated		7.60
Blank, ml.	0.15	0.15
Conversion to Milligrams		332.82

Analyst William T. Chung

dso4titr.xls

CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX

DATE	21-Apr-05		
TIME	9:28 AM	TO	9:49 AM
STACK	D SAP		
RUN	#4		

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	0.011158	0.011158	
Mls. of Barium Perchlorate Titrated		7.65	
Blank, ml.	0.15	0.15	
Conversion to Milligrams		335.05	

Analyst William T. Chung Jr

dso4titr.xls

CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX

DATE	21-Apr-05		
TIME	10:20 AM	TO	11:46 AM
STACK	D 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	0.011158	0.011158
Mls. of Barium Perchlorate Titrated		26.57
Blank, ml.	0.15	0.15
Conversion to Milligrams		1180.28

Analyst William T. Cheney Jr

dso4titr.xls

CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX

DATE	21-Apr-05		
TIME	12:03 PM	TO	1:26 PM
STACK	D SAP		
RUN	#6		

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	0.011158	0.011158	
Mls. of Barium Perchlorate Titrated		26.88	
Blank, ml.	0.15	0.15	
Conversion to Milligrams		1194.13	

Analyst William F. Chung Jr

dso4titr.xls

CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX

DATE	21-Apr-05		
TIME	1:45 PM	TO	2:06 PM
STACK	D SAP		
RUN	#7		

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	0.011158	0.011158
Mls. of Barium Perchlorate Titrated		7.50
Blank, ml.	0.15	0.15
Conversion to Milligrams		328.35

Analyst William T. Chung Jr.

dso4titr.xls

CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX

DATE	21-Apr-05		
TIME	2:40 PM	TO	3:01 PM
STACK	D SAP		
RUN	#8		

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	0.011158	0.011158	
Mls. of Barium Perchlorate Titrated		7.68	
Blank, ml.	0.15	0.15	
Conversion to Milligrams		336.39	

Analyst William T. Chung Jr.

dso4titr.xls

CF INDUSTRIES, INC.
PLANT CITY PHOSPHATE COMPLEX

DATE	21-Apr-05		
TIME	3:35 PM	TO	3:56 PM
STACK	D SAP		
RUN	#9		

SAMPLE SOLUTION ANALYSIS

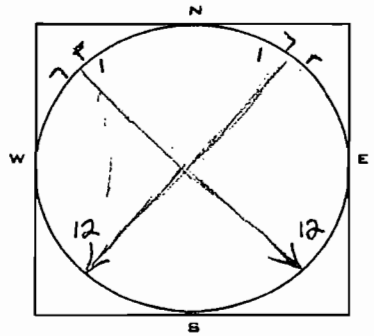
	Acid Mist, SO_3	SO_2
Volume of Sample, ml.	500	500 100
Aliquot, ml.	50	20 20
Normality of Barium Perchlorate	0.011158	0.011158
Mls. of Barium Perchlorate Titrated		7.70
Blank, ml.	0.15	0.15
Conversion to Milligrams		337.29

Analyst William F. Clancy Sr.

dso4titr.xls

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	D SULFURIC
RUN NUMBER	RATA (3)
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	4/19/05
OPERATOR	ERNEST KRUEGER
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	0.273	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

No Leak at 15" (RUN START) EK

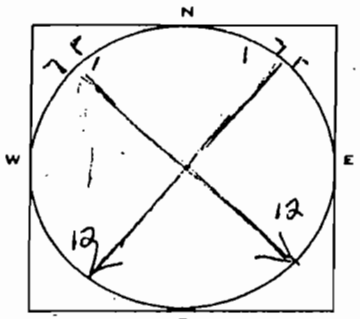
SCHEMATIC OF STACK CROSS SECTION

No Leak at 15" (END OF RUN) EK

TRAVERSE POINT	CLOCK (TIME)	DRY GAS METER (CUBIC FEET)	PITOT DELTA P (INCHES OF WATER) RATA		ORIFICE DELTA H (INCHES OF WATER)	DRY GAS TEMPERATURE (DEGREES F) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	4:55PM	875.011	0.25	0.33	1.64	99°	92°	8.0	N/A	62°	163°
2	5:02	880.5	0.28	0.23	1.14	108°	94°	6.0		62°	164°
3	5:09	885.2	0.33	0.25	1.24	112°	96°	6.2		63°	164°
STOP	5:16	890.082	0.33								
5			0.33								
6			0.30								
7			0.20								
8			0.23								
9			0.25 23								
10			0.28								
11			0.30								
12			0.33								
STOP											
1			0.15								
2			0.15								
3			0.18								
4			0.18								
5			0.15								
6			0.18								
7			0.30								
8			0.33								
9			0.33								
10			0.35								
11			0.35								
12			0.33								
STOP											
		15.071	0.5103		1.34		100.17				163.67

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	D SULFURIC
RUN NUMBER	COMP - 1
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	4/20/05
OPERATOR	BRUCE KNEESCHMAR
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	0.273	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

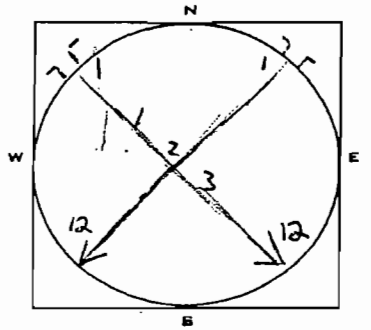
No Leak at 15" (RUN START) GK

No Leak at 15" (END OF RUN) GK

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	3:30PM	934.411	0.15	0.74	94°	94°	3.5	N/A	68°	155°
2	3:33PM	936.0	0.18	0.89	102°	93°	4.0		66°	161°
3	3:36	937.7	0.18	0.89	103°	92°	4.0		64°	165°
4	3:39	939.5	0.20	0.97 GK	104°	92°	4.0		63°	166°
5	3:42	941.3	0.18	0.87 89	106°	92°	4.0		63°	165°
6	3:45	942.9	0.18	0.89	108°	93°	4.0		63°	165°
7	3:48	944.8	0.33	1.61	109°	93°	~~4.0~~ 5.5		64°	164°
8	3:51	946.9	0.33	1.61	112°	95°	5.5		64°	163°
9	3:54	949.2	0.35	1.70	112°	96°	5.6		65°	164°
10	3:57	951.6	0.35	1.70	113°	97°	5.6		65°	163°
11	4:00	953.9	0.35	1.70	114°	98°	5.6		65°	163°
12	4:03	956.3	0.33	1.61	114°	99°	5.5		64°	163°
STOP	4:06PM	958.657								
1	4:20PM	958.657	0.23	1.12	102°	99°	4.5		66°	157°
2	4:23	960.6	0.25	1.22	113°	101°	4.8		62°	161°
3	4:26	962.7	0.33	1.61	114°	100°	5.2		61°	163°
4	4:29	965.0	0.30	1.46	114°	101°	5.0		62°	163°
5	4:32	966.9	0.30	1.46	115°	101°	5.0		61°	164°
6	4:35	969.5	0.28	1.36	115°	102°	4.8		63°	164°
7	4:38	971.7	0.25	1.22	115°	101°	4.5		64°	164°
8	4:41	973.8	0.23	1.12	116°	102°	4.2		64°	164°
9	4:44	975.8	0.23	1.12	116°	102°	4.2		65°	164°
10	4:47	977.7	0.25	1.22	117°	102°	4.5		66°	164°
11	4:50	979.8	0.30	1.46	118°	103°	5.0		65°	164°
12	4:53	982.0	0.33	1.61	120°	104°	5.2		65°	165°
STOP	4:56PM	984.327								
		49.916	AVG. Sq Rt.	AVG.		104.54				AVG.
			0.5121	1.299.2						163.08

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	D SULFURIC
RUN NUMBER	RUN-2
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	4/20/05
OPERATOR	BRANDT KROEKSCHMAN
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



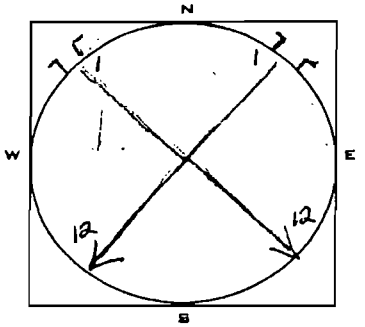
AMBIENT AIR TEMPERATURE		DEGREES F
BAROMETRIC PRESSURE		INCHES HG
ASSUMED MOISTURE	0	%
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.273	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

No Leak at 15" (Run Start) ✓ SCHEMATIC OF STACK CROSS SECTION No Leak at 15" (End of Run) ✓

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	5:27PM	985.608	0.18 / 0.20	0.97	105°	105°	4.0	N/A	68°	~~167°~~ 165°
2	5:34	989.9	0.18 / 0.28	1.36	112°	100°	5.0		63°	165°
3	5:41	994.9	0.20 / 0.33	1.61	113°	100°	5.2		63°	165°
STOP 4	5:48	1000.391	0.20							
5			0.20							
6			0.20							
7			0.30							
8			0.33							
9			0.35							
10			0.35							
11			0.35							
12			0.33							
STOP										
1			0.23							
2			0.25							
3			0.30							
4			0.33							
5			0.30							
6			0.28							
7			0.20							
8			0.23							
9			0.25							
10			0.28							
11			0.30							
12			0.33							
STOP										
		14.783	.5152	1.31		105.183				165.0

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	D SULFURIC
RUN NUMBER	RATA 3
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	4/21/05
OPERATOR	ERNEST KEITH HOMAR
SAMPLE UNIT S/N	S-311A
CONTROL UNIT S/N	C-254



SCHEMATIC OF STACK CROSS SECTION

AMBIENT AIR TEMPERATURE	73°	DEGREES F
BAROMETRIC PRESSURE	30.06	INCHES HG
ASSUMED MOISTURE	0 0	%
HEATER BOX SETTING	N/A	DEGREES F
PROBE TIP DIAMETER	0.273	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

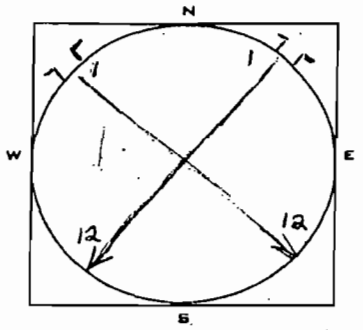
No Leak at 15" (Run Start) OK

No Leak at 15" (Run 5 Run) 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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	9:23AM	12.111	0.18	0.20	0.97	92°	84°	4.0	NA	58°	163°
2	9:35	16.3	0.18	0.25	1.22	108°	87°	4.5		56°	163°
3	9:42	21.0	0.18	0.33	1.61	114°	98°	5.0		58°	163°
STOP 4	9:49AM	26.238	0.20								
5			0.18								
6			0.18								
7			0.33								
8			0.33								
9			0.35								
10			0.33								
11			0.33								
12			0.33								
STOP											
1			0.22								
2			0.28								
3			0.30								
4			0.33								
5			0.30								
6			0.28								
7			0.23								
8			0.23								
9			0.23								
10			0.25								
11			0.30								
12			0.33								
STOP							AVG.				
			AVG. Sq Rt		AVG		96.17				AVG.
		14.127	0.5121		1.2667						163°

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	D SULFURIC
RUN NUMBER	COMP(4)
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	4/21/05
OPERATOR	ERNEST KOBYLCHMAR
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	0.273	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

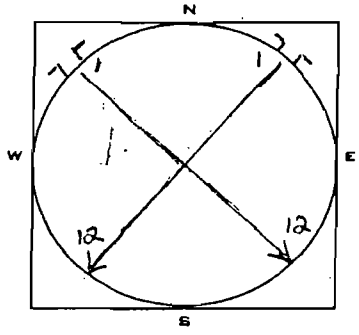
No Leak at 15" (RUN START) EK

No Leak at 15" (END OF RUN) EK

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	10:20AM	42.702	0.15	0.73	107°	104°	3.0	NA	68°	155°
2	10:23	44.3	0.18	0.88	115°	104°	3.0		64°	160°
3	10:26	46.0	0.18	0.88	117°	103°	3.0		62°	162°
4	10:29	47.8	0.20	0.97	118°	103°	3.2		61°	163°
5	10:32	49.6	0.18	0.88	118°	104°	3.0		62°	163°
6	10:35	51.3	0.18	0.88	119°	104°	3.0		64°	164°
7	10:38	53.1	0.33	1.61	122°	105°	3.5		64°	164°
8	10:41	55.4	0.33	1.61	122°	105°	3.5		64°	163°
9	10:44	57.8	0.35	1.70	122°	107°	3.6		64°	163°
10	10:47	60.1	0.35	1.70	123°	108°	3.6		63°	163°
11	10:50	62.6	0.35	1.70	124°	108°	3.6		63°	163°
12	10:53	65.0	0.33	1.61	124°	108°	3.5		64°	162°
STOP	10:56	67.323								
1	11:10AM	67.383	0.23	1.12	112°	108°	3.0		68°	157°
2	11:13	69.3	0.28	1.36	122°	108°	3.2		65°	162°
3	11:16	71.5	0.30	1.46	123°	107°	3.2		63°	162°
4	11:19	73.7	0.33	1.61	123°	108°	3.2		62°	163°
5	11:22	76.0	0.30	1.46	123°	108°	3.2		63°	163°
6	11:25	78.3	0.28	1.36	124°	108°	3.0		63°	163°
7	11:28	80.8	0.20	0.97	124°	108°	3.0		63°	163°
8	11:31	82.4	0.23	1.12	125°	109°	3.0		64°	162°
9	11:34	84.3	0.25	1.22	125°	110°	3.0		64°	162°
10	11:37	86.4	0.28	1.36	126°	111°	~~2.5~~ 3.0		65°	161°
11	11:40	88.6	0.30	1.46	126°	111°	3.3		64°	161°
12	11:43	90.8	0.33	1.61	128°	118°	3.3		64°	160°
STOP	11:46AM	93.189				AVG.				
			SQ RT AVG.	AVG.		114.23				AVG.
		50.487	0.5132	1.303						161.83

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	D SULFURIC
RUN NUMBER	Comp(s)
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	4/21/05
OPERATOR	BERNIEST KROTZHMAR
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	0.273	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

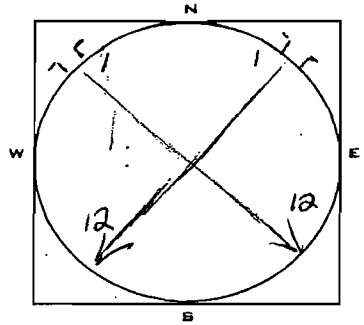
No Leak at 15" (Run START) EK

No Leak at 15" (END of RUN) EK

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	12:03PM	94.307	0.13	0.63	112°	109°	3.0	N/A	68°	156°
2	12:06	95.9	0.15	0.73	115°	108°	3.0		68°	161°
3	12:09	97.4	0.18	0.88	117°	108°	3.0		68°	162°
4	12:12	98.9	0.20	0.97	117°	107°	3.0		68°	162°
5	12:15	100.8	0.18	0.88	118°	106°	3.0		67°	162°
6	12:18	102.6	0.18	0.88	119°	106°	3.0		66°	162°
7	12:21	104.3	0.30	1.46	119°	106°	~~3.0~~ 3.3		67°	161°
8	12:24	106.2	0.33	1.61	121°	106°	3.5		64°	160°
9	12:27	108.5	0.35	1.70	121°	107°	3.5		64°	159°
10	12:30	110.9	0.35	1.70	121°	107°	3.5		62°	158°
11	12:33	113.4	0.35	1.70	121°	107°	3.5		61°	158°
12	12:36	115.8	0.33	1.61	120°	108°	3.5		62°	157°
STOP	12:39PM	118.136								
1	12:50PM	118.136	0.23	1.14	108°	108°	3.0		66°	147°
2	12:53	120.2	0.25	1.24	120°	108°	3.0		62°	155°
3	12:56	122.3	0.30	1.49	121°	107°	3.3		59°	~~155°~~ 156°
4	12:59	124.6	0.30	1.49	120°	108°	3.3		60°	158°
5	1:02	126.8	0.30	1.49	120°	107°	3.3		60°	158°
6	1:05	129.1	0.28	1.39	120°	107°	3.0		62°	159°
7	1:08	131.3	0.20	0.97	120°	107°	3.0		64°	159°
8	1:11	133.2	0.23	1.14	121°	107°	3.0		64°	159°
9	1:14	135.2	0.25	1.24	122°	107°	3.0		64°	~~159°~~ 160°
10	1:17	137.4	0.28	1.39	122°	108°	3.0		63°	160°
11	1:20	139.5	0.30	1.49	123°	108°	3.2		62°	160°
12	1:23	141.8	0.33	1.64	123°	108°	3.5		62°	160°
STOP	1:26PM	144.198				AVG.				
			Sq Rt. AVG.	AVE.		113.29				AVG.
		49.891	0.5071	1.2858	30					158.71

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	D SULFURIC
RUN NUMBER	RATA (6)
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	4/21/05
OPERATOR	BERNIST / CLOTFELTER
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	0.273	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

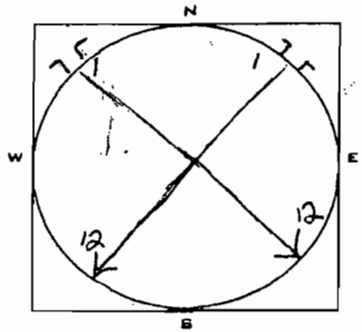
No Leak at 15" (Run START) EK

No Leak at END of Run @ 15" CK

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	1:45PM	160.202	0.18 | 0.18	0.89	112°	109°	5.2	N/A	68°	162°
2	1:52	164.3	0.18 | 0.25	1.24	118°	108°	6.5	↓	68°	161°
3	1:59	169.2	0.18 | 0.33	1.64	118°	107°	7.8	↓	64°	162°
STOP 4	2:06PM	174.749	0.18					↓		
5			0.18					↓		
6			0.18					↓		
7			0.33					↓		
8			0.35					↓		
9			0.35					↓		
10			0.35					↓		
11			0.33					↓		
12			0.33					↓		
STOP										
1			0.20							
2			0.28							
3			0.30							
4			0.33							
5			0.30							
6			0.30							
7			0.20							
8			0.23							
9			0.25							
10			0.25							
11			0.30							
12			0.33							
STOP			Sq Rt. AVG.	AVG.		AVG.				AVG.
		14.547	0.5119	1.2567		112°				161.67°

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	D SULFURIC
RUN NUMBER	RATA - 7
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	4/21/05
OPERATOR	ERNEST KRETSCHMAR
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	0.273	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

SCHEMATIC OF STACK CROSS SECTION

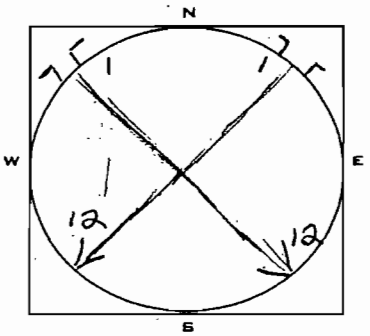
No Leak at 15" (Pre STM) EK

No Leak at 15" (End of Run) EK

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	2:40PM	180.209	0.18	0.20	0.99	105°	106°	4.0	N/A	68°	164°
2	2:47	184.5	0.18	0.25	1.24	115°	103°	4.8		64°	162°
3	2:54	189.4	0.18	0.32 0.30	1.164	115°	104°	5.0		62°	162°
STOP 4	3:01PM	194.971	0.18	0.33							
5			0.18								
6			0.18								
7			0.30								
8			0.33								
9			0.33								
10			0.35								
11			0.33								
12			0.33								
STOP											
1			0.20								
2			0.25								
3			0.30								
4			0.33								
5			0.30								
6			0.28								
7			0.20								
8			0.25								
9			0.25								
10			0.25								
11			0.30								
12			0.35								
STOP											
		14.762	AVG Sq Rt.		1.290		108				162.67

CF INDUSTRIES COMPLIANCE TEST FIELD SHEET

PLANT	D SULFURIC
RUN NUMBER	RATA - 8
LOCATION	CF INDUSTRIES, PLANT CITY
DATE	4/21/05
OPERATOR	BRUNER / STOETSCHMAL
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	0.273	INCHES
PROBE LENGTH	10.5	FEET
PROBE HEATER SETTING	N/A	

No Leak at 15" (RUN START) GB

No Leak at 15" (END OF RUN) GB

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) INLET	DRY GAS TEMPERATURE (DEGREES F) OUTLET	PUMP VACUUM (INCHES HG) GUAGE	BOX TEMPERATURE (DEGREES F)	IMPINGER TEMPERATURE (DEGREES F)	STACK TEMPERATURE (DEGREES F)
1	3:35PM	196.404	0.15 | 0.20	0.99	104°	105°	3.0	N/A	68°	164°
2	3:42	200.7	0.18 | 0.25	1.24	114°	102°	3.2		63°	162°
3	3:49	205.16	0.18 | 0.33	1.64	116°	102°	3.5		64°	162°
STOP 4	3:56 PM	211.112	0.18							
5			0.18							
6			0.18							
7			0.28							
8			0.33							
9			0.33							
10			0.35							
11			0.35							
12			0.33							
STOP										
1			0.20							
2			0.25							
3			0.30							
4			0.30							
5			0.28							
6			0.28							
7			0.20							
8			0.25							
9			0.25							
10			0.30							
11			0.30							
12			0.33							
STOP										
		14.708	0.5068	1.29		107.1				162.67

O2 Testing by Orsat

	Date		Plant	Tedlar Bags Leak Checked Yes	Tedlar Bags Leak Checked No	Orsat Leak Checked Yes	Orsat Leak Checked No	Time Collected	Time Analyzed	CO2	O2*	Analyst	
	4/20/05	1	DSAD COMP 1	✓		✓			6:55PM	0	3.1	EB	
1		2									3.3	EB	3.27
		3									3.4	EB	
2	4/20/05	1	DSAD			✓			7:15PM	0	3.4	EB	
		2	RATA 2								3.4	EB	3.43
		3									3.5	EB	
3	4/21/05	1	DSAP	✓		✓			1040		3.5	TD	
		2	RATA 3								3.5	TD	3.50
		3									3.5	TD	
4	4/21/05	1	COMP 2						1200		3.4	TD	
		2									3.5	TD	3.43
		3									3.4	TD	
5		1	COMP 3						1340		3.4	TD	
		2									3.3	TD	3.37
		3									3.4	TD	
6		1	RATA 4						1500		3.3	TD	
		2									3.4	TD	3.37
		3									3.4	TD	
7		1	RATA 5						1615		3.4	TD	
		2									3.5	TD	3.47
		3									3.5	TD	
8		1	RATA 6						1625		3.4	TD	
		2									3.3	TD	3.37
		3									3.4	TD	
9		1	RATA 7						1645		3.4	TD	
		2									3.5	TD	3.43
		3									3.4	TD	
		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 □ (813) 752-5014, Fax: (813) 752-2475

February 18, 2005

Mr. Frank Dlugos
CF INDUSTRIES, INC.
P.O. Drawer L
Plant City, Florida 33564

Re: Meter Box Calibration &
Dry Gas Meter Calibration

Dear Frank:

The attached calibrations were performed on the Lear Seigler meter box (serial # C254) and the 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

Enclosures

DRY GAS METER CALIBRATION

Meter Box Number: Lear Seigler Barometric Pressure: 30.06
Serial No: C254 Wet Test Meter No.: P-576
Date: 02/16/2005 Calibrated By: DW

Orifice Manometer Setting (Delta H) in. H2O	Gas Volume		Temperature		Time (THETA) 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	5.361	73.0	105.50	12.1	0.988	1.551
1.00	5.000	5.318	72.0	105.0	8.57	0.996	1.552
1.50	10.000	10.644	72.0	106.0	14.23	0.996	1.602
2.00	10.000	10.575	71.0	105.5	12.33	1.002	1.599
3.00	10.000	10.568	72.0	108.0	10.13	1.003	1.618
4.00	10.000	10.501	71.5	106.5	8.83	1.005	1.640
						0.998	1.594

Delta H@ Acceptable Range 1.794 to 1.394
Yi Acceptable Range 1.018 to 0.978

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

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

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.
Td = 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
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

SOUTHERN ENVIRONMENTAL SCIENCES, INC.
WET TEST METER CALIBRATION CHECK

Wet Test Meter #: P-576
Manufacturer: American Meter
Date: 01/05/2005

Barometric Pressure: 30.08
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	71.0	72.0	0.999
1.198	1.204	70.0	72.0	0.999
1.195	1.204	70.0	74.0	1.000
1.197	1.204	71.0	74.0	1.000
1.199	1.202	71.0	73.0	1.001
1.199	1.204	72.0	74.0	1.000
				1.000

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

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	02/18/2005
SERIAL #	JA 631105	BAROMETRIC PRESSURE	30.22
WET TEST METER #	P-576	LEAK CHECK	0.00 CFM @ 15" Hg

	Gas Volume		Temperature						
Approximate Flowrate (CFM)	Wet Test Meter (Vw) ft.^3	Dry Gas Meter (Vd) ft.^3	Wet Test Meter (Tw) Deg F	Dry Gas Meter (Td) Deg F	Dry Gas Meter Delta P ("H2O)	Time (THETA) Min.	Flowrate (CFM)	Dry Gas Meter Coeff. (Yds)	Avg. Gas Meter Coeff. (Yds)
0.40	5.000	4.982	74.5	78.0	0.10	10.85	0.460	1.010	
0.40	5.000	4.975	74.5	78.0	0.10	10.93	0.456	1.011	1.009
0.40	5.000	4.996	74.5	78.0	0.10	10.97	0.455	1.007	
0.60	5.000	5.033	74.0	77.0	0.35	7.23	0.691	0.998	
0.60	5.000	5.025	74.0	76.0	0.35	8.10	0.616	0.998	0.998
0.60	6.000	6.033	74.0	76.0	0.35	8.68	0.690	0.997	
0.80	5.000	5.047	73.0	75.0	0.73	5.58	0.897	0.993	
0.80	6.000	6.074	73.5	75.5	0.73	6.77	0.886	0.990	0.991
0.80	5.000	5.056	72.5	74.5	0.73	5.63	0.889	0.991	
1.00	5.000	5.055	72.0	74.0	1.31	4.62	1.085	0.990	
1.00	5.000	5.069	72.0	74.0	1.31	4.58	1.094	0.987	0.989
1.00	5.000	5.045	71.5	73.0	1.31	4.67	1.074	0.991	
1.20	5.000	5.075	70.0	72.0	1.48	4.05	1.242	0.985	
1.20	5.000	5.077	69.5	71.0	1.48	4.00	1.259	0.984	0.983
1.20	5.000	5.085	68.0	68.5	1.48	3.82	1.322	0.981	

$$Q = \frac{Pb \times Vw \times 528}{(Tw + 460) \times Theta \times 29.92}$$

$$Yds = \frac{Vw}{Vd} \times \frac{(Td + 460)}{(Tw + 460)} \times \frac{Pb}{[Pb + (Delta\ P/13.6)]}$$

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. H20.

Yds = Dry gas meter Coefficient

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

STANDARD METER CALIBRATION CURVE

GAS METER MANUF.	ROCKWELL	PERFORMED FOR	C. F. Industries - Plant City
MODEL #	175-S	DATE	02/18/2005
SERIAL #	JA 631105		

FLOWRATE (CFM)	DRY GAS METER COEFF. (Yds)
0.457	1.009
0.666	0.998
0.891	0.991
1.085	0.989
1.274	0.983

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

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.

α1 1 (<10 °) α2 0 (<10°)

β1 = 0 (< 5°) β2 1 (< 5°)

γ = 2 ° θ = 0 ° A = 0.997 cm (in)

Z = A SINE γ = 0.035 cm (in) Where Z is <0.32 cm (<1/8 in)

W = A SINE θ = 0.000 cm (in) Where W is <0.08 cm (<1/32 in)

Pa = 0.499 cm, in Pb = 0.499 cm, in

P = Pa + Pb / = 0.499 cm, in

Dt = 0.375 cm , in P/Dt = 1.329 Where P / Dt ≥ 1.05 and ≤ 1.50

Comments: Client: CF Industries

Type of Probe and Effective 31-674X-B1

Cp = 0.84

ANNUAL LSI STACKBOX (C254) THERMOCOUPLE CALIBRATIONS

Date: 10/15/04

Time: 940-1550

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

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

Initial

Display	Item	Ice Water Point			Ambiont Water Point			Hot Water Point			Hot Oil Point		
		Thermocouple or RTD Reading (Degrees F)	NIST Reading Actual	NIST Reading Con-version to Degrees C	Thermocouple or RTD Reading (Degrees F)	NIST Reading Actual	NIST Reading Con-version to Degrees C	Thermocouple or RTD Reading (Degrees F)	NIST Reading Actual	NIST Reading Con-version to Degrees C	Thermocouple or RTD Reading (Degrees F)	NIST Reading Actual	NIST Reading Con-version to Degrees C
				F			F			F			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

LSI-TCUPL-04.XLS

POSTTEST DRY GAS METER CALIBRATION DATA FORM (English units)

Test numbers _____ Date 4/25/05 Meter box number C254 Plant D SULFURIC

Barometric pressure, P_b = 30.00 in. Hg Dry gas meter number 463613 Pretest Y 0.998

Orifice manometer setting, (ΔH), in. H_2O	Gas volume: Dry test meter (V_w), ft^3	Gas volume: Dry gas meter (V_d), ft^3	Temperature: Dry test meter (t_w), °F	Temperature: Dry gas meter: Inlet (t_{d_i}), °F	Temperature: Dry gas meter: Outlet (t_{d_o}), °F	Temperature: Dry gas meter: Average (t_d)[a], °F	Time (θ), min	Vacuum setting, in. Hg	Y_i	$Y_i \frac{V_w P_b (t_d + 460)}{V_d \left(P_b + \frac{\Delta H}{13.6}\right)(t_w + 460)}$
1.30	695.082 685.043	231.872 221.602	74° 72°	98° 77°	82° 73°	82.5°	15.0	7.8	0.9775	$\frac{(10.039)(30.00)(542.5)}{(10.270)(30.096)(533.0)}$
1.30	705.125 695.082	242.290 231.872	73° 74°	103° 90°	87° 83°	90.75°	15.0	7.8	0.9920	$\frac{(10.043)(30.00)(550.75)}{(10.418)(30.096)(533.5)}$
1.30	715.127 705.125	252.780 242.290	76° 73°	106° 93°	91° 87°	94.25°	15.0	7.8	0.9856	$\frac{(10.002)(30.00)(554.25)}{(10.490)(30.096)(534.5)}$
									Y = 0.9850	

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

Within ±0.05y
3:15PM, 4/25/05

V_w = Gas volume passing through the wet test meter, ft^3.

V_d = Gas volume passing through the dry gas meter, ft^3.

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 H_2O.

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 ±0.05Y

P_b = Barometric pressure, in. Hg.

θ = Time of calibration run, min.

Dry test meter number Rockwell-JAG31105

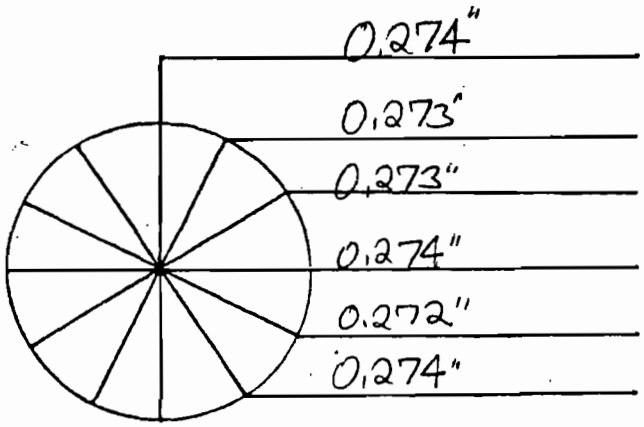
P.O. Drawer L.
Plant City, Florida 33564-9007
Telephone: 813/782-1591

CF Industries, Inc.
Plant City Phosphate Complex

PROBE NOZZLE CALIBRATION DATA

Nozzle Identification Number: 4452

Calibrated by: Bonnie Kretschman **Date:** 4/18/05



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: 0.273 In.

Nozzle area A_n: 0.000 407 ft^2

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

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
$\sqrt{\Delta}$ Pave	=	Average square root of velocity head, in. H_2O
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_2O	=	Density of water, 1 gm/ml
M H_2O	=	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
Ø	=	Sampling time (minutes)

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

$$Vmstd = Vm \left(\frac{Tstd}{Tm} \right) \left(\frac{Pbar + \frac{\Delta H}{13.6}}{Pstd} \right)$$

$$Bwo = \frac{Vwstd}{Vwstd + Vmstd}$$

$$Ms = Md\ (1 - Bwo) + 18\ (Bwo)$$

$$Vs(avg) = Kp\ Cp \sqrt{P(avg)} \sqrt{\frac{460 + Ts}{Ms\ Ps}}$$

$$Qs = 60\ (1 - Bwo)\ Vs\ As \left(\frac{Tstd}{Ts} \right) \left(\frac{Ps}{Pstd} \right)$$

PERCENT ISOKINETIC

$$I = \frac{Ts\ (1.667) \left[(0.00267)\ V_1 + \left(\frac{Tstd}{Tm} \right) Pbar + \frac{\Delta H}{13.6} \right]}{\theta\ Vs\ Ps\ An}$$

$$Cs = 0.0154 \text{ grs/mg } \frac{Mf \text{ or } Mn}{Vmstd}$$

$$lbs/hr = (Cs \times Qs \times 60) / 7000$$

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

J. H. Falls
3/15/93

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

CF Industries, Inc.
Plant City Phosphate Complex

CALIBRATION DRIFT EVALUATION

Sulfuric Acid Plant D

Continuous Emissions Monitoring System

April 18, 2005 through April 24, 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 D for the period, April 18 through April 24, 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 April 2005. Attachment 2 provided zero point drift data for the SO2 and O2 CEMS.

T.A. Edwards
5/13/2005

Table 1
Calibration Drift Determination - "D" Sulfuric Acid Plant
April 18 - April 24, 2005 - SO2 CEMS

Date	Reference Value ppm (a)	CEMS Response ppm	Calibration Drift ppm	Calibration Drift, % of span value (b)
18-Apr-05	904	897.0	7	0.70
19-Apr-05	904	892.0	12	1.20
20-Apr-05	904	889.0	15	1.50
21-Apr-05	904	888.0	16	1.60
22-Apr-05	904	884.0	20	2.00
23-Apr-05	904	885.0	19	1.90
24-Apr-05	904	885.0	19	1.90

(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 - "D" Sulfuric Acid Plant
April 18 - April 24, 2005 - O2 CEMS

Date	Reference Value % O2 (a)	CEMS Response % O2	Calibration Drift % O2 (b)
18-Apr-05	15.0	15.10	0.10
19-Apr-05	15.0	15.10	0.10
20-Apr-05	15.0	15.10	0.10
21-Apr-05	15.0	15.10	0.10
22-Apr-05	15.0	15.08	0.08
23-Apr-05	15.0	15.00	0.00
24-Apr-05	15.0	15.05	0.05

(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 – April 2005

DAILY SO_2 LOG

PLANT D MONTH APRIL 2005

DAY	TECH	O_2	ZERO REF. COUNTS	SPAN	%ERROR	DATE OF NEW BOTTLE	LOG SPAN TIME
1	MEK	15.2	-3129	892	-1.32		07:17 - 07:43
2	CEB	15.3	-3138	883	+2.32		07:10 - 07:36
3	VITO	15.4	-3136	896	-.88		7:34 AM - 7:50 AM
4	BVO	15.3	-3140	898	-.66		07:12 - 07:40 AM
5	BVO	15.3	-3150	896	-.88		07:10 - 07:40 AM
6	BVO	15.3	-3155	895	-1.00		07:25 - 07:55 AM
7	Y.Q.	15.4	-3161	889	-1.65		07:13 - 07:40 AM
8	Y.Q	15.4	-3172	882	-2.43		07:18 - 07:45 AM
9	Y.Q	15.3	-3170	882	-2.43		07:11 - 07:38 AM
10	BVO	15.3	-3168	887	-2.0		07:05 - 07:35 AM
11	BVO	15.2	-3178	889	-1.66		07:15 - 07:42 AM
12	BVO	15.2	-3180	884	-2.21		07:20 - 07:47 AM
13	Y.Q	15.1	-3190	881	-2.54		07:05 - 07:34 AM
14	Y.Q	15.3	-3194	883	2.32		07:15 - 07:41 AM
15	Y.Q	15.2	-3196	889	-1.66		07:16 - 07:37 AM
16	BVO	15.2	-3192	894	-1.11		07:03 - 07:31 AM
17	BVO	15.1	-3205	898	-.66		07:07 - 07:34 AM
18	BVO	15.1	-3210	891	-.77		07:21 - 07:50 AM
19	Y.Q	15.1	-3223	892	-1.32		07:07 - 07:33 AM
20	Y.Q	15.1	-3236	889	-1.66		07:17 - 07:42 AM
21	Y.Q	15.1	-3240	885	-1.76		09:32 - 09:58 AM
22	MAD	15.08	-3240	884	-2.26		07:37 - 08:10 AM
23	BVO	15.0	-3244	885	-2.10		07:03 - 07:31 PM
24	BVO	15.05	-3245	885	-2.10		07:07 - 07:34 PM
25	Y.Q	15.3	-3252	886	-1.99		07:11 - 07:39 AM
26	Y.Q	15.0	-3268	882	-2.43		10:20 - 10:53 AM
27	Y.Q.	14.9	-3275	886	-1.99		07:19 - 07:41 AM
28	BVO	15.1	-3265	891	-1.44		07:24 - 07:51 AM
29	BVO	15.0	-3278	881	-2.54		07:02 - 07:36 PM
30	BVO	15.0	-3280	886	-1.99		07:03 - 07:31 PM
31	X						

SO2 BOTTLE #1
SER# CC152789 PPM 904

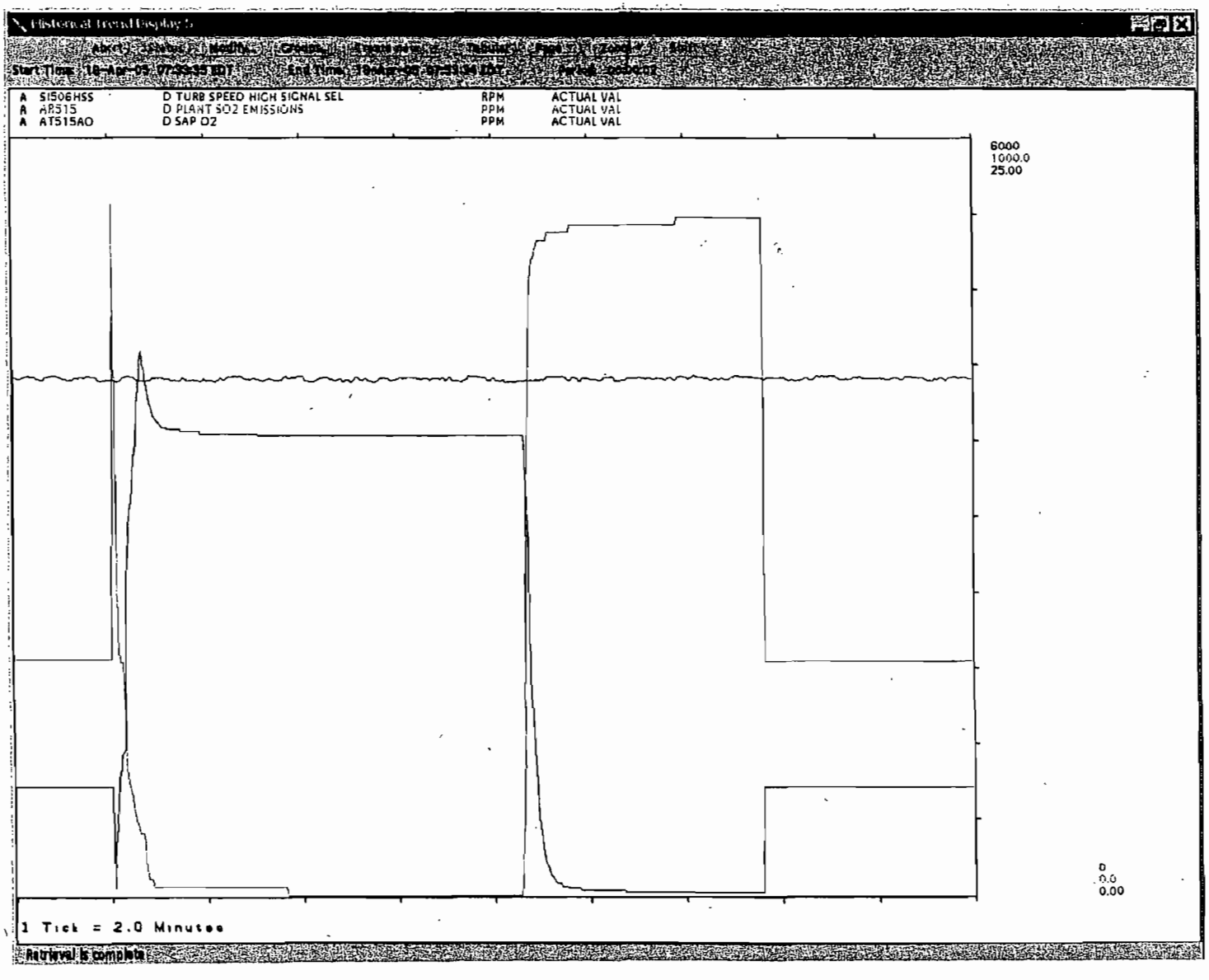
BOTTLE #2
SERIAL # _____ PPM _____

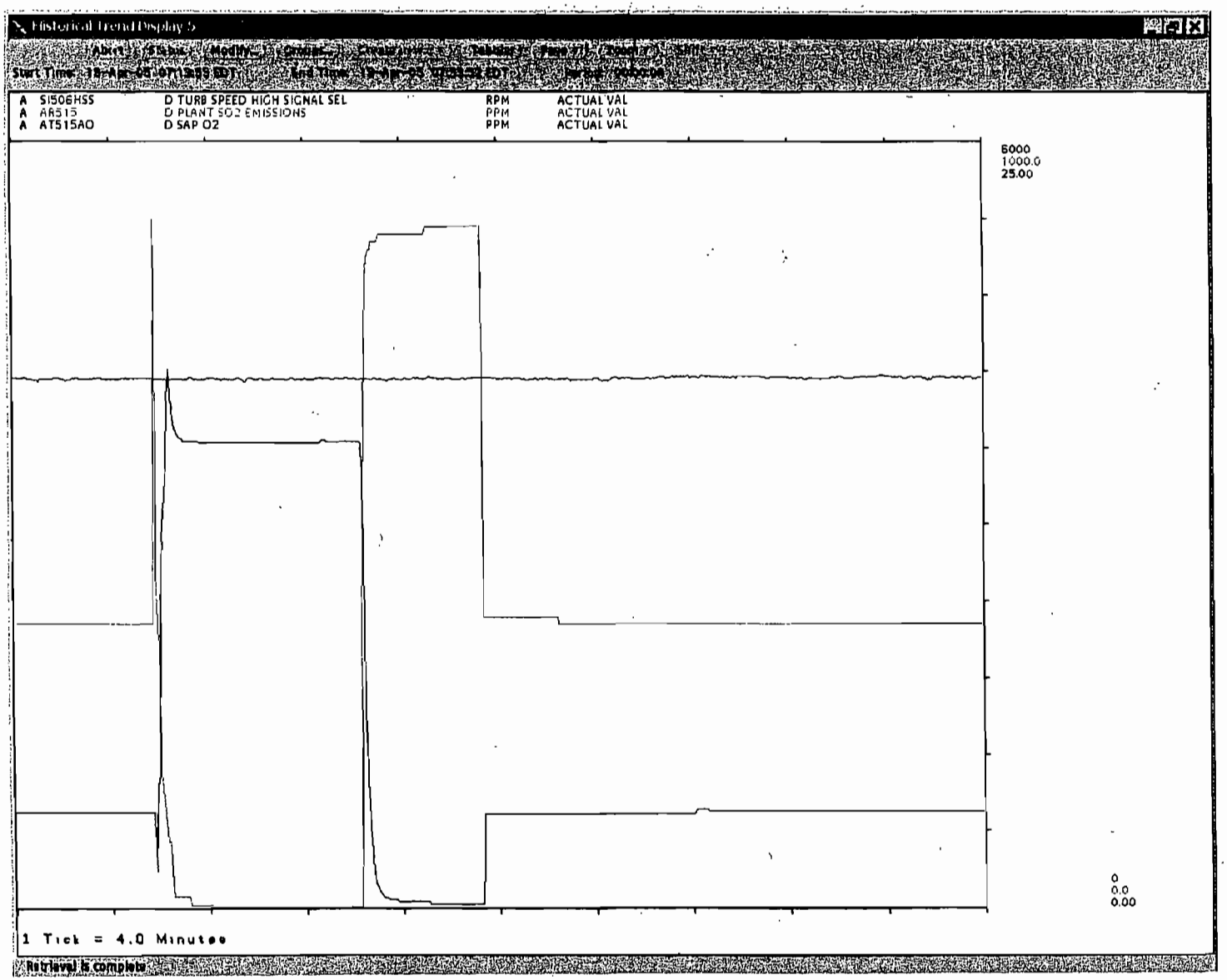
O2 BOTTLE #1
SER# CC181707 PPM 15.0

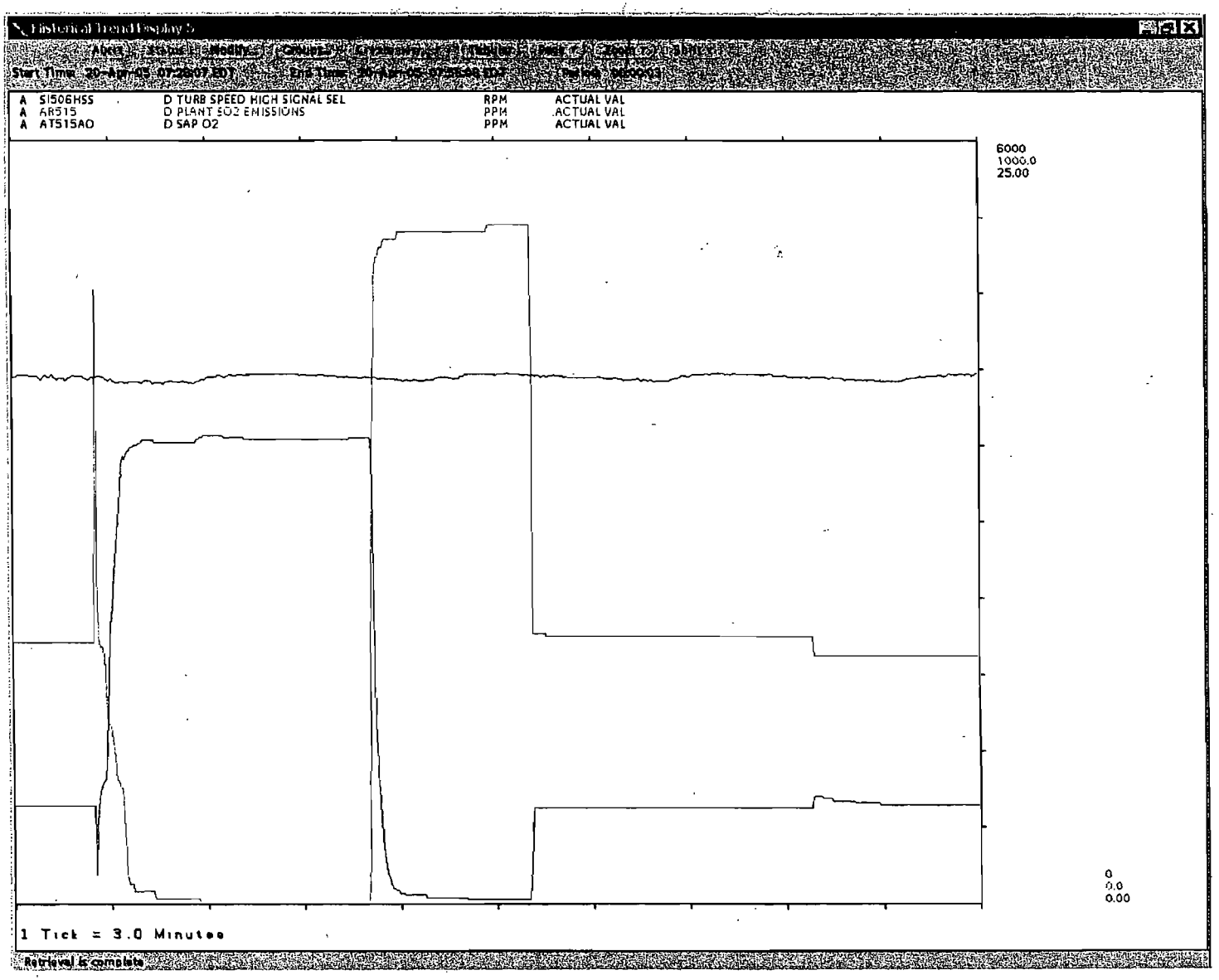
BOTTLE #2
SERIAL # _____ PPM _____

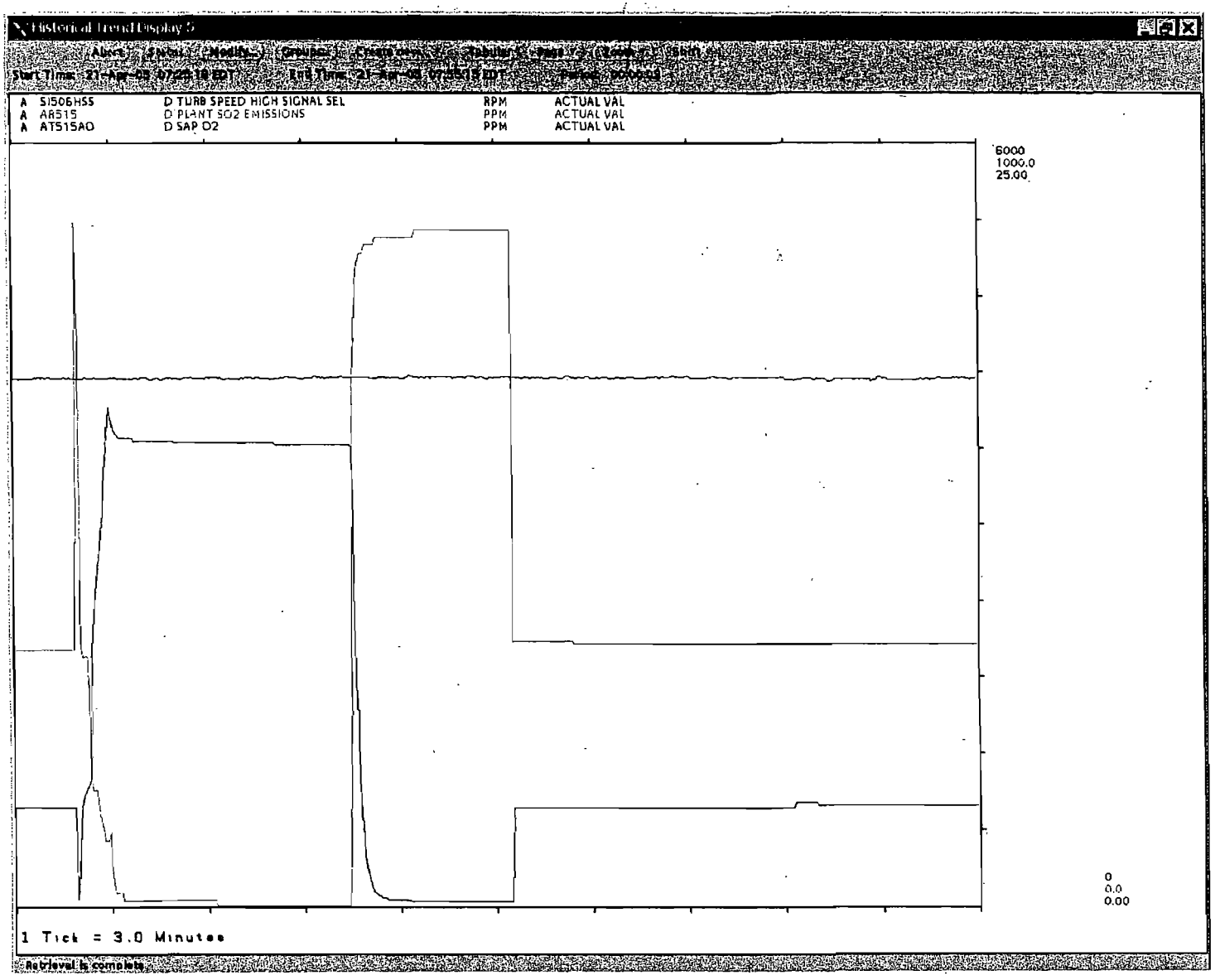
ATTACHMENT 2 – CEMS SO2 and O2

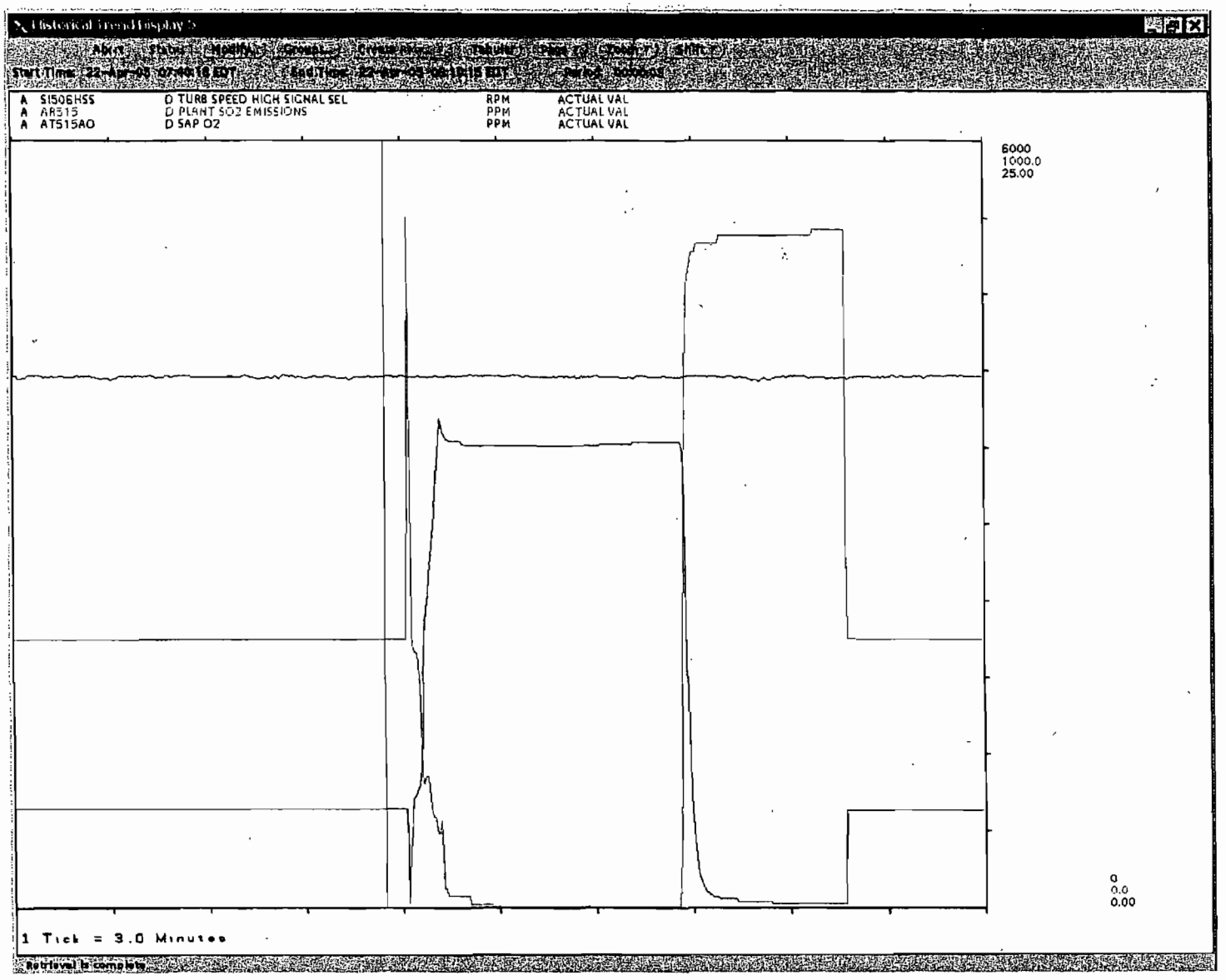
Zero Point Graphs from DCS-WPF – April 18-24, 2005

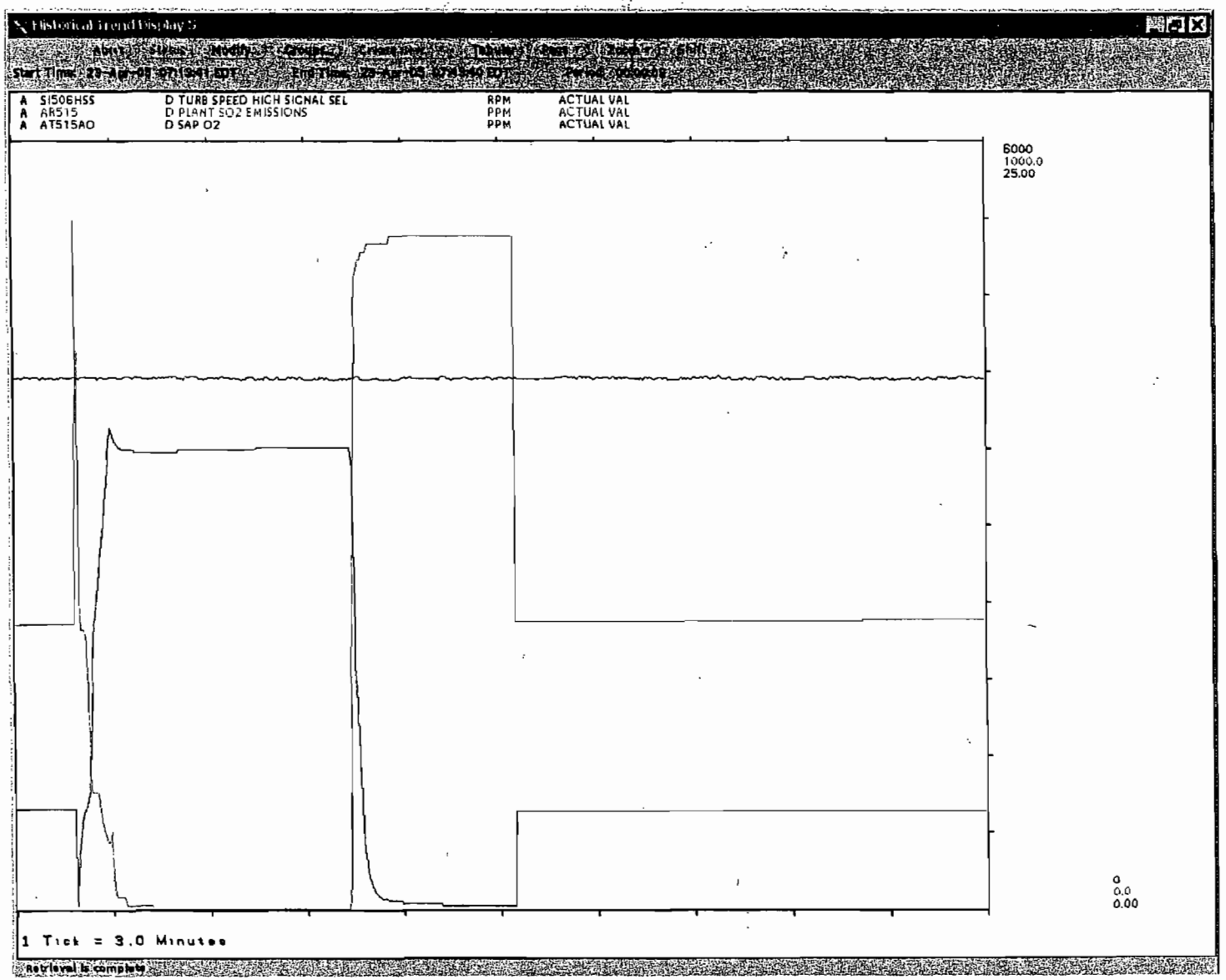

A SI506HSS D TURB SPEED HIGH SIGNAL SEL RPM ACTUAL VAL
A AR515 D PLANT SO2 EMISSIONS PPM ACTUAL VAL
A AT515AO D SAP O2 PPM ACTUAL VAL
6000
1000.0
25.00
D
0.0
0.00
1 Tick = 2.0 Minutes
Retrieval is complete

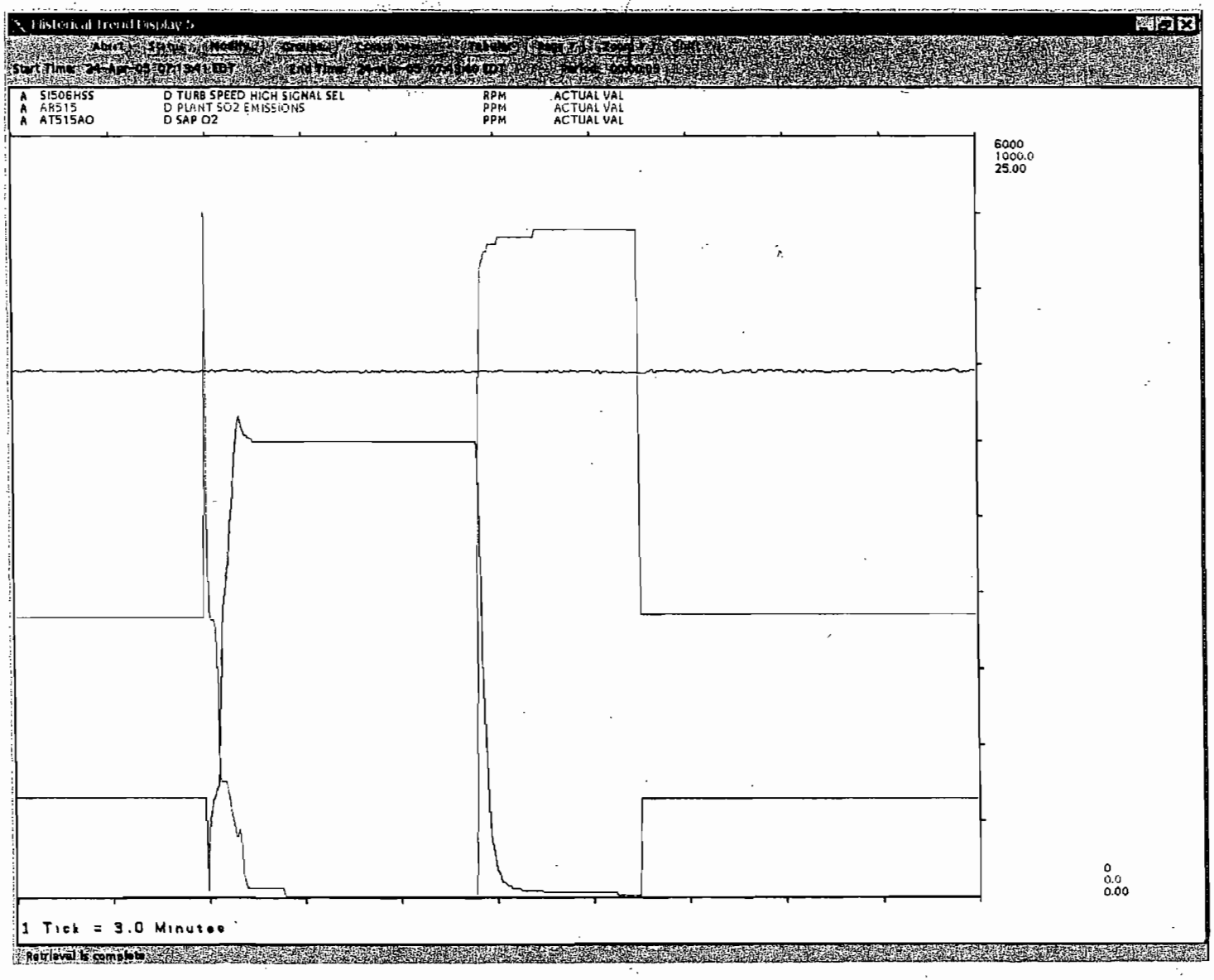

Historical Trend Display 5
A SI506HSS D TURB SPEED HIGH SIGNAL SEL RPM ACTUAL VAL
A AR515 D PLANT SO2 EMISSIONS PPM ACTUAL VAL
A AT515AO D SAP O2 PPM ACTUAL VAL
6000
1000.0
25.00
0
0.0
0.00
1 Tick = 4.0 Minutes
Retrieval is complete


Historical Trend Display 5
Start Time: 20-Apr-95 07:26:07.30
A S1506HSS D TURB SPEED HIGH SIGNAL SEL RPM ACTUAL VAL
A AR515 D PLANT SO2 EMISSIONS PPM ACTUAL VAL
A AT515AO D SAP O2 PPM ACTUAL VAL
6000
1000.0
25.00
0
0.0
0.00
1 Tick = 3.0 Minutes
Retrieval is complete


Historical Trend Display 5
A S1506HSS D TURB SPEED HIGH SIGNAL SEL RPM ACTUAL VAL
A AR515 D PLANT SO2 EMISSIONS PPM ACTUAL VAL
A AT515AO D SAP O2 PPM ACTUAL VAL
6000
1000.0
25.00
0
0.0
0.00
1 Tick = 3.0 Minutes


A S1506HSS D TURB SPEED HIGH SIGNAL SEL RPM ACTUAL VAL
A AR515 D PLANT SO2 EMISSIONS PPM ACTUAL VAL
A AT515AO D SAP O2 PPM ACTUAL VAL
6000
1000.0
25.00
0
0.0
0.00
1 Tick = 3.0 Minutes


A SI506HSS D TURB SPEED HIGH SIGNAL SEL RPM ACTUAL VAL
A AR515 D PLANT SO2 EMISSIONS PPM ACTUAL VAL
A AT515AO D SAP O2 PPM ACTUAL VAL
6000
1000.0
25.00
0
0.0
0.00
1 Tick = 3.0 Minutes
Retrieval is complete


Historical Trend Display 5
A S1506HSS D TURB SPEED HIGH SIGNAL SEL RPM ACTUAL VAL
A AR515 D PLANT SO2 EMISSIONS PPM ACTUAL VAL
A AT515AO D SAP O2 PPM ACTUAL VAL
6000
1000.0
25.00
0
0.0
0.00
1 Tick = 3.0 Minutes
Retrieval is complete

NITROGEN OXIDES EMISSIONS TESTING of the CF INDUSTRIES, INC. SULFURIC ACID PLANT D Plant City, Florida

April 22, 2005

AIRS No. 0570005
E.U. ID No. 008
SES Reference No. 05S105

Conducted by:

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

Project Participants

Mark S. Gierke
Dale A. Wingler
Terry L. Wilson

1.0 INTRODUCTION

Southern Environmental Sciences, Inc. conducted nitrogen oxides emissions testing of the CF Industries, Inc. Sulfuric Acid Plant D on April 22, 2005. This plant is located on State Road 39 in Plant City, Florida. Testing was performed to determine if the plant was operating in compliance with requirements of the Florida Department of Environmental Protection (FDEP) and the Environmental Protection Commission of Hillsborough County (EPCHC).

2.0 SUMMARY OF RESULTS

The plant was found to be in compliance with all applicable emission limiting standards. Results of the emissions test are summarized in Table 1. Allowable nitrogen oxides emissions from this source are limited to a maximum of 0.12 pounds per ton of 100% sulfuric acid produced. The average measured nitrogen oxides emission rate was 0.10 pounds per ton of 100% sulfuric acid produced.

3.0 PROCESS DESCRIPTION

Sulfuric Acid Plant D is a 2750 TPD (approximately) sulfur-burning, double-conversion, double-absorption plant of Leonard-Monsanto design. Sulfur is burned with dried atmospheric oxygen to produce sulfur dioxide (SO_2). The sulfur dioxide is catalytically oxidized to sulfur trioxide (SO_3) over a vanadium pentoxide catalyst bed. The sulfur trioxide so produced is absorbed in 98% sulfuric acid. The acid flows from each absorbing tower are combined to provide product acid. By the use of an intermediate absorbing tower, the

TABLE 1. EMISSIONS TEST SUMMARY

Company: CF INDUSTRIES, INC.
Source: SULFURIC ACID PLANT D

	Run 1	Run 2	Run 3	
Date of Run	4/22/05	4/22/05	4/22/05	
Process Rate (TPH)	107.6	107.6	107.6	
Start Time (24-hr. clock)	0945	1107	1230	
End Time (24-hr. clock)	1045	1207	1330	
Barometric Pressure at Barom. (in. Hg.)	29.97	29.97	29.97	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Moisture in Stack Gas (% Vol.)	0.0	0.0	0.0	
Molecular Weight Dry Stack Gas	28.00	28.00	28.00	
Molecular Weight Wet Stack Gas	28.00	28.00	28.00	
Stack Gas Static Press. (in. H2O gauge)	-0.24	-0.24	-0.24	
Stack Gas Static Press. (in. Hg. abs.)	29.95	29.95	29.95	
Average Square Root Velocity Head	0.512	0.539	0.545	
Average Stack Gas Temperature (Deg F)	158.9	157.5	154.3	
Pitot Tube Coefficient	0.84	0.84	0.84	
Stack Gas Vel. Stack Cond. (ft./sec.)	31.56	33.19	33.51	
Effective Stack Area (sq. ft.)	67.20	67.20	67.20	
Stack Gas Flow Rate Std. Cond. (DSCFM)	108,672	114,544	116,259	
Stack Gas Flow Rate Stack Cond. (ACFM)	127,246	133,824	135,122	
NOx Emissions (PPM)	13.3	14.0	14.0	13.8
NOx Emissions (lb./hr.)	10.32	11.49	11.66	11.15
NOx Emissions (lbs/ton of 100% acid)	**0.096**	**0.107**	**0.108**	**0.10**
Allowable NOx Emissions (lbs./ton of 100% acid)				**0.12**

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

partial pressure of sulfur dioxide in the final converter is increased to drive the conversion reaction to a greater degree of completion, thus providing greater efficiency and cleaner atmospheric emissions.

The permitted process rate for this source is 2750 TPD based upon 100 percent H_2SO_4. Process rates during the test period were determined by plant personnel. Process operational data are included in the appendix.

4.0 SAMPLING PROCEDURES

4.1 Methods

All sampling was performed using methods currently acceptable to the FDEP. Nitrogen oxides sampling was conducted in accordance with EPA Method 7E - Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure), 40 CFR 60, Appendix A-4. Stack gas flow rates were determined in accordance with EPA Method 2 - Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube), 40 CFR 60 Appendix A-1. The effluent gas stream was considered to be dry and the water vapor volume and moisture content were assumed to be zero percent as described in section 6.4 of EPA Method 8.

4.2 Sampling Locations

Locations of the sample ports and stack dimensions are shown in Figure 1. Nitrogen oxides sampling was performed from the same sampling ports as the those used for

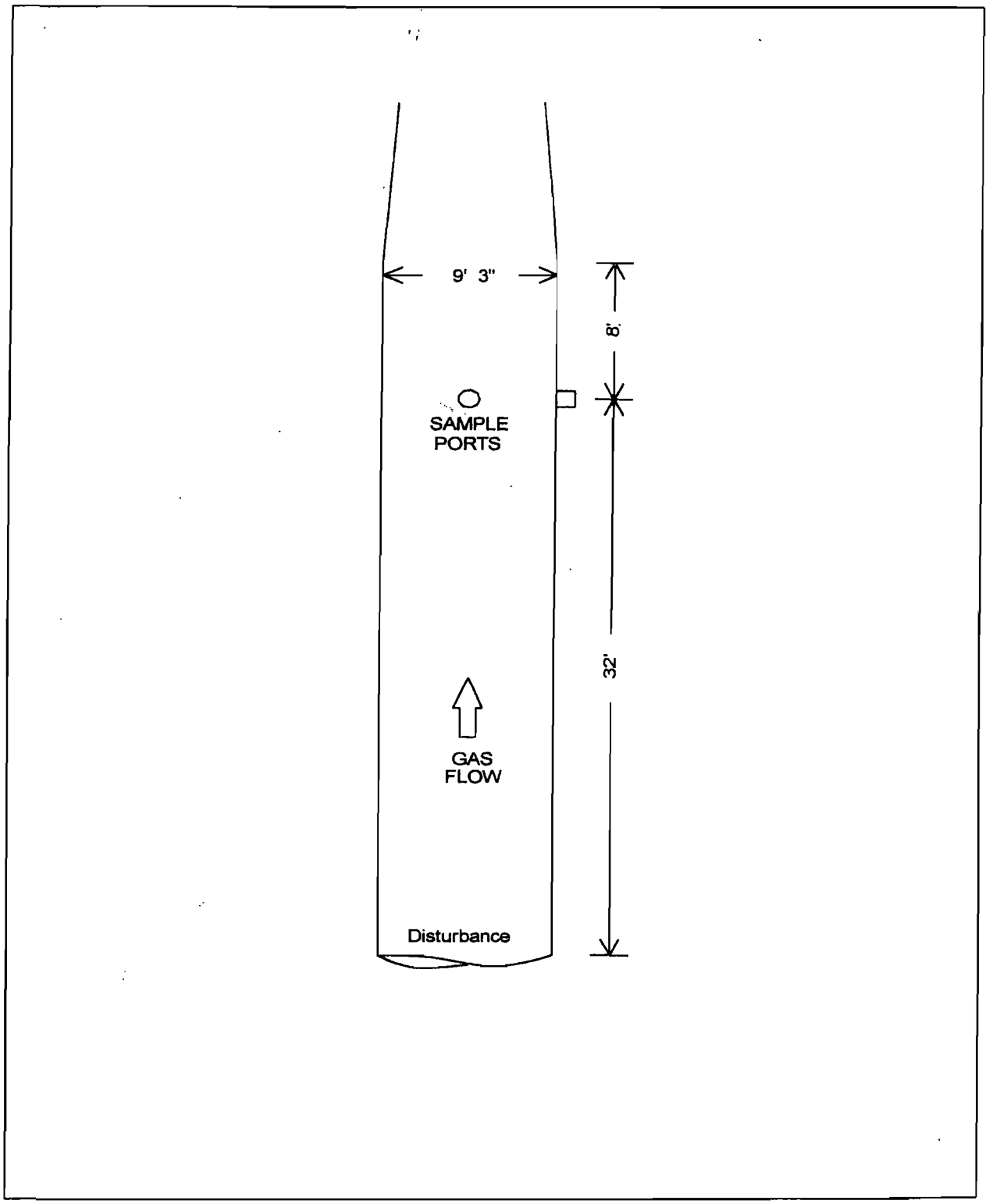


Figure 1. Stack Dimensions and Sample Port Locations, CF Industries, Inc., Sulfuric Acid Plant D, Plant City, Florida.

determination of stack gas flow rate. Twenty four sample points were chosen in accordance with EPA Method 1 - Sample and Velocity Traverses for Stationary Sources, 40 CFR 60, Appendix A.

4.3 Sampling Train

The sampling train consisted of a stainless steel probe, calibration valve, heated teflon sample line, condenser and a Thermo Environmental Instruments, Inc. Model 10S Chemiluminiscent NO/NO_x Analyzer as shown in Figure 2.

4.4 Sample Collection

The analyzer was calibrated immediately prior to the beginning of the test by introducing known gases into the instrument through the sampling system. Zero and a mid-range calibration gas were introduced after each run to check for instrument drift.

5.0 ANALYTICAL PROCEDURE

5.1 Analysis

The average nitrogen oxides concentration was determined for each one-hour test run. Based on the stack flow rate determinations, the concentrations were then converted to pound per hour and pound per ton emissions rates.

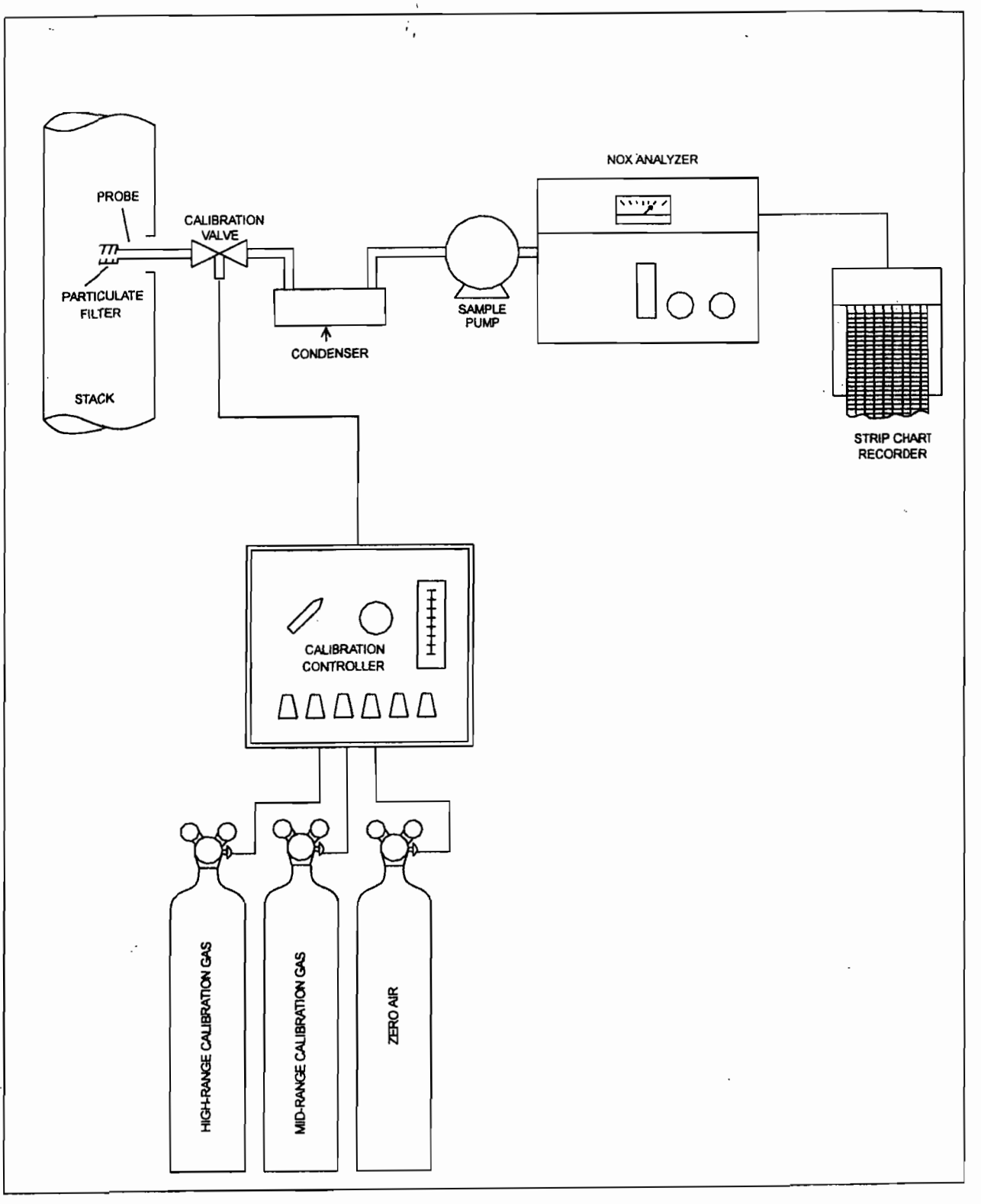


Figure 3. EPA Method 7E Sampling Train.

APPENDIX

Project Participants

Certification

Process Operational Data

Field Data Sheets

Analyzer Strip Charts

Calibration Data

Calculations and Symbols

PROJECT PARTICIPANTS AND CERTIFICATION
CF INDUSTRIES, INC.
SULFURIC ACID PLANT D
Plant City, Florida

April 22, 2005

Project Participants:

Mark S. Gierke Dale A. Wingler Terry L. Wilson	Conducted the field testing.
Frank Dlugos (CF Industries)	Provided process rates.
Kenneth M. Roberts	Computed test results.
Kenneth M. Roberts	Prepared the final test report.

Certification:

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

Kenneth M. Roberts, QEP

CF INDUSTRIES, INC.
SULFURIC ACID PLANT D
PROCESS OPERATIONAL DATA

Test Date: 4/22/05

Start Time	0945	1007	1029	1051	1114	1137	1200	1224	1246
Stop Time	1006	1028	1050	1112	1135	1158	1221	1245	1307
Production (tons/day)	2583	2583	2583	2583	2583	2583	2583	2583	2583
Production (lbs/hr)	107.6	107.6	107.6	107.6	107.6	107.6	107.6	107.6	107.6
Average Oxygen (%)	3.19	3.22	3.24	3.28	3.28	3.28	3.31	3.31	3.27

SUMMARY OF FLOW DATA

Company: CF INDUSTRIES
Source: "D" SAP

	Run 1	Run 2	Run 3
Date of Run	4/22/05	4/22/05	4/22/05
Process Rate (TPH)	107.9	107.9	107.9
Start Time (24-hr. clock)	945	1107	1230
End Time (24-hr. clock)	1045	1207	1330
Barometric Pressure at Barom. (in. Hg.)	29.97	29.97	29.97
Elev. Diff. Manom. to Barom. (ft.)	0	0	0
Moisture in Stack Gas (% Vol.)	0.0	0.0	0.0
Molecular Weight Dry Stack Gas	28.00	28.00	28.00
Molecular Weight Wet Stack Gas	28.00	28.00	28.00
Stack Gas Static Press. (in. H2O gauge)	-0.24	-0.24	-0.24
Stack Gas Static Press. (in. Hg. abs.)	29.95	29.95	29.95
Average Square Root Velocity Head	0.512	0.539	0.545
Average Stack Gas Temperature (Deg F)	158.9	157.5	154.3
Pitot Tube Coefficient	0.84	0.84	0.84
Stack Gas Vel. Stack Cond. (ft./sec.)	31.56	33.19	33.51
Effective Stack Area (sq. ft.)	67.20	67.20	67.20
Stack Gas Flow Rate Std. Cond. (DSCFM)	108,672	114,544	116,259
Stack Gas Flow Rate Stack Cond. (ACFM)	127,246	133,824	135,122

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

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

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VELOCITY TRAVERSE

Company:	CF Industries			Stack Diameter:	111"
Unit Tested:	SAP "D"			BP, (in. Hg):	29.97
Date:	4-22-05			Time:	0938
Run #:	1	Cp:	.84	Operator:	DW/TCW

Point No.	Dist. from Duct Wall (Inches)	Velocity Head ("H2O)	Static Pressure ("H2O)	Stack Temp. (°F)	
1	2.3	.35		153	
2	7.4	.37		156	
3	13.1	.36		157	
4	19.7	.36		159	
5	27.8	.36		160	
6	39.5	.29		161	
7	71.5	.18		162	
8	83.3	.16		162	
9	91.4	.19		162	
10	97.9	.23		162	
11	103.6	.24		162	
12	108.7	.21		160	
1		.32		150	
2		.31		154	
3		.27	-.24	156	
4		.24		158	
5		.23		159	
6		.20		160	
7		.27		160	
8		.30		161	
9		.26		161	
10		.25		161	
11		.23		160	
12		.19		158	

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VELOCITY TRAVERSE

Company:	CF Industries			Stack Diameter:	111"
Unit Tested:	SAP "D"			BP, (in. Hg):	29.97
Date:	4-22-05			Time:	1109
Run #:	2	Cp:	.84	Operator:	DW/TW

Point No.	Dist. from Duct Wall (Inches)	Velocity Head ("H2O)	Static Pressure ("H2O)	Stack Temp. (°F)	
1		.38		149	
2		.38		151	
3		.39		153	
4		.35		159	
5		.35		159	
6		.37		159	
7		.25		160	
8		.18		161	
9		.23		161	
10		.25		162	
11		.24		162	
12		.21		161	
1		.26		144	
2		.32		147	
3		.28		152	
4		.29		156	
5		.26		158	
6		.24		159	
7		.20	-0.24	161	
8		.34		161	
9		.29		162	
10		.35		162	
11		.31		161	
12		.32		161	

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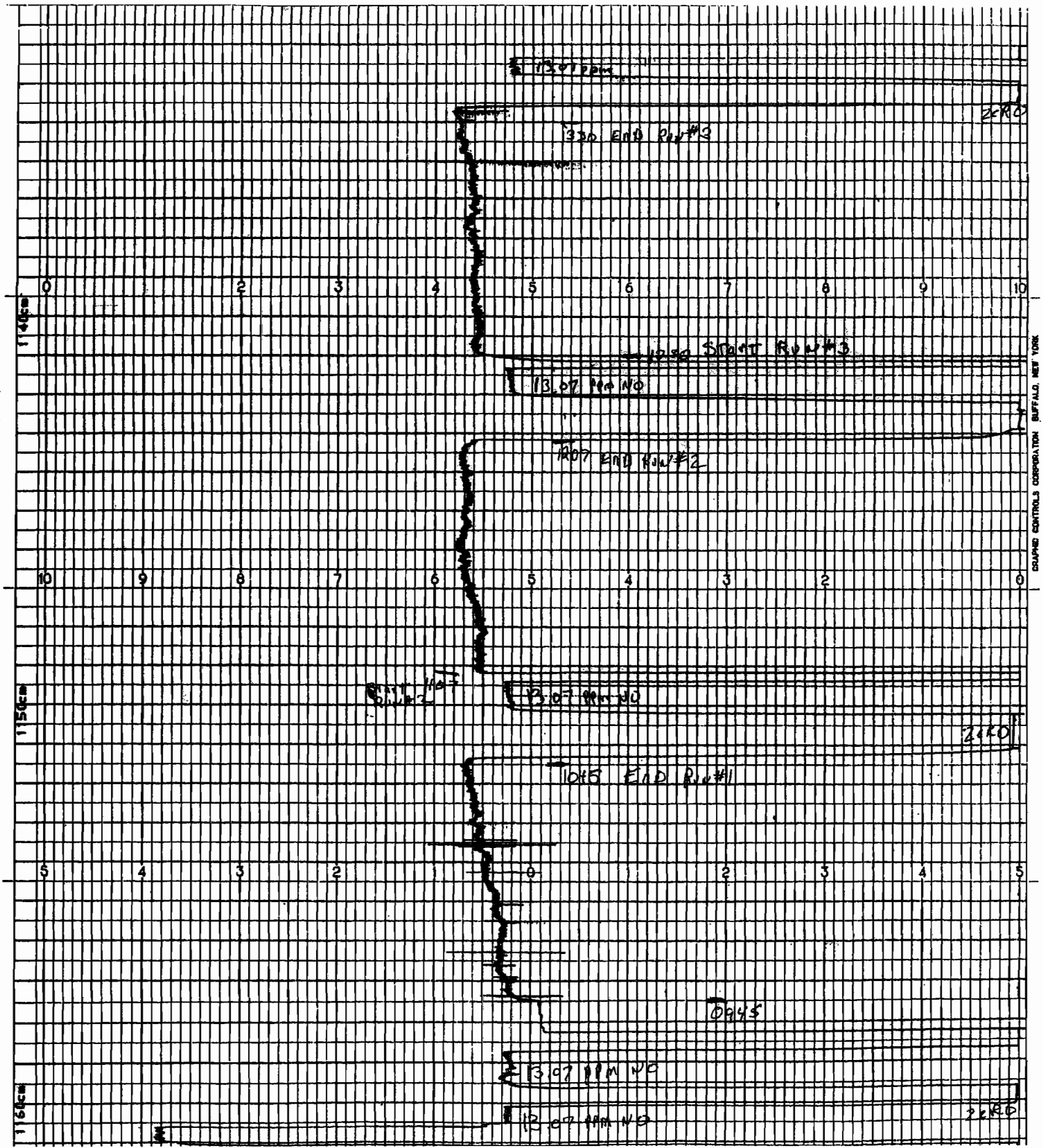
VELOCITY TRAVERSE

Company:	CF Industries			Stack Diameter:	111"
Unit Tested:	SAP "D"			BP, (in. Hg):	29.97
Date:	4-22-05			Time:	1228
Run #:	3	Cp:	.84	Operator:	DW/TW

Point No.	Dist. from Duct Wall (Inches)	Velocity Head ("H2O)	Static Pressure ("H2O)	Stack Temp. (°F)	
1		.35		142	
2		.37		146	
3		.37		149	
4		.37		152	
5		.37		155	
6		.33		157	
7		.22		158	
8		.21		161	
9		.24		160	
10		.26		160	
11		.25		159	
12		.23		158	
1		.26		141	
2		.30		144	
3		.32		146	
4		.25		148	
5		.24		152	
6		.30	-0.24	157	
7		.30		159	
8		.34		160	
9		.34		160	
10		.32		160	
11		.31		160	
12		.34		160	

CF INDUSTRIES, INC.
SULFURIC ACID PLANT D
APRIL 22, 2005
NITROGEN OXIDES
25 PPM SCALE
6 CM/HR - CHART SPEED



SOUTHERN ENVIRONMENTAL SCIENCES, INC.

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

NITROGEN OXIDES ANALYZER CALIBRATION DATA

EPA METHOD 7E

COMPANY	**CF INDUSTRIES**
SOURCE	**SAP D**
OPERATOR	**MG**
DATE	**04/22/05**
RUN #'S	**3**
INSTRU. SPAN RANGE	**25 PPM**

	Cylinder value (PPM)	Analyzer calibration responses (PPM)	Absolute difference (PPM)	Difference (% of Span)
Zero	0	0	0	0.0
Mid-range	13.07	13	0.07	0.3
High-range	22.29	22	0.29	1.2

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	0.13	0.52	0.52
	Upscale	13.0	13.05	0.2	13.13	0.52	0.32
Run 2	Zero	0	0.13	0.52	0	0	-0.52
	Upscale	13.0	13.13	0.52	13.05	0.2	-0.32
Run 3	Zero	0	0	0	0	0	0
	Upscale	13.0	13.05	0.2	13	0	-0.2

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

SOUTHERN ENVIRONMENTAL SCIENCES, INC.
PITOT TUBE CALIBRATION

Pitot Tube ID: 10A
Date: 12/13/04
Calibrated By: TJ, MJ
Cp of Standard Pitot: 0.99

"A" SIDE CALIBRATION

Run No.	Delta P std (in. H2O)	Delta P(s) (in. H2O)	Cp(s)	Deviation Cp(s) - Cp(A)
1	0.54	0.74	0.85	0.00
2	0.54	0.75	0.84	0.00
3	0.54	0.75	0.84	0.00
Average →		**Cp (SIDE A)**	0.84	0.00

"B" SIDE CALIBRATION

Run No.	Delta P std (in. H2O)	Delta P(s) (in. H2O)	Cp(s)	Deviation Cp(s) - Cp(B)
1	0.55	0.75	0.85	0.00
2	0.55	0.75	0.85	0.00
3	0.54	0.75	0.84	0.01
Average →		**Cp (SIDE B)**	0.85	0.00

$$Cp(s) = Cp(std) \times (\text{Delta Pstd}/\text{Delta Ps})^{1/2}$$

$$\text{Average Deviation} = \text{Sum}\frac{|Cp(s)-\overline{Cp}(A \text{ or } B)|}{3} \qquad \text{Must be} \le 0.01$$

$$|\overline{Cp}\,(\text{SIDEA}) - \overline{Cp}\,(\text{SIDE B})| \qquad \text{Must be} \le 0.01$$

SOUTHERN ENVIRONMENTAL SCIENCES, INC.
THERMOMETER CALIBRATIONS

Calibrated By/Date: Terry L. Wilson 3/16/05

ALL TEMPERATURES ARE DEGREES RANKIN

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	500	505	1.00%	538	536	0.37%	622	623	0.16%	828	830	0.24%
T2	PT	2000° F	500	504	0.80%	538	536	0.37%	627	628	0.16%	816	818	0.25%
T3	PT	2000° F	500	501	0.20 %	538	535	0.56%	630	633	0.48%	818	822	0.50%
T4	PT	2000° F	500	502	0.40 %	538	536	0.37%	634	636	0.32%	820	824	0.49%
T5	PT	2000° F	500	503	0.60%	538	535	0.56%	640	639	0.16%	820	818	0.24%
T6	PT	2000° F	500	504	0.80%	538	535	0.56%	644	644	0.00%	824	820	0.49%
T7	PT	2000° F	500	503	0.60%	538	535	0.56%	646	645	.015%	824	820	0.49%
T8	PT	2000° F	500	501	0.20%	538	536	0.37%	648	648	0.00%	816	820	0.49%
T9	PT	2000° F	500	502	0.40%	538	535	0.56%	650	651	0.15%	818	821	0.37%
SS110	BM	220° F	498	500	2 °	538	535	3 °	672	674	2 °	-	-	-
SS300	PT	2000 °F	498	498	0.00%	538	535	0.56%	672	674	0.30%	830	832	0.24%
SS301	PT	2000° F	498	499	0.20%	538	535	0.56%	672	672	0.00%	830	834	0.48%
SS306	PT	2000° F	498	500	0.40%	538	535	0.56%	672	674	0.30%	830	830	0.00%
2.5'PA	PT	2000° F	494	494	0.00%	524	523	0.19%	650	649	0.15%	754	754	0.00%
2.5'PB	PT	2000° F	498	500	0.40%	538	538	0.00%	661	662	0.15%	828	832	0.48%
3'P	PT	2000° F	498	497	0.20%	538	537	0.19%	662	664	0.30%	828	830	0.24%
3'INC	PT	2000° F	497	497	0.00%	538	538	0.00%	660	659	0.15%	835	836	0.12%
5'PA	PT	2000° F	497	496	0.20%	538	539	.019%	662	660	0.30%	832	831	0.12%
5'PB	PT	2000° F	497	497	0.00%	538	540	0.37%	662	662	0.00%	832	834	0.24%
5'PC	PT	2000° F	497	497	0.00%	538	539	0.19%	664	664	0.00%	832	834	.024%
5'PD	PT	2000° F	497	498	0.20%	538	539	0.19%	664	664	0.00%	830	831	0.12%
5'PE	PT	2000° F	497	499	0.40%	538	538	0.00%	666	664	0.00%	830	832	0.24%
5'VP	PT	2000° F	497	495	0.40%	538	538	0.00%	662	664	0.30%	832	831	0.12%
5'INC	PT	2000° F	497	497	0.00%	538	537	0.19%	660	662	0.30%	836	835	0.12%
8'PA	PT	2000° F	496	498	0.40%	538	538	0.00%	668	668	0.00%	834	833	0.12%
8'PB	PT	2000° F	496	498	0.40%	538	539	0.19%	669	670	0.15%	834	834	0.00%
8'PC	PT	2000° F	496	497	0.20%	538	539	0.19%	670	671	0.15%	834	833	0.12%
8'PD	PT	2000° F	496	496	0.00%	538	539	0.19%	670	672	0.30%	834	832	0.24%
10'PA	PT	2000° F	498	501	0.60%	538	540	0.37%	656	658	.30%	840	842	0.24%
10'PB	PT	2000° F	498	500	0.40%	538	540	0.37%	656	657	0.15%	840	838	0.24%
10'PB														

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

Airgas

4

Airgas Specialty Gases
12722 South Wentworth Avenue
Chicago, IL 60628
773.785.3000 Fax: 773.785.1928
www.airgas.com

Certificate of Analysis EPA Protocol Gas Mixture

Cylinder No:	SG9140417BAL	Reference Number:	54-58557500-001
Cylinder Pressure:	2,013 psig	Expiration Date:	10/03/2005
Certification Date:	10/03/2003	Laboratory:	ASG - Chicago - IL

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
Nitric Oxide	13.07 PPM	+/- 1%	CHEMIL	G1
Nitrogen	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed.
Analytical Methodology does not require correction for analytical interferences.

Notes: SG9140417BAL NOX=13.23ppm

Do not use cylinder below 150 psig.

S. Baker
Approved for Release

Reference Standard Information

Type	Component	Cyl. Number	Concentration
GMIS	Nitric Oxide	CC1322202	20.97 PPM

Analytical Results

1st Component **Nitric Oxide**

1st Analysis Date:			09/26/2003				
R	8.060	S	5.070	Z	0.0000	Conc	13.14 PPM
S	5.050	Z	0.0000	R	8.110	Conc	13.16 PPM
Z	0.0000	R	8.080	S	5.060	Conc	13.08 PPM
						AVG:	13.13 PPM
2nd Analysis Date:			10/03/2003				
R	7.710	S	4.720	Z	0.0000	Conc	13.03 PPM
S	4.790	Z	0.0000	R	7.660	Conc	12.89 PPM
Z	0.0000	R	7.680	S	4.780	Conc	13.09 PPM
						AVG:	13.00 PPM

Airgas

Airgas Specialty Gases
12722 South Wentworth Avenue
Chicago, IL 60628
773.785.3000 Fax: 773.785.1928
www.airgas.com

Certificate of Analysis EPA Protocol Gas Mixture

Cylinder No:	SG9151491BAL	Reference Number:	54-ST9758-000
Cylinder Pressure:	2,013 psig	Expiration Date:	10/03/2005
Certification Date:	10/03/2003	Laboratory:	ASG - Chicago - IL

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
Nitric Oxide	22.29 PPM	+/- 1%	CHEMIL	G1
Nitrogen	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed.
Analytical Methodology does not require correction for analytical interferences.

Notes: SG9151491BAL NOX=22.48ppm

Do not use cylinder below 150 psig.

Approved for Release

Reference Standard Information

Type	Component	Cyl. Number	Concentration
GMIS	Nitric Oxide	CC1322202	20.97 PPM

Analytical Results

1st Component Nitric Oxide

1st Analysis Date:			09/26/2003				
R	8.070	S	8.570	Z	0.0000	Conc	22.17 PPM
S	8.530	Z	0.0000	R	8.080	Conc	22.35 PPM
Z	0.0000	R	8.040	S	8.590	Conc	22.29 PPM
						AVG:	22.27 PPM
2nd Analysis Date:			10/03/2003				
R	7.710	S	8.190	Z	0.0000	Conc	22.22 PPM
S	8.170	Z	0.0000	R	7.660	Conc	22.38 PPM
Z	0.0000	R	7.680	S	8.160	Conc	22.34 PPM
						AVG:	22.31 PPM

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

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

NOX EMISSIONS TEST CALCULATIONS

COMPANY: CF INDUSTRIES
SOURCE: SAP D
TEST DATE: 04/22/05
DATA ANALYST: MG

RUN NO.	AVERAGE CONC. (PPM)	STACK PRESS (in. Hg)	STACK FLOWRATE (dscfm)	EMISSIONS (mg/m3)	EMISSIONS (lbs/ft3)	EMISSIONS (lbs/hr)
1	13.3	29.95	108,672	25.34	1.58E-06	10.32
2	14.0	29.95	114,544	26.77	1.67E-06	11.49
3	14.0	29.95	116,259	26.77	1.67E-06	11.66
AVERAGE	**13.8**	**29.95**	**113,158**	**26.29**	**1.64E-06**	**11.15**

FORMULAS: mg/m3 = ppm x .041573 x molecular wt.

$$\text{lb/ft3} = \frac{\text{mg/m3}}{35.31\ \text{ft3/m3} \times 1000\ \text{mg/g} \times 453.59\ \text{g/lb}}$$

lb/hr = lb/ft3 x flowrate x 60 min/hr

where:

Pstd =	29.92 "Hg
Tstd =	528 deg R
Molecular Wt. of NOx =	46

Southern Environmental Sciences, Inc.
1204 North Wheeler Street ☐ Plant City, Florida 33566-2354 ☐ (813) 752-5014

NOMENCLATURE USED IN STACK SAMPLING CALCULATIONS

A_n = Cross-sectional area of nozzle, ft^2

A_s = Cross-sectional area of stack, ft^2

B_{ws} = Water vapor in gas stream, proportion by volume

C_p = Pitot coefficient

C_s = Pollutant concentration, gr/DSCF

F_d = Ratio of gas generated to heat value of fuel, DSCF/mm BTU

ΔH = Average pressure differential across orifice, in. H_2O

%I = Isokinetic variation, %

M_d = Molecular weight of dry gas

M_n = Total amount of pollutant collected, mg

M_s = Molecular weight of stack gas

N = Normality of barium perchlorate titrant

$\sqrt{\Delta P_{avg}}$ = Average of the square roots of the velocity heads

P_{bar} = Barometric pressure at the sampling site, in. Hg

P_g = Stack gas static pressure, in. H_2O

P_m = Absolute pressure at the dry gas meter, in. Hg

P_s = Absolute stack pressure, in. Hg

PMR = Pollutant mass rate, lb/hr

P_{std} = Standard absolute pressure, 29.92 in. Hg

θ = Total sampling time, minutes

ATTACHMENT 2 - CEMS/PRODUCTION DATA REPORTS

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

CF Industries, Inc.
Plant City Phosphate Complex

July 13, 2005

Ms. Trina Vielhauer
Chief, Bureau of Air Regulations
Department of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: CF Industries, Inc.
Plant City Phosphate Complex
"C" & "D" Sulfuric Acid Plant
Second Quarter 2005 SO2 CEM/Production Data

Dear Ms. Vielhauer:

In accordance with Specific Condition 22 of Permit No. PSD-FL-339, enclosed is the Second Quarter 2005, SO_2 and production data from the "C" & "D" Sulfuric Acid Plants.

If you have any questions concerning this submittal please contact Michael Messina at (813) 364-5639.

Sincerely,

Thomas A. Edwards
Superintendent, Environmental Affairs

U:\2005C&DSecondQCEMProduction.doc
TAE/JMM/gem
CC: Joel Smolen/FDEP
Diana Lee/HCEPC
J. M. Messina

CF Industries, Inc. Plant City Phosphate Complex

C-SAP Quarterly Report, Hourly Stack CEM Data - Lb SO_2/Ton H_2SO_4

April 1, 2005 6:00 AM Through July 1, 2005 6:00 AM

3-Hr Rolling Average Period (Previous 2hrs & Indicated Hr)

	Daily Prod. Tons H2SO4	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM
4/1/2005	2,636	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.3
4/2/2005	2,583	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3
4/3/2005	2,721	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2
4/4/2005	2,697	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/5/2005	2,675	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3
4/6/2005	2,663	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/7/2005	2,649	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/8/2005	2,667	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/9/2005	2,672	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/10/2005	2,665	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/11/2005	2,654	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/12/2005	2,638	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
4/13/2005	2,676	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/14/2005	2,686	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/15/2005	2,719	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/16/2005	2,730	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3
4/17/2005	2,718	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/18/2005	2,693	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3
4/19/2005	2,684	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/20/2005	1,742	2.4	1.3	0.2	0.0	0.0	0.0	0.0	0.0	startup	startup	startup	1.4	2.1	2.5	2.9	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3
4/21/2005	2,467	3.3	3.3	3.3	3.3	3.0	2.0	startup	startup	startup	2.9	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.2	3.2	3.2
4/22/2005	2,666	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/23/2005	2,660	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.4	3.4	3.2	3.1	3.1	3.1	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2
4/24/2005	2,707	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.3
4/25/2005	2,698	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/26/2005	2,664	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3
4/27/2005	2,682	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/28/2005	2,681	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/29/2005	2,655	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/30/2005	1,784	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.2	3.3	3.3	3.2
5/1/2005	2,642	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/2/2005	2,658	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/3/2005	2,656	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/4/2005	2,661	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2
5/5/2005	2,669	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3
5/6/2005	2,700	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/7/2005	2,695	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/8/2005	2,683	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/9/2005	2,680	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/10/2005	2,679	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3
5/11/2005	2,674	3.3	3.4	3.4	3.4	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3
5/12/2005	2,664	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/13/2005	2,521	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	startup	startup	startup	1.4	1.4	1.7	2.3	3.0	3.3	3.3	3.3	3.3	3.3	3.3
5/14/2005	2,653	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/15/2005	2,645	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/16/2005	2,644	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3
5/17/2005	2,644	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/18/2005	2,644	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/19/2005	2,639	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/20/2005	2,635	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2

CF Industries, Inc. Plant City Phosphate Complex

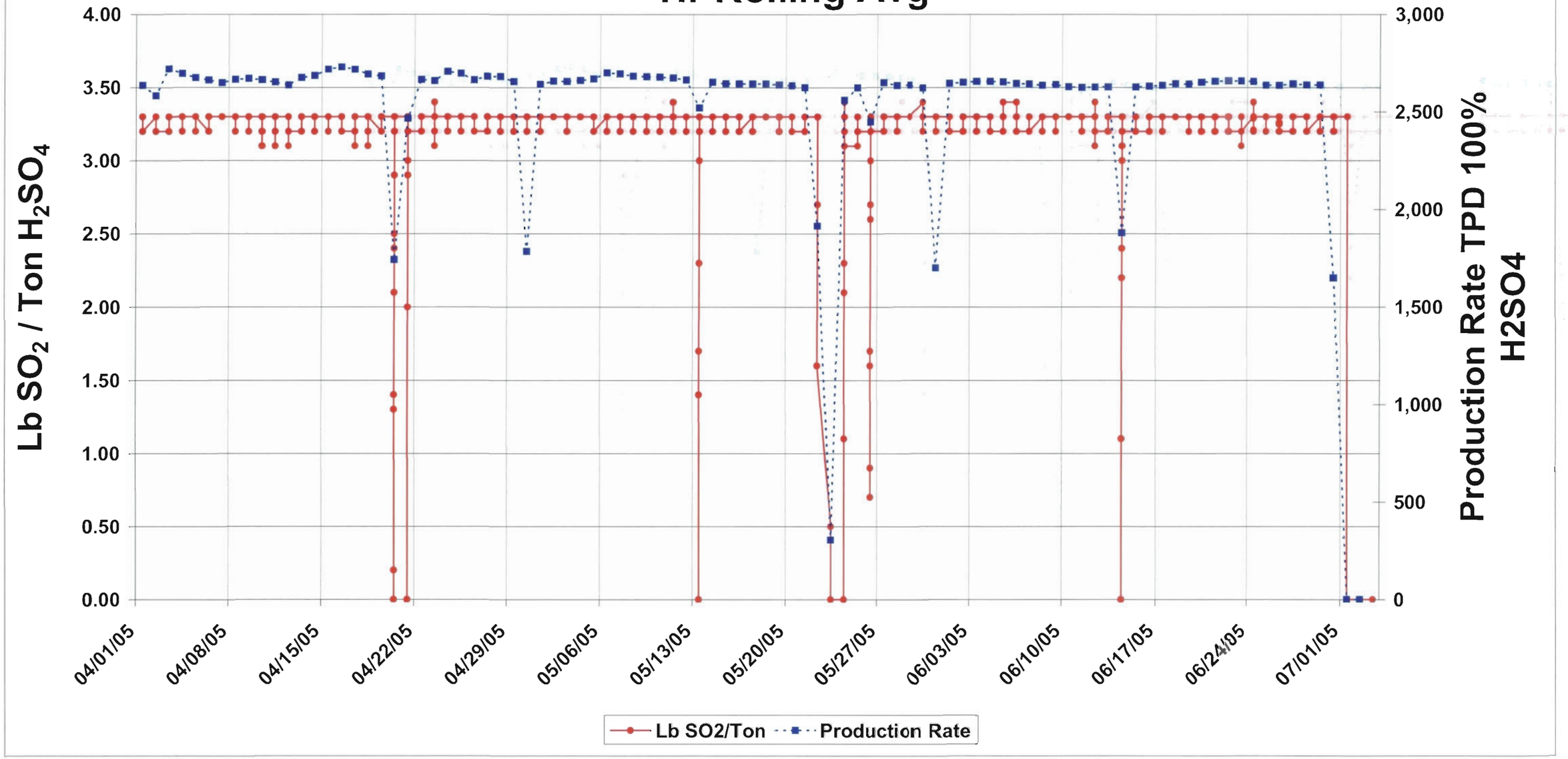
C-SAP Quarterly Report, Hourly Stack CEM Data - Lb SO_2/Ton H_2SO_4

April 1, 2005 6:00 AM Through July 1, 2005 6:00 AM

3-Hr Rolling Average Period (Previous 2hrs & Indicated Hr)

	Daily Prod. Tons H2SO4	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM
5/21/2005	2,625	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/22/2005	1,914	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.7	1.6	0.5	0.0	0.0	0.0	0.0
5/23/2005	305	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	startup	startup	startup	1.1
5/24/2005	2,561	2.1	2.3	3.1	3.3	3.3	3.3	3.4	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.2	3.2
5/25/2005	2,624	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3
5/26/2005	2,449	3.3	3.3	3.3	3.3	3.3	2.7	1.7	0.7	0.9	1.6	2.6	3.0	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3
5/27/2005	2,649	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/28/2005	2,635	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/29/2005	2,637	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.4	3.4	3.4	3.3	3.3
5/30/2005	2,623	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/31/2005	1,700	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2
6/1/2005	2,647	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3
6/2/2005	2,652	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/3/2005	2,656	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/4/2005	2,656	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2
6/5/2005	2,654	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.4	3.4	3.3	3.3	3.3	3.3
6/6/2005	2,646	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2
6/7/2005	2,643	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2
6/8/2005	2,636	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/9/2005	2,640	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/10/2005	2,629	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/11/2005	2,625	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.4	3.4	3.4
6/12/2005	2,627	3.4	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
6/13/2005	2,628	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/14/2005	1,879	3.3	3.3	2.2	1.1	0.0	0.0	0.0	0.0	startup	startup	startup	2.4	3.0	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.2
6/15/2005	2,628	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3
6/16/2005	2,632	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/17/2005	2,636	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/18/2005	2,645	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3
6/19/2005	2,643	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/20/2005	2,652	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2
6/21/2005	2,657	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/22/2005	2,660	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
6/23/2005	2,659	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.3	3.2	3.2	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3
6/24/2005	2,656	3.4	3.4	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/25/2005	2,637	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3
6/26/2005	2,636	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3
6/27/2005	2,644	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/28/2005	2,638	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3
6/29/2005	2,638	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/30/2005	1,649	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3

CF Industries Plant City Phosphate Complex
C-SAP Quarterly Report, (2nd Quarter 2005) Hourly CEM Data - 3 Hr Rolling Avg



CF Industries, Inc. Plant City Phosphate Complex

D-SAP Quarterly Report, Hourly Stack CEM Data - Lb SO_2/Ton H_2SO_4

April 1, 2005 6:00 AM Through July 1, 2005 6:00 AM

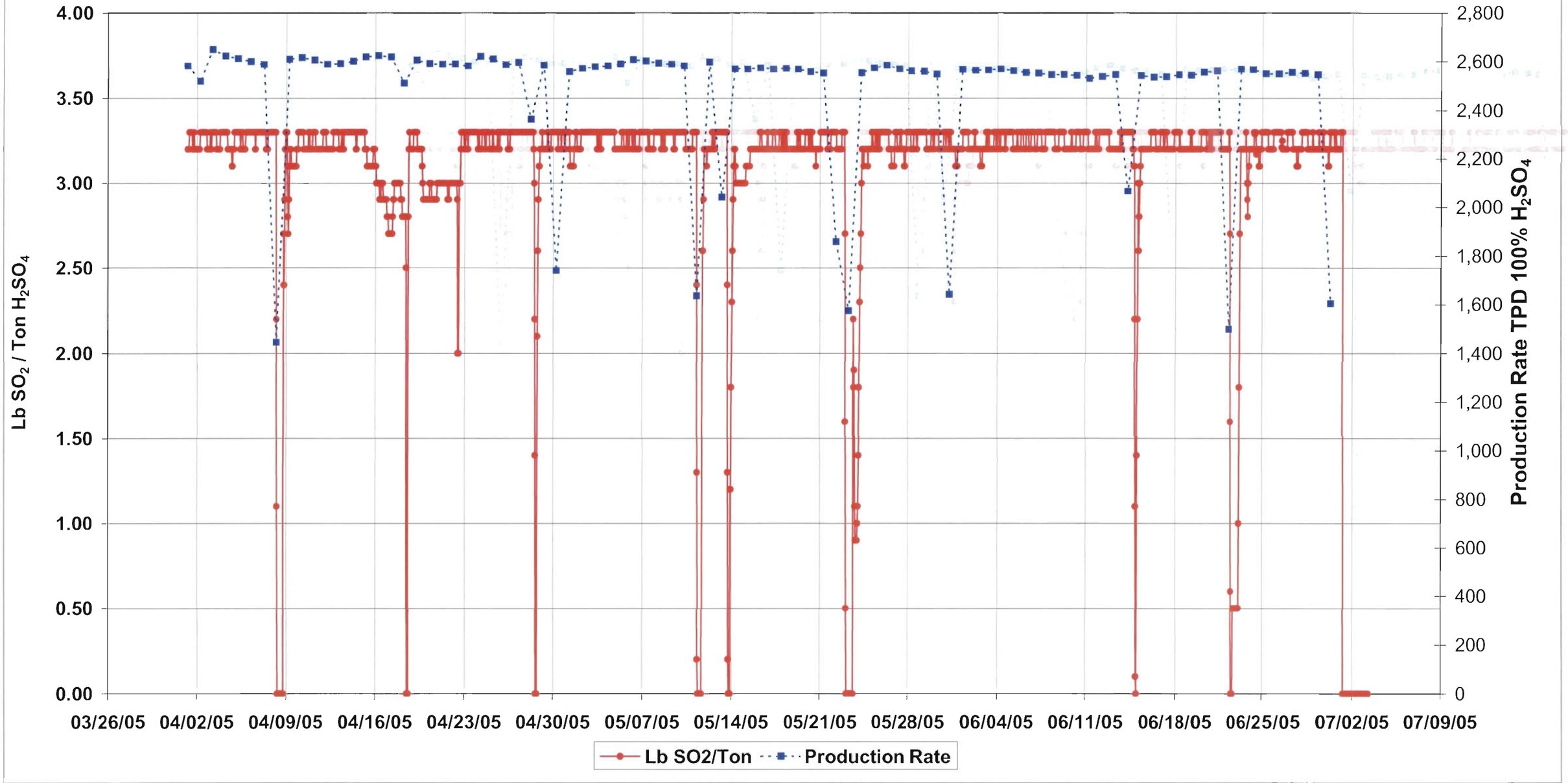
3-Hr Rolling Average Period (Previous 2hrs & Indicated Hr)

	Daily Prod. Tons H2SO4	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM
4/1/2005	2,583	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
4/2/2005	2,520	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.3	3.3
4/3/2005	2,651	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/4/2005	2,625	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/5/2005	2,614	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/6/2005	2,602	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/7/2005	2,589	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/8/2005	1,445	2.2	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	startup	startup	startup	2.7	2.4	2.9	3.2	3.3	3.3	3.3	3.1	2.8	2.7	2.9
4/9/2005	2,611	3.1	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/10/2005	2,618	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3
4/11/2005	2,608	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2
4/12/2005	2,590	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2
4/13/2005	2,593	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/14/2005	2,603	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2
4/15/2005	2,621	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.1	3.1	3.0	3.0	3.0	3.0
4/16/2005	2,626	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.7	2.7
4/17/2005	2,621	2.7	2.7	2.7	2.8	2.9	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.8
4/18/2005	2,512	2.8	2.8	2.8	2.8	2.5	startup	startup	startup	2.8	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3
4/19/2005	2,607	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
4/20/2005	2,593	3.0	3.0	3.0	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
4/21/2005	2,590	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
4/22/2005	2,591	3.0	3.0	3.0	3.0	2.9	2.0	2.0	2.0	3.0	3.0	3.0	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3
4/23/2005	2,583	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.2	3.2
4/24/2005	2,623	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3
4/25/2005	2,612	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/26/2005	2,588	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/27/2005	2,598	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/28/2005	2,363	3.3	3.3	3.3	3.3	3.3	3.2	3.0	2.2	1.4	startup	startup	startup	2.1	2.6	2.9	3.1	3.1	3.2	3.2	3.2	3.2	3.3	3.2	3.2
4/29/2005	2,586	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
4/30/2005	1,739	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/1/2005	2,559	3.3	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3
5/2/2005	2,573	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/3/2005	2,580	3.3	3.3	3.3	3.3	3.2	3.3	3.2	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/4/2005	2,583	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
5/5/2005	2,591	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2
5/6/2005	2,609	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/7/2005	2,604	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/8/2005	2,595	3.3	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/9/2005	2,590	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/10/2005	2,583	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/11/2005	1,635	2.4	1.3	0.2	0.0	0.0	0.0	0.0	0.0	startup	startup	startup	2.6	2.6	2.9	3.2	3.2	3.2	3.2	3.2	3.1	3.2	3.2	3.2	3.2
5/12/2005	2,599	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/13/2005	2,040	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.4	1.3	0.2	startup	startup	startup	1.2	1.2	1.8	2.3	2.6	2.9	3.1	3.2
5/14/2005	2,571	3.2	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.1	3.1	3.1
5/15/2005	2,570	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3
5/16/2005	2,575	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3
5/17/2005	2,570	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.2	3.2	3.2	3.3	3.3	3.2
5/18/2005	2,573	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3
5/19/2005	2,570	3.3	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3
5/20/2005	2,559	3.3	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3
5/21/2005	2,553	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/22/2005	1,857	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	2.7	1.6	0.5	0.0	0.0	0.0	0.0
5/23/2005	1,574	0.0	0.0	0.0	0.0	0.0	0.0	startup	startup	startup	2.2	1.8	1.9	1.1	0.9	0.9	0.9	0.9	1.0	1.1	1.4	1.8	2.3	2.5	2.7
5/24/2005	2,554	3.0	3.2	3.2	3.2	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2
5/25/2005	2,575	3.2	3.2	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3

CF Industries, Inc. Plant City Phosphate Complex
D-SAP Quarterly Report, Hourly Stack CEM Data - Lb SO_2/Ton H_2SO_4
April 1, 2005 6:00 AM Through July 1, 2005 6:00 AM
3-Hr Rolling Average Period (Previous 2hrs & Indicated Hr)

	Daily Prod. Tons H2SO4	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM
5/26/2005	2,586	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2
5/27/2005	2,571	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/28/2005	2,562	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
5/29/2005	2,560	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3
3/1/2005	2,549	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.2	3.2
5/31/2005	1,641	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
6/1/2005	2,569	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3
6/2/2005	2,565	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.3
6/3/2005	2,566	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2
6/4/2005	2,570	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2
6/5/2005	2,563	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2
6/6/2005	2,555	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3
6/7/2005	2,552	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/8/2005	2,546	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/9/2005	2,547	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3
6/10/2005	2,543	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2
6/11/2005	2,531	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3
6/12/2005	2,539	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
6/13/2005	2,547	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/14/2005	2,066	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.1	3.1	2.2	1.1	0.1	0.0	1.4	2.2	3.0	2.6	2.8	3.0	3.1
6/15/2005	2,543	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3
6/16/2005	2,536	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3
6/17/2005	2,538	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/18/2005	2,546	3.3	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3
6/19/2005	2,544	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3
6/20/2005	2,557	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/21/2005	2,562	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
6/22/2005	1,499	3.3	3.3	2.7	1.6	0.6	0.0	startup	startup	startup	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.8	2.7	3.2
6/23/2005	2,570	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.0	2.9	2.8	3.0	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2
6/24/2005	2,568	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/25/2005	2,551	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/26/2005	2,550	3.3	3.3	3.3	3.3	3.3	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
6/27/2005	2,556	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3
6/28/2005	2,552	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
6/29/2005	2,547	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.2	3.3	3.2
6/30/2005	1,604	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3

CF Industries Plant City Phosphate Complex
D-SAP Quarterly Report (2nd Quarter 2005) Hourly CEM Data - 3 Hr Rolling Avg



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

CF Industries, Inc.
Plant City Phosphate Complex

October, 25 2005

Ms. Trina Vielhauer
Chief, Bureau of Air Regulations
Department of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: CF Industries, Inc.
Plant City Phosphate Complex
"C" & "D" Sulfuric Acid Plant
Third Quarter 2005 SO2 CEM/Production Data

Dear Ms. Vielhauer:

In accordance with Specific Condition 22 of Permit No. PSD-FL-339, enclosed is the Second Quarter 2005, SO_2 and production data from the "C" & "D" Sulfuric Acid Plants.

If you have any questions concerning this submittal please contact Michael Messina at (813) 364-5639.

Sincerely,

Thomas A. Edwards
Superintendent, Environmental Affairs

U:\2005C&DThridQCEMProduction.doc
TAE/JMM/gem
CC: Joel Smolen/FDEP
Diana Lee/HCEPC
J. M. Messina

CF Industries, Inc. Plant City Phosphate Complex

C-SAP Quarterly Report, Hourly Stack CEM Data - Lb SO_2/Ton H_2SO_4

July 1, 2005 6:00 AM Through October 1, 2005 6:00 AM

3-Hr Rolling Average Period (Previous 2hrs & Indicated Hr)

	Daily Prod. Tons H2SO4	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM
7/1/2005	2,635	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/2/2005	2,637	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/3/2005	2,636	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/4/2005	2,642	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/5/2005	2,638	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3
7/6/2005	1,913	3.3	2.8	2.1	1.4	0.8	0.4	0.1	0.0	Startup	Startup	Startup	1.9	2.5	2.9	3.1	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2
7/7/2005	2,628	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3
7/8/2005	2,615	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3
7/9/2005	2,642	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/10/2005	2,625	3.3	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/11/2005	2,643	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/12/2005	2,655	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/13/2005	2,637	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/14/2005	2,639	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.4	3.3	3.2	3.2	3.2	3.2
7/15/2005	2,646	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/16/2005	2,636	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/17/2005	2,630	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/18/2005	2,623	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/19/2005	2,632	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/20/2005	2,626	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/21/2005	2,625	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.2
7/22/2005	2,617	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/23/2005	2,624	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/24/2005	2,630	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2
7/25/2005	2,625	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3
7/26/2005	2,617	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/27/2005	2,620	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/28/2005	1,949	3.3	2.4	1.3	0.2	0.0	Startup	Startup	Startup	0.9	1.2	2.1	2.8	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/29/2005	2,631	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/30/2005	2,632	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/31/2005	1,576	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/1/2005	2,626	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/2/2005	2,625	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/3/2005	2,620	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3
8/4/2005	2,630	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/5/2005	2,633	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/6/2005	2,639	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/7/2005	2,632	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/8/2005	2,622	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/9/2005	2,622	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/10/2005	2,625	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3
8/11/2005	2,619	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2
8/12/2005	2,623	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
8/13/2005	2,611	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
8/14/2005	2,628	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3
8/15/2005	2,623	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3
8/16/2005	2,612	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/17/2005	2,612	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2
8/18/2005	2,429	3.2	3.2	3.2	3.2	3.2	Startup	Startup	Startup	2.0	1.8	2.6	3.1	3.2	3.1	3.1	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
8/19/2005	2,624	3.0	3.0	3.1	3.1	3.1	3.1	3.0	3.0	3.0	3.1	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3

CF Industries, Inc. Plant City Phosphate Complex

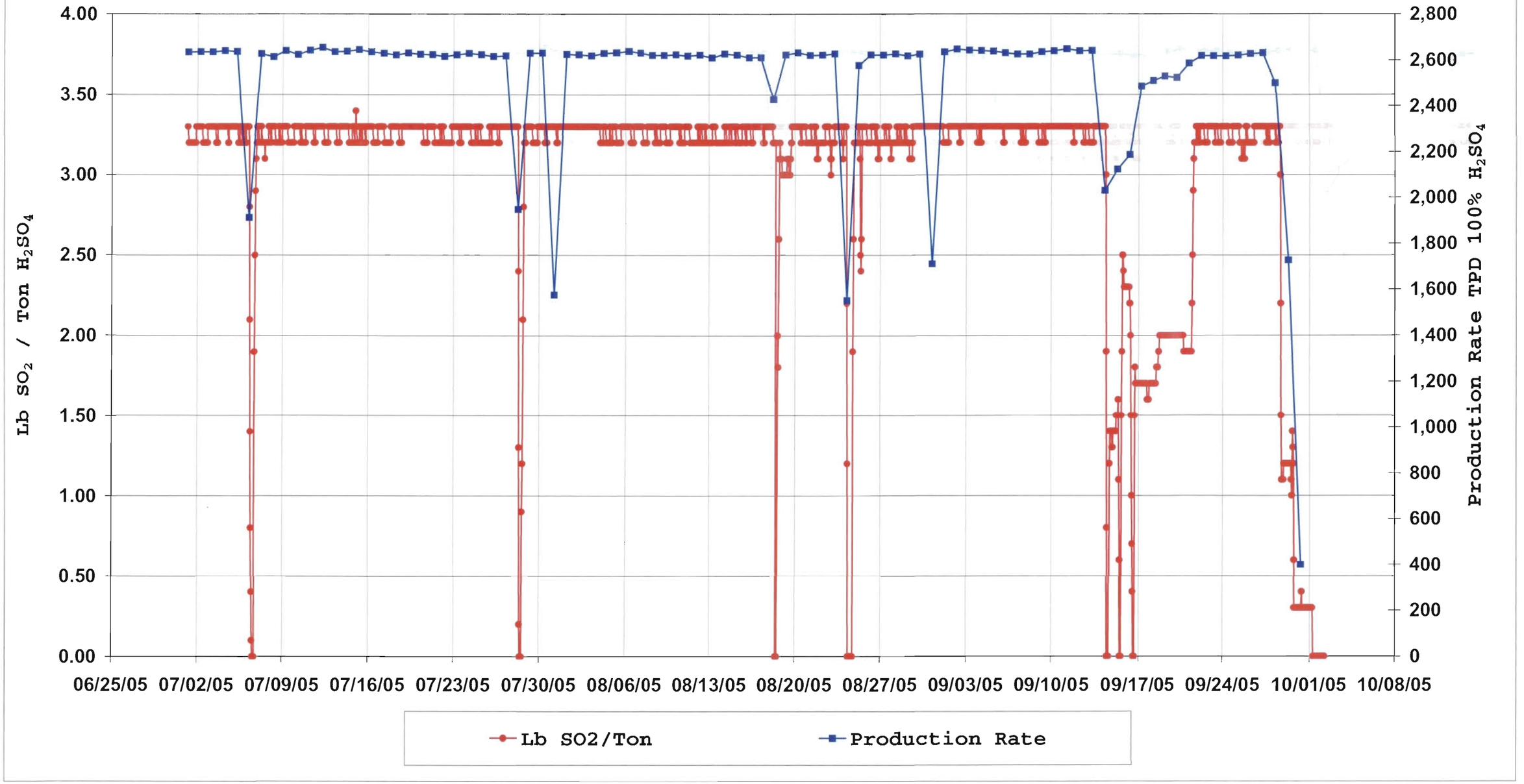
C-SAP Quarterly Report, Hourly Stack CEM Data - Lb SO_2/Ton H_2SO_4

July 1, 2005 6:00 AM Through October 1, 2005 6:00 AM

3-Hr Rolling Average Period (Previous 2hrs & Indicated Hr)

	Daily Prod. Tons H2SO4	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM
8/20/2005	2,633	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
8/21/2005	2,622	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
8/22/2005	2,623	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.1	3.0	3.1	3.2	3.2	3.2	3.2	3.2	3.2
8/23/2005	2,628	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.1	3.2	3.3	3.3	3.3	3.3	3.3	3.3
8/24/2005	1,552	2.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Startup	Startup	Startup	1.9	2.6	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3
8/25/2005	2,578	3.3	3.3	3.1	2.5	2.4	2.6	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
8/26/2005	2,624	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.2	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
8/27/2005	2,623	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.2	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
8/28/2005	2,628	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.3	3.3	3.3	3.2	3.2
8/29/2005	2,620	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/30/2005	2,626	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/31/2005	1,711	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2
9/1/2005	2,636	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/2/2005	2,648	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/3/2005	2,643	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2
9/4/2005	2,642	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2
9/5/2005	2,639	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3
9/6/2005	2,632	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/7/2005	2,626	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/8/2005	2,626	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2
9/9/2005	2,636	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/10/2005	2,640	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/11/2005	2,649	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/12/2005	2,640	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2
9/13/2005	2,642	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/14/2005	2,030	3.3	3.3	3.0	1.9	0.8	0.0	Startup	Startup	Startup	1.2	1.4	1.4	1.4	1.4	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.5
9/15/2005	2,124	1.5	1.5	1.6	1.1	0.6	Stratup	Stratup	Startup	1.5	1.9	2.5	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
9/16/2005	2,188	2.2	2.2	2.0	1.5	1.0	0.7	0.4	Startup	Startup	Startup	1.5	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
9/17/2005	2,488	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
9/18/2005	2,512	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
9/19/2005	2,531	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
9/20/2005	2,525	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
9/21/2005	2,587	1.9	1.9	1.9	1.9	1.9	2.2	2.5	2.9	3.1	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.3	3.2	3.2	3.3	3.3	3.3
9/22/2005	2,620	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/23/2005	2,619	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/24/2005	2,618	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/25/2005	2,622	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.2	3.1	3.1	3.1	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2
9/26/2005	2,628	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/27/2005	2,632	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/28/2005	2,502	3.2	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.0	2.2	1.5	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
9/29/2005	1,727	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.0	1.4	1.3	1.2	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
9/30/2005	399	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

CF Industries Plant City Phosphate Complex
C-SAP 2005 (3rd Quarter) Report, Hourly CEM Data - 3 Hr Rolling Avg (production/SO2 Emissions)



CF Industries, Inc. Plant City Phosphate Complex

D-SAP Quarterly Report, Hourly Stack CEM Data - Lb SO_2/Ton H_2SO_4

July 1, 2005 6:00 AM Through October 1, 2005 6:00 AM

3-Hr Rolling Average Period (Previous 2hrs & Indicated Hr)

	Daily Prod. Tons H2SO4	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM
7/1/2005	2,536	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/2/2005	2,534	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3
7/3/2005	2,532	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7/4/2005	2,543	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7/5/2005	2,549	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3
7/6/2005	2,546	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7/7/2005	2,212	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.3	1.2	Startup	Startup	Startup	2.2	2.9	3.2	3.2
7/8/2005	2,554	3.2	3.2	3.2	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7/9/2005	2,552	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.2	3.2	3.2	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.3	3.3	3.2	3.2
7/10/2005	2,542	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7/11/2005	2,556	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7/12/2005	2,554	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7/13/2005	2,548	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7/14/2005	2,231	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	2.6	1.5	Startup	Startup	Startup	1.9	2.7	3.2	3.3
7/15/2005	2,181	3.2	3.1	3.1	3.2	3.2	3.1	2.1	1.0	0.0	Startup	Startup	Startup	3.1	3.2	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7/16/2005	2,535	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7/17/2005	2,535	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7/18/2005	2,531	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2
7/19/2005	2,539	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/20/2005	2,536	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
7/21/2005	2,530	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7/22/2005	2,521	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2
7/23/2005	2,528	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3
7/24/2005	2,537	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.1	3.1	3.0	3.1	3.2	3.2	3.3	3.3	3.3	3.3	3.2
7/25/2005	2,523	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7/26/2005	2,522	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3
7/27/2005	2,524	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2
7/28/2005	2,525	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7/29/2005	2,549	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7/30/2005	2,538	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.2	3.2
7/31/2005	1,521	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
8/1/2005	2,537	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2
8/2/2005	2,540	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/3/2005	2,532	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
8/4/2005	2,534	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.3	3.2	3.2	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.2
8/5/2005	2,536	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/6/2005	2,540	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2
8/7/2005	2,533	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/8/2005	2,524	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3
8/9/2005	2,522	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/10/2005	2,525	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.3	3.3
8/11/2005	2,205	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.1	2.0	0.9	0.0	
8/12/2005	1,886	0.0	0.0	0.0	0.0	0.0	Startup	Startup	Startup	2.1	2.8	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
8/13/2005	2,536	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2
8/14/2005	2,552	3.2	3.2	3.2	3.2	3.2	3.1	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2
8/15/2005	2,547	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.2
8/16/2005	2,536	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3
8/17/2005	2,543	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3
8/18/2005	2,157	3.3	3.3	3.3	3.3	3.2	2.4	1.3	Startup	Startup	Startup	2.2	1.8	1.9	2.0	2.2	2.3	2.3	2.3	2.4	2.5	2.6	2.9	3.0	3.0
8/19/2005	2,535	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
8/20/2005	2,552	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3
8/21/2005	2,539	3.3	3.3	3.2	3.2	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3
8/22/2005	2,541	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.1	3.2	3.2	3.3	3.3	3.3	3.2

CF Industries, Inc. Plant City Phosphate Complex

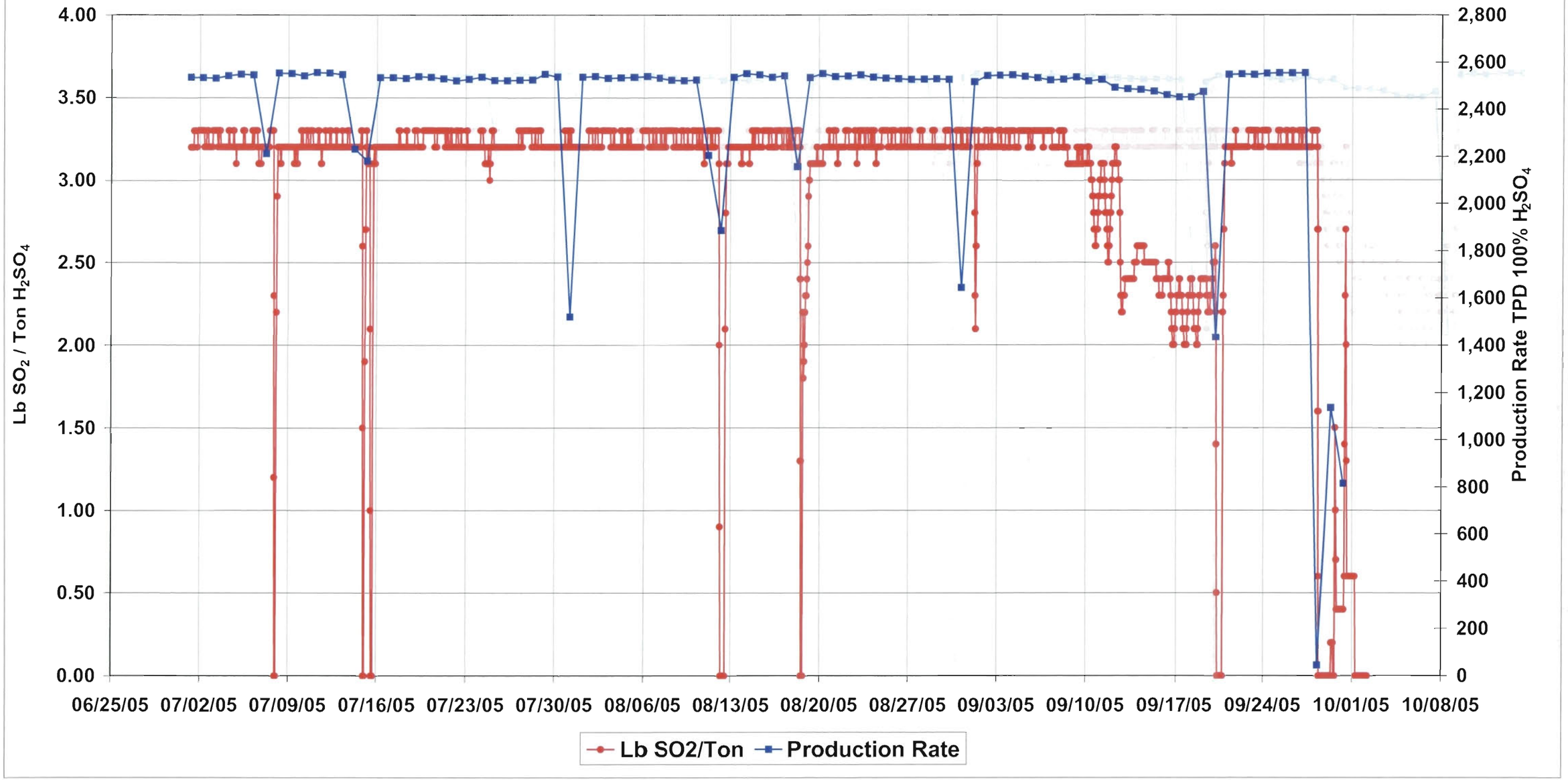
D-SAP Quarterly Report, Hourly Stack CEM Data - Lb SO_2/Ton H_2SO_4

July 1, 2005 6:00 AM Through October 1, 2005 6:00 AM

3-Hr Rolling Average Period (Previous 2hrs & Indicated Hr)

	Daily Prod. Tons H2SO4	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM
8/23/2005	2,546	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2
8/24/2005	2,536	3.3	3.3	3.3	3.2	3.2	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/25/2005	2,532	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2
8/26/2005	2,530	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2
8/27/2005	2,527	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2
8/28/2005	2,528	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2
3/1/2005	2,529	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3
8/30/2005	2,527	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2
8/31/2005	1,644	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/1/2005	2,517	3.3	2.8	2.3	2.1	2.6	3.1	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3
9/2/2005	2,543	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3
9/3/2005	2,544	3.3	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3
9/4/2005	2,546	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/5/2005	2,540	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/6/2005	2,534	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/7/2005	2,525	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2
9/8/2005	2,528	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
9/9/2005	2,537	3.1	3.2	3.2	3.2	3.1	3.1	3.2	3.2	3.2	3.2	3.1	3.1	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2
9/10/2005	2,520	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.7	2.7	2.7	2.8	2.9	2.9	3.0	3.0	3.1
9/11/2005	2,526	3.1	3.1	3.1	3.1	3.1	3.0	2.9	2.8	2.8	2.8	2.7	2.6	2.5	2.5	2.6	2.7	2.8	2.8	2.9	3.0	3.1	3.1	3.1	3.1
9/12/2005	2,493	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	2.8	2.5	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4
9/13/2005	2,487	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6
9/14/2005	2,484	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
9/15/2005	2,477	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4
9/16/2005	2,461	2.4	2.4	2.4	2.5	2.5	2.5	2.4	2.4	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.3
9/17/2005	2,452	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.4
9/18/2005	2,452	2.4	2.4	2.4	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.4
9/19/2005	2,475	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.5	2.5	2.5	2.5	2.6
9/20/2005	1,433	2.2	1.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Startup	Startup	Startup	2.2	2.3	2.7	3.1	3.2	3.2	3.2	3.2	3.2	3.2
9/21/2005	2,548	3.2	3.2	3.2	3.2	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
9/22/2005	2,550	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/23/2005	2,548	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
9/24/2005	2,553	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3
9/25/2005	2,555	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
9/26/2005	2,554	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.3	3.3	3.3	3.3
9/27/2005	2,555	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2
9/28/2005	45	2.7	1.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9/29/2005	1,135	0.0	0.2	0.2	0.2	0.2	Startup	Startup	Startup	1.5	1.0	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
9/30/2005	814	0.4	0.4	0.6	1.4	2.3	2.7	2.0	1.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6

CF Industries Plant City Phosphate Complex
D-SAP 2005 (3rd Quarter) Report, Hourly CEM Data - 3 Hr Rolling Avg (production/SO2 Emissions)



ATTACHMENT 3 - DOCUMENTATION OF CESIUM CATALYST INSTALLATION

HALDOR TOPSOE, INC.
GENERAL OFFICES • 17629 EL CAMINO REAL, 3RD FLOOR • HOUSTON, TEXAS 77058
PHONE: (281) 228-5000 • FAX: (281) 228-5019 • WWW.HALDORTOPSOE.COM
MANUFACTURING FACILITY • PHONE: (281) 228-5201 • FAX: (281) 228-5209

CF Industries, Inc.
Attn: Department 510
PO Box 1480
Bartow FL 33831-1480

Invoice

Repeat printout

Invoice No.: 90009910
Date: May. 31, 2004
Your ref. No.: ~~AFE66370P~~
Sales order No.: 3071
Customer No.: 102418
Page: 1 / 2

Ship-to address:
CF Industries, Inc.
10608 Paul Buchman Hwy.
Plant City FL 33565

ENTERED
JUN 18 2004
TX2

Terms of payment: Net cash 30 days from invoice

Terms of delivery: FCA Port of Miami ins by HTI ppd
HTI to handle customs clearance at Port of Miami, risk transfer will occur at port

Quantity	Unit	Description	Price	Per unit	Value USD
21,000.0	L	VK69, Topsoe Sulphuric Acid Catalyst 12 mm Daisy	5.50 USD	1 L	115,500.00
42,000.0	L	VK69, Topsoe Sulphuric Acid Catalyst 12 mm Daisy	5.50 USD	1 L	231,000.00

M Hutson 1/yr/1
6/4
FOR YOUR APPROVAL
CHARGE _____
APPROVAL _____
RETURN TO ACCOUNTS PAYABLE
CF INDUSTRIES, INC.

03.404
RECEIVED
JUN 4 2004

HALDOR TOPSOE, INC.
GENERAL OFFICES • 17629 EL CAMINO REAL, 3RD FLOOR • HOUSTON, TEXAS 77058
PHONE: (281) 228-5000 • FAX: (281) 228-5019 • WWW.HALDORTOPSOE.COM
MANUFACTURING FACILITY • PHONE: (281) 228-5201 • FAX: (281) 228-5209

Invoice

Repeat printout

Invoice No.: 90009910
Page: 2 / 2

Quantity Unit	Description	Price	Per unit	Value USD
102,000.0 L	VK69, Topsoe Sulphuric Acid Catalyst 12 mm Daisy	5.50 USD	1 L	561,000.00
Total items				907,500.00
	Freight			5,193.00
Total amount				**912,693.00**

If paying by check, please pay to:
Haldor Topsoe, Inc.
P.O. Box 200322
Houston, TX 77216-0322

If paying by bank wire, please pay to:
JP Morgan Chase Bank
S.W.I.F.T. Code: TCBK US44
ABA 1130 00609. For Account of:
Haldor Topsoe, Inc., No. 00100891705

Haldor Topsoe, Inc.

HALDOR TOPSOE, INC.

MATERIAL SAFETY DATA SHEET
VK69

1.1 IDENTIFICATION OF PRODUCT.

Designation: VK69. Sulphuric acid catalyst.

1.2 COMPANY.

Haldor Topsoe, Inc.
17629 El Camino Real
Houston, TX 77058, USA

Phone: (281) 228-5000
Fax: (281) 228-5209
Emergency Phone: (281) 228-5000

2 HAZARDOUS AND OTHER INGREDIENTS.

Exposure limits may vary. It is recommended that information about locally applicable exposure limits be obtained.

%w/w	Compound		CAS No	MAK mg/m^3 (Germany)	TLV mg/m^3 (ACGIH)	PEL mg/m^3 (OSHA)
5-9	Vanadium pentoxide	V_2O_5	1314-62-1	0.05 (resp)	0.05 resp	0.05 (resp)
10-20	Potassium sulphate	K_2SO_4	7778-80-5	-	-	-
5-15	Cesium sulphate	Cs_2SO_4	10294-54-9	-	-	-
1- 8	Sodium sulphate	Na_2SO_4	7757-82-6	-	-	-
55-70	Silica,diatomaceous earth	SiO_2	61790-53-2	4	10	6
	- calcined		68855-54-9	0.3 (resp)	-	-
1-5	Silica, crystalline	SiO_2				
	Cristobalite		14464-46-1	0.15 (resp)	0.05 (resp)	0.05 (resp)
	Quartz		14808-60-7	0.15 (resp)	0.1 (resp)	0.1 (resp)
	Tridymite		15468-32-3	0.15 (resp)	0.05 (resp)	0.05 (resp)

3 PHYSICAL DATA.

State:	Solid
Appearance and odour:	Greenish yellow.Extruded pellets.Odourless.
pH:	Not applicable.
Boiling point or range:	Not applicable.
Melting point or range:	Silica above 1600 °C / 2910 °F ; alkalisulphates above approx 400 °C / 750 °F.
Vapour pressure:	Not applicable.
Vapour density:	Not applicable.
Density relative to water:	Above 1.
Solubility in water:	Alkalisulphates soluble. Vanadium compounds partly soluble.
Partition coefficient (n-octanol/water):	Not applicable.
Other data:	

Enviro-Chem Systems, Inc.

P.O. Box 14547 • St. Louis, MO 63178 • Phone: (314)275-5700 • Fax: (314)275-5701

INVOICE 1

Customer Original

SHIPPER'S NBR	BO#	DATE ENTERED	CUSTOMER'S ORDER NBR	INVOICE DATE	INVOICE NUMBER
035585CA	0	1/28/2005	62203P	2/11/2005	19658

TERMS	PROJECT NBR	DATE SHIPPED	FOREIGN SHIPPER NBR
NET 30 DAYS	-	2/9/2005	

PREPAID OR COLLECT ROUTING	CARRIER	MCB #
PREPAID	RANGER - FLAT BED TRAILER	

DELIVERY F.O.B	TAX EXEMPT NBR
FOB DESTINATION	39-00-135828-63

SHIPPED FROM	WHSE CODE	PROD.GRP	SLS TYPE	TERMS	CUST. AR NBR
LAKELAND	CA-1986	CA	1	20	0255905

SOLD TO
CF Industries
P. O. Drawer "L"
Plant City FL 33564--9007
United States

SHIP TO
CF Industries
10608 Paul Buchman Highway
Plant City FL 33565--9007
United States

PAYMENT

PLEASE MAKE CHECKS PAYABLE TO:

Monsanto Enviro-Chem
P.O. Box 945526
Atlanta, GA 30394-5526

PLEASE REFERENCE INVOICE NUMBER WITH YOUR REMITTANCE.

ITEM	DESCRIPTION	B/O QTY	SHIP QTY	UNIT COST	AMOUNT
1	LTR SCX-2000 IN 1200 LITER BAGS SCX-2000/1200	0	164,400	$5.35	$879,540.00
2	LTR SCX-2000 IN 200 LTR DRUM SCX-2000/200	0	600	$5.35	$3,210.00
				** SUBTOTAL **	882,750.00
	** NO TAX APPLIED **				
				** TOTAL **	882,750.00
	SHIP ON FLAT BED TRAILERS (SIDE LOADED				
	SHIP 2/DAY TO ARRIVE BETWEEN 7AM - 12 NOON				
	SHIP XLP-220 FIRST (FROM P.O. 62207P0				

RECEIVED
FEB 18 2005

ENTERED
FEB 23 2005
Tax 1

Subject to 0.05% per day late payment charge

MONSANTO Company

Material Safety Data

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: SULFURIC ACID CATALYST TYPE SCX-2000 DATE: January 17, 2002

CHEMICAL NAME: Mixture of complex inorganic salts (oxosulfato vanadates) containing cesium, potassium and vanadium salts on amorphous silica support

SYNONYMS: None

MONSANTO COMPANY, 800 N. LINDBERGH BLVD., ST. LOUIS, MO 63167

FOR CHEMICAL EMERGENCY, SPILL LEAK, FIRE, EXPOSURE, OR ACCIDENT
Call CHEMTREC - Day or Night - 1-800-424-9300 Toll free in the continental U.S., Hawaii, Puerto Rico, Canada, Alaska, or Virgin Islands. For calls originating elsewhere: 703-527-3887 (collect calls accepted)

For additional non-emergency information, call: 314-694-6661

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	% BY WEIGHT
Vanadium/cesium/potassium salt complex *	not available	40 - 49
Diatomaceous earth (amorphous silica)	68855-54-9	51 - 60

* Hazardous chemical(s) under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).
# National Toxicology Program (NTP) and International Agency for Research on Cancer (IARC) listed carcinogen.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING!
CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION
MAY BE HARMFUL IF SWALLOWED

APPEARANCE AND ODOR: yellow to light green pellets or rings

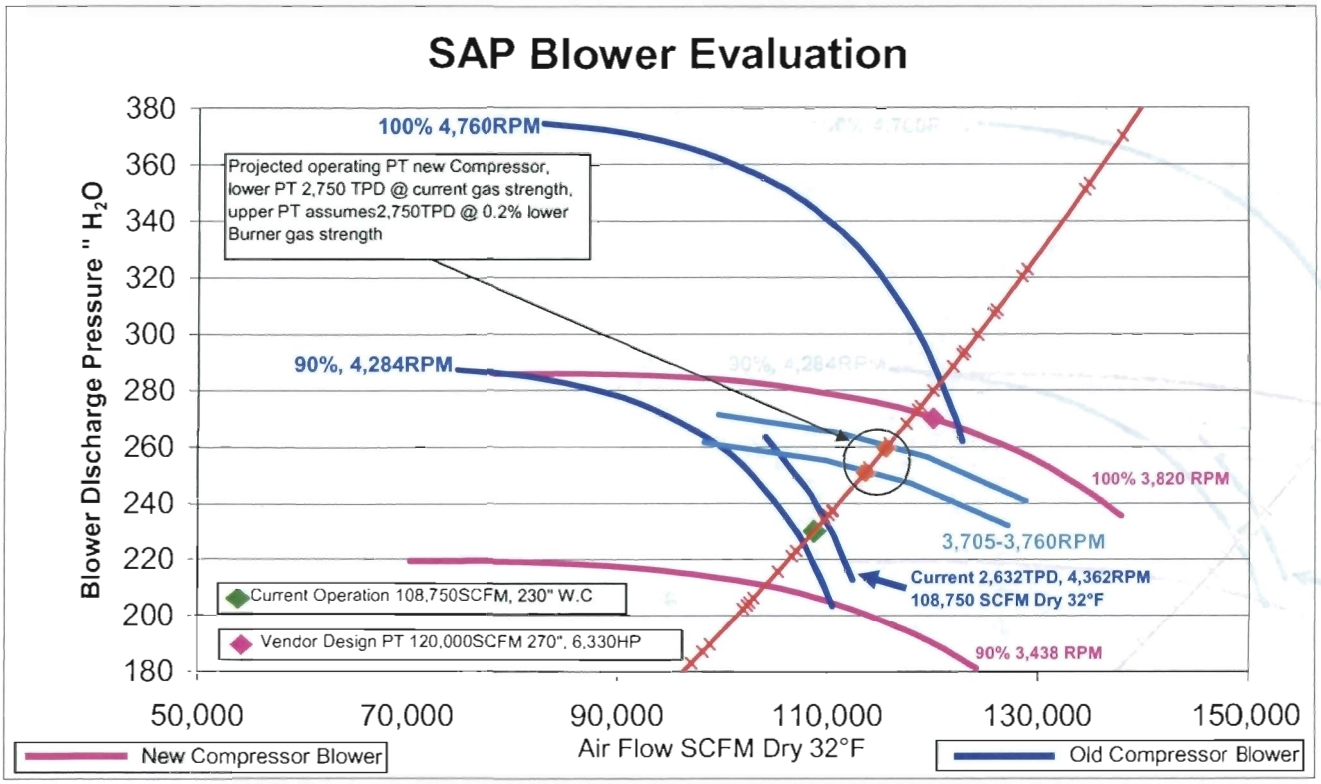
POTENTIAL HEALTH EFFECTS

LIKELY ROUTES OF EXPOSURE: skin contact and inhalation

EYE CONTACT: causes pain, redness and tearing based on toxicity studies on the components. Dust may cause eye irritation as would any foreign material.

SKIN CONTACT: no more than slightly toxic or irritating based on toxicity studies. Dust grittiness may cause slight irritation.

ATTACHMENT 4 - BLOWER SPECIFICATIONS AND PRODUCTION EFFECT



Assume Current Burner Gas Strength

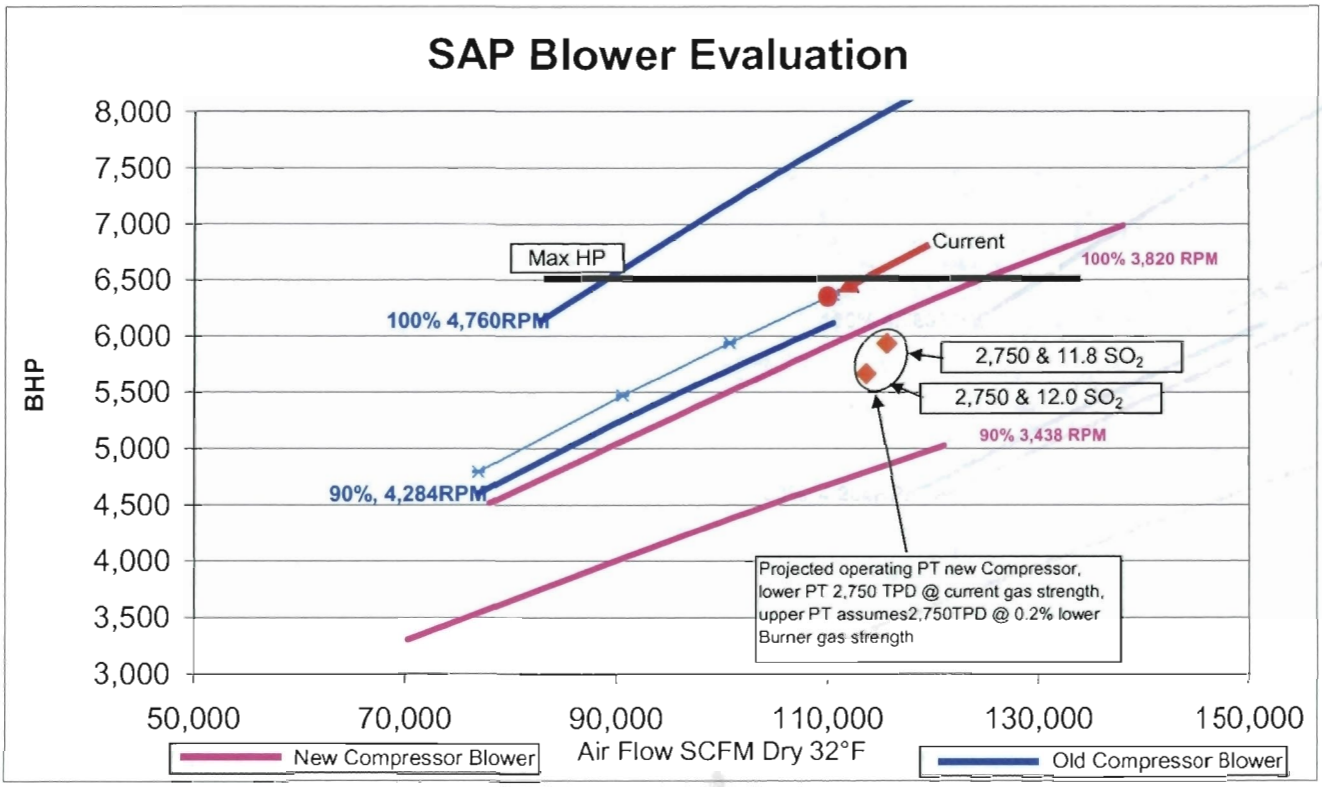
$$\frac{2,750}{2,632} \times 108,750 = 113,626$$

Current SCFM — New SCFM

Assume 0.2% Lower Burner Gas Strength Than Current

$$1.017^{*} \times \frac{2,750}{2,632} \times 108,750 = 115,557$$

*Factor for lower gas strength — Current SCFM — New SCFM

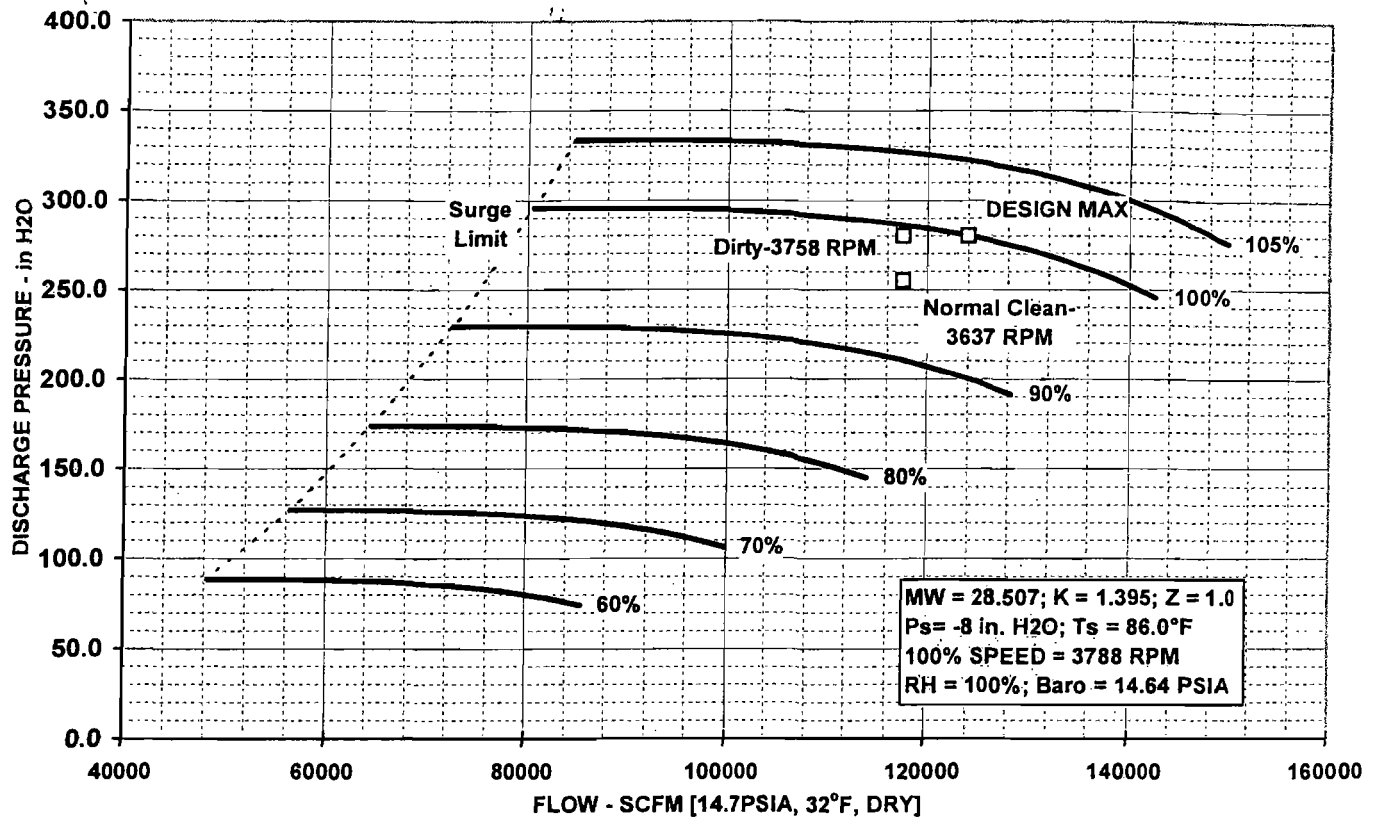


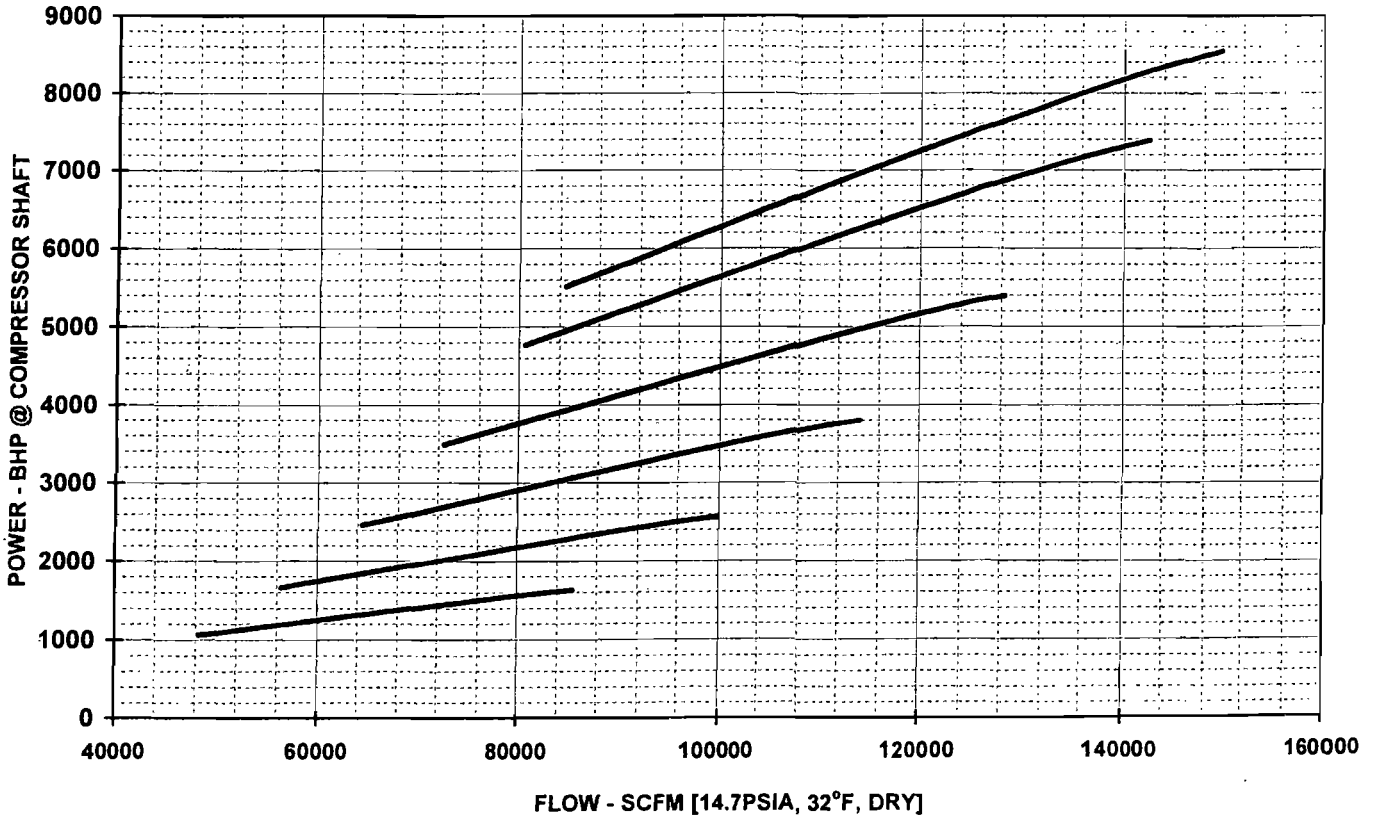
Calculated Performance for ROOTS OIB-260-60 with Turbine Drive

CF Industries

Pressure and Power vs Flow

PROPOSED





Dresser ROOTS
DRESSER, INC.
CONNERSVILLE, INDIANA

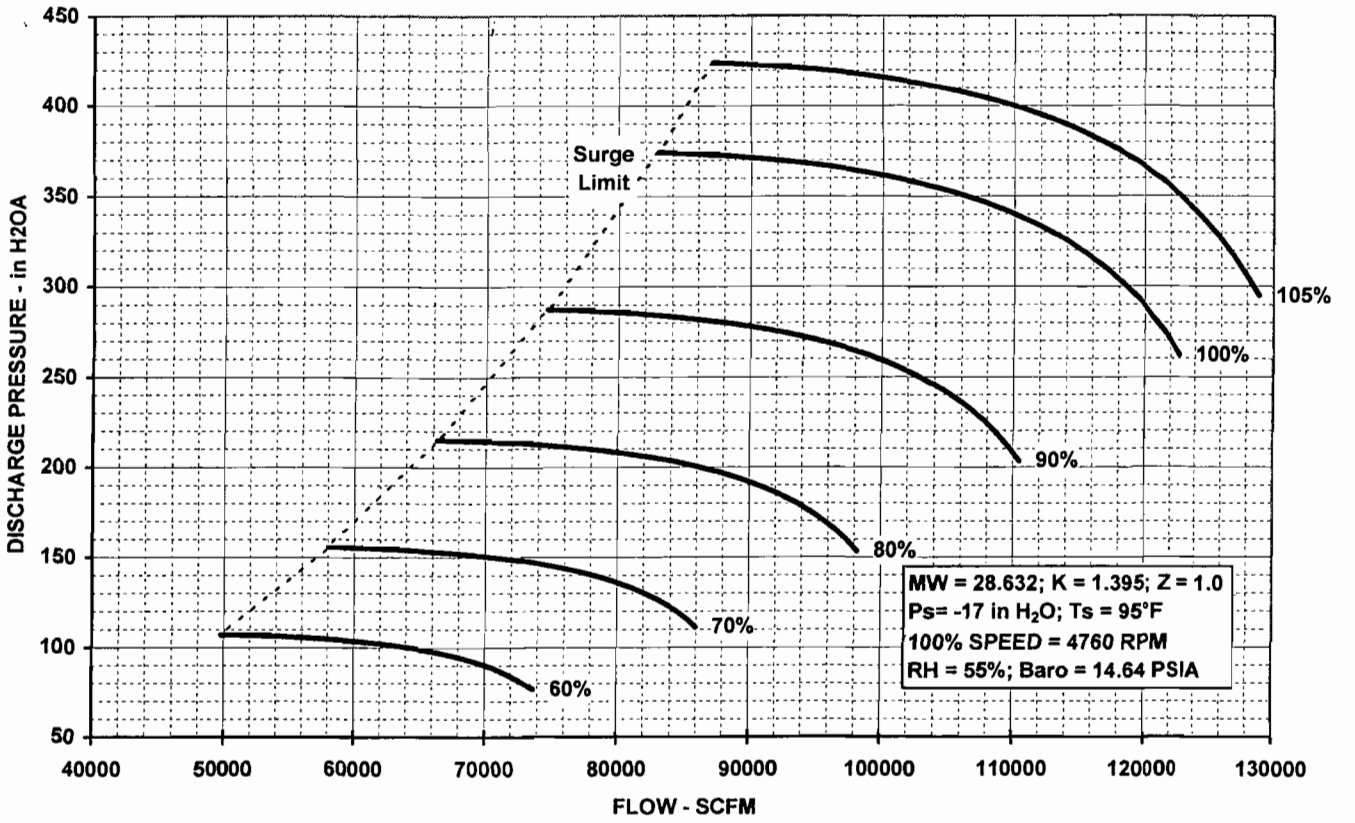
MLS 11/21/2005

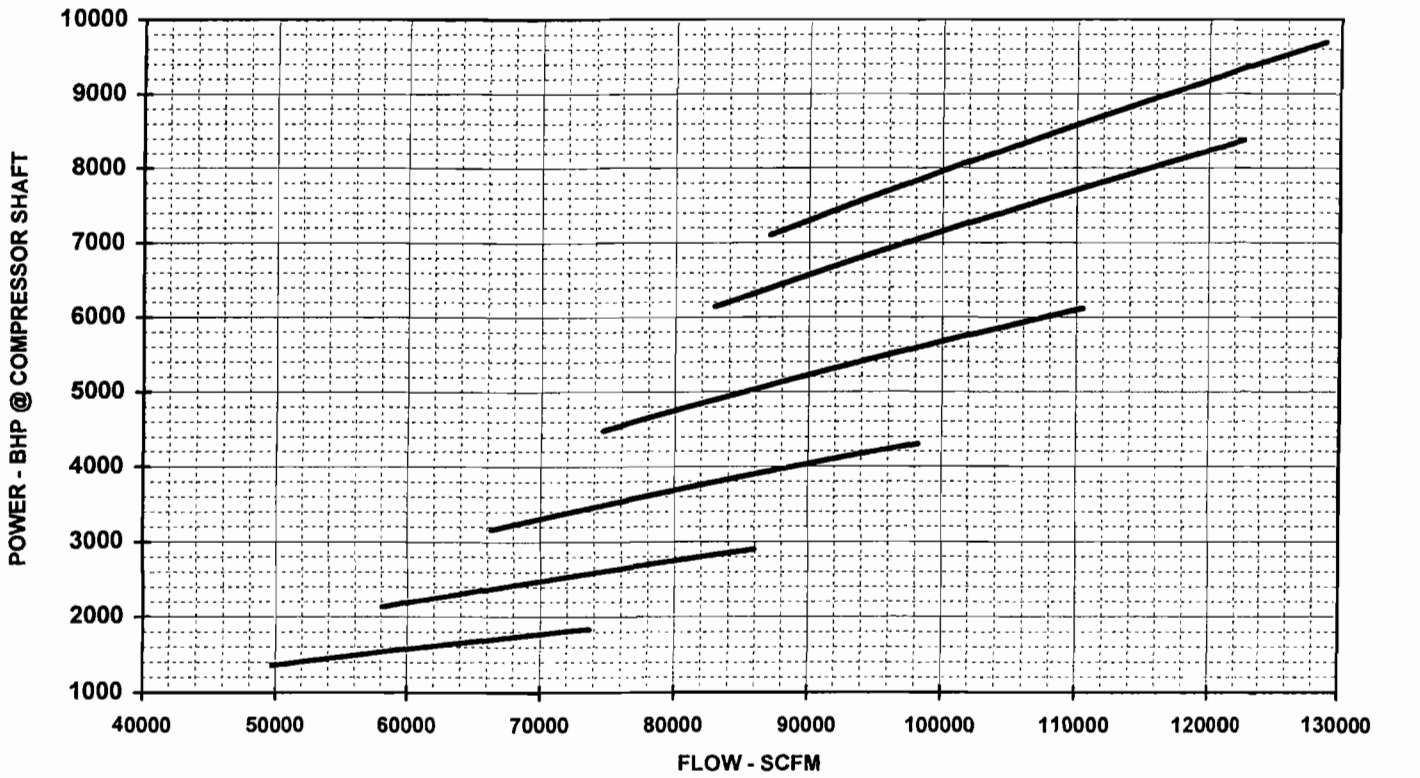
CULATED PERFORMANCE
OOTS 54"-OIB
with Turbine Drive
SN H-2887/8 w/H-8176-R Rotor

C. F. Industries

PRESSURE and POWER
vs FLOW

CURRENT





Dresser ROOTS
DRESSER, INC.
CONNERSVILLE, INDIANA

GGE 3/28/2005

GB-4495-A