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**BUREAU OF AIR REGULATION**

July 6, 2007

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**  
**Permit No. 0570005-017AV**  
**"C" & "D" Sulfuric Acid Plant**  
**Second Quarter 2007 SO2 CEM/Production Data**

Dear Ms. Vielhauer:

In accordance with Specific Condition, "Subsection B.20." contained in the facility Title V Air Permit No. 0570005-017 AV, enclosed is the Second Quarter 2007, SO<sub>2</sub> 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,



Herschel E. Morris  
Vice President Phosphate Operations  
& General Manager

U:\2007C&amp;DSecondQCEMProduction.doc

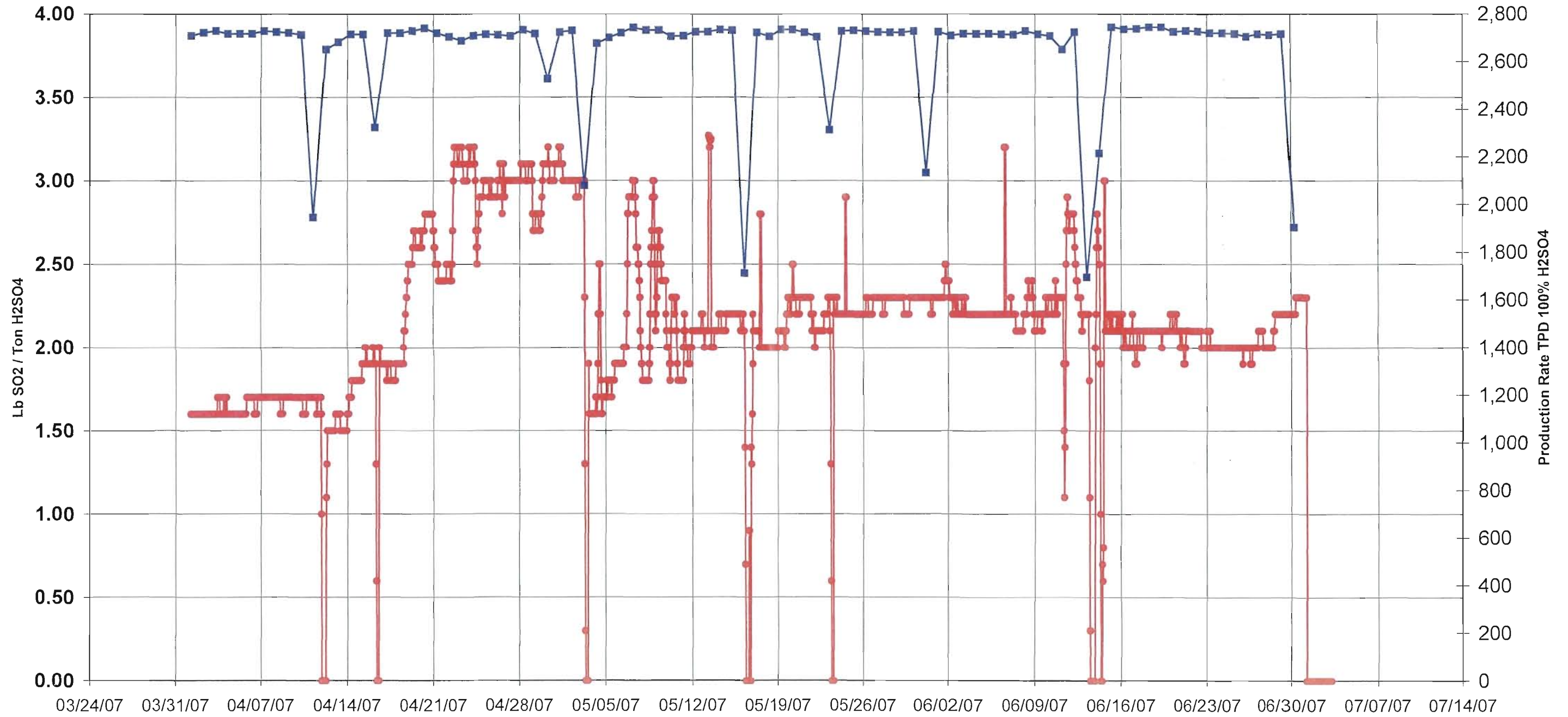
HEM/JMM/gem

CC: Chris Bradley/FDEP  
Lynn Robinson/HCEPC  
J. M. Messina  
Ron Brunk





CF Industries Plant City Phosphate Complex  
C-SAP Quarterly Report (Second Quarter 2007) Hourly CEM Data - 3 Hr Rolling Avg

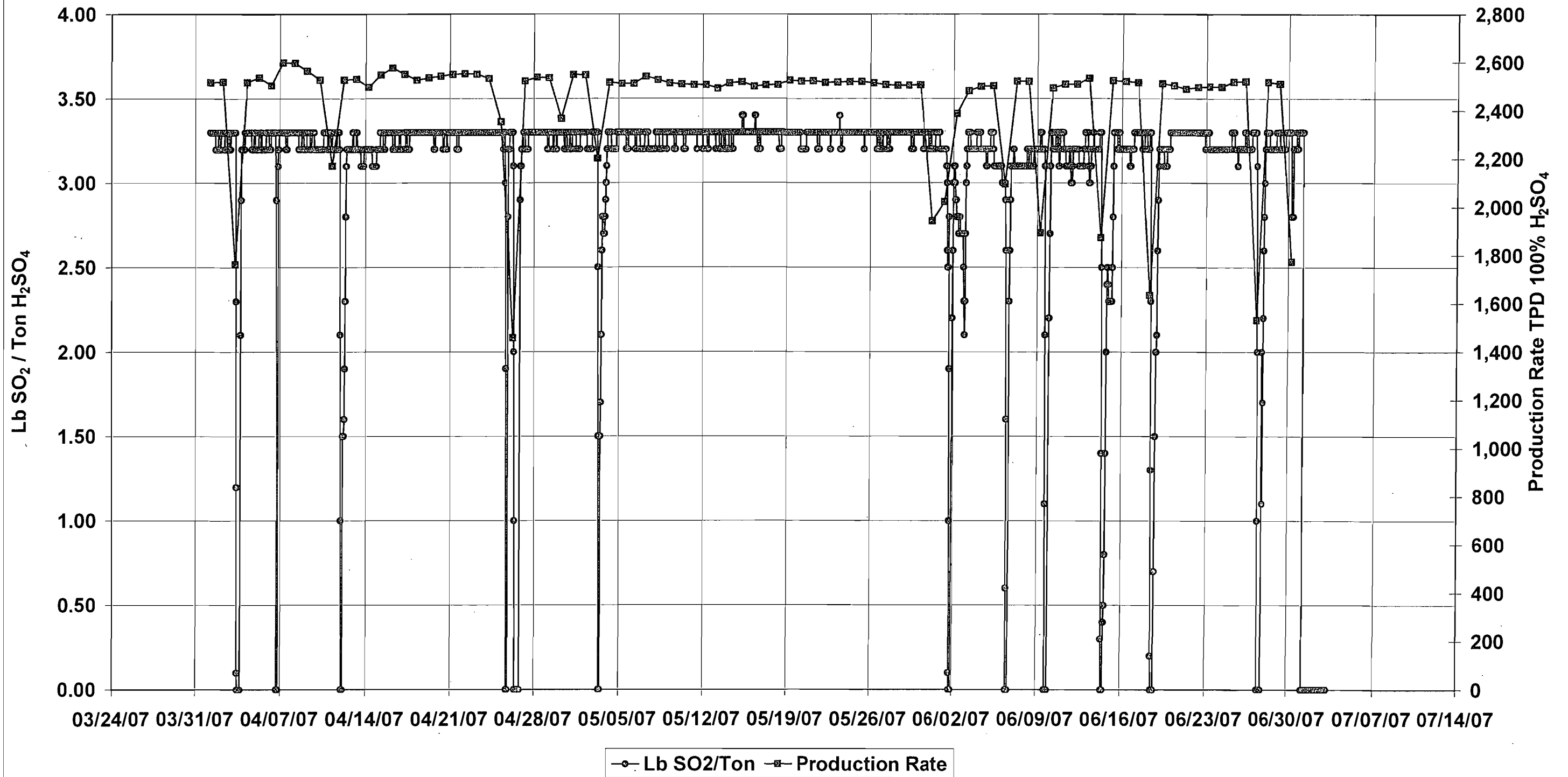


—●— Lb SO2/Ton —■— Production Rate

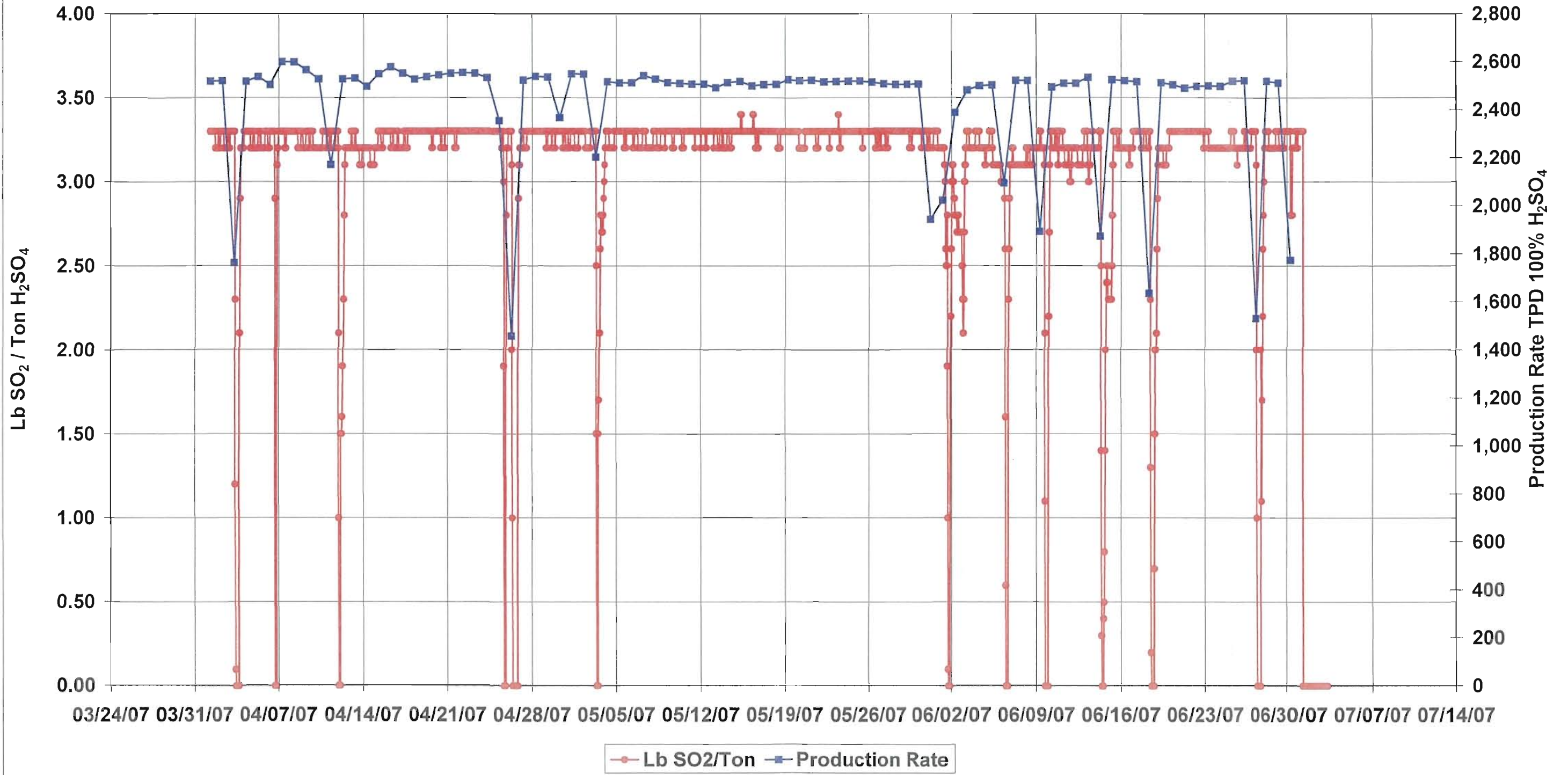




CF Industries Plant City Phosphate Complex  
D-SAP Quarterly Report, Hourly CEM Data - 3 Hr Rolling Avg (Second Quarter 2007)



CF Industries Plant City Phosphate Complex  
D-SAP Quarterly Report, Hourly CEM Data - 3 Hr Rolling Avg (Second Quarter 2007)





INSTRUMENT MAINTENANCE PROCEDURE  
C & D SULFURIC ACID

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Assigned To: I/E Shiftman Date: MAY 07

SO<sub>2</sub>/O<sub>2</sub> EMISSIONS ANALYZER SPAN TEST  
DAILY, CRITICAL PM TEST

PRE-TEST PROCEDURE

1. Before starting test: Notify the operator you are about to begin the SO<sub>2</sub>/O<sub>2</sub> tests. You must confirm with production that it is OK to perform the test.
2. Check SO<sub>2</sub> and O<sub>2</sub> test gas bottles for contents greater than 150 PSI.
3. Insure inner cabinet temperature on field unit is at least 105°C.
4. Check field cabinet sample flow rotometer for flow rate of 3750 cc/min ± 250.
5. Verify heat system by observing "green" indicator light. "Yellow" indicator light represents unit is heating. Temperature should be over 200°F.
6. Verify O<sub>2</sub> flows are set at 600cc and pressure reading is between -7" H<sub>2</sub>O to -10" H<sub>2</sub>O.

GUIDELINES:

1. Notify the I/E Wetside Supervisor of any and all problems during the last 24 hours recording, performing the test or of test results.
2. Values documented on the log sheets must be from the WDPF.
3. At the first of every month return "Instrument Maintenance Procedure" to the I/E Wetside Supervisor and send a copy to the lab.
4. SO<sub>2</sub> test results for each sulfuric plant must be within 25 ppm of the span test bottle analysis.
5. O<sub>2</sub> readings must be within 3% of the test gas analysis.
6. Zero offsets must not exceed 200 reference counts in a 24-hour period.
7. If span test does not fall within the guidelines outlined on daily PM, refer to manufacturer's documentation and follow procedures outlined in maintenance section. Maintenance performed on the SO<sub>2</sub>/ O<sub>2</sub> analyzer **MUST** be thoroughly documented on the appropriate maintenance sheet of this procedure and operator's log. Rerun test.

8. REFERENCE DOCUMENT NOTES:

Analyzer Manufacturer's Manuals (AMETEK)  
62-204.800 (2) FAC  
40 CFR Part 51, APX-P  
62-204.800 (7) FAC  
40 CFR Part 60, APX-B  
40 CFR Part 60, 1 and 2

f:\doc\pm\_ins\ 39556-Q 7/29/05 Rev.7 Approved By:

D.W. Remington

GAD  
SWP

Date: 7.29.05

Approved By: Superintendent Environmental Affairs

Ronald Edwards

Date: 8/1/05

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9. **TEST CANNOT BE COMPLETED DURING:**

- 1) Rate change; likewise, production may not change rates during a test.
- 2) Plant start up; should a plant shut down during a test and/or during maintenance, they may not start up until the analyzer has been put back in service.

10. The SO<sub>2</sub> test gas shall be NIST certified by the vendor. Mean analysis should be approximately 900ppm SO<sub>2</sub> and 15ppm O<sub>2</sub> gas. Verify SO<sub>2</sub> and the oxygen bottles have at least 150 lbs pressure available. For installation of new bottles, check certificate of each new Test Gas bottle for analysis AND expiration date. Record on the certificate which plant, date, your initials and forward to the I/E Wet-side Supervisor as soon as possible. Record installation date, plant sampling, bottle concentration, and cylinder number on this PM Log Sheet.

PROCEDURE: SO<sub>2</sub> EMISSIONS SPAN TEST

The following step by step procedure for the test should be followed in order. Keypad entries are indicated in bold and must be PERFORMED EXACTLY AS SHOWN.

1. Always start the test during Period 8 or 16 on the Ametek Analyzer as indicated on the display window. The calibration procedure is fully automated and will proceed when the following procedures have been completed. Values can be compared between instruments while the test is in progress. Samplings are taken in the following order: C Plant O<sub>2</sub>, C Plant SO<sub>2</sub>; D Plant O<sub>2</sub>, D Plant SO<sub>2</sub>.
2. On the Analyzer, Press **CAL**, **Enter**, then **Cancel** to begin the test. The unit will "click" and stabilization occurs in 3 to 4 minutes.
3. Verify for correct flows and pressures for each sample flow during their respective sample cycle.
4. To obtain Zero Reference Count: Press 5, then 2222, and Enter. Press ↓ repeatedly until "Configure Menu" is displayed. (verify arrows in the display are pointing to "Configure Menu"). Press **Enter**. Press → once to cause the arrow in the display to point to "Display". Press **Enter**, **Enter** to select Line 1 Flag. Press 10, **Enter**. The ZERO reference count will be displayed. Record this value on the log sheet. It must not exceed 200 from the previous day's entry.  
  
(Follow steps 5 thru 7 if O<sub>2</sub> readings are being verified from controller.)
5. Press 6 to enter a new value representing "A" Plant O<sub>2</sub> reading. Press **Enter**, **Enter** to select Line 1 Flag. Press 1 then 0 to enter a new value of 10. The following entry removes the Zero value from the display.
6. Press **Enter**, 1, then **Enter** again to return Line 1 Flag in the display to read "C" Plant SO<sub>2</sub>.
7. Press **Enter**, 4, **Enter** for a new value representing "D" Plant O<sub>2</sub>.
8. Press **Enter**, 1, **Enter** to return the display to SO<sub>2</sub> readings. Press **Cancel**, **Cancel**, **Cancel** to return to the main display. The test runs without further input. It is complete after Period 32.

INSTRUMENT MAINTENANCE PROCEDURE  
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OBTAIN SPAN VALUES FROM WDPF SYSTEM IN THE CONTROL ROOM.

1. At the console, pull up TREND GROUPS, scroll down and left click to open the "Emissions Group". SO<sub>2</sub>/O<sub>2</sub> Trends. Obtain official Start/Stop time to cover test period time by left clicking and dragging graph line. A box opens on the display to show test values for the time period. Record test time and stabilized values on the following page.
2. To calculate the error percentages, take the *difference* between the reading and the calibration gas concentration value. Divide the difference by the calibration gas value. Multiply by 100. Enter on log sheet.
3. Record the start and end times for the span tests and/or maintenance time and initials on the operator's log sheets for each plant.
4. Record the start and end times for the span tests and/or maintenance time and initials on the old, paper charts.

SAP Daily SO2 Emissions Test Log for Month of MAY 07

Send copy of this document to Lab each month.

Day	Tech	Bottle Change (M)	Zero Ref Count	Prev Day Zero Ref Count	Ref Count Δ <sup>2</sup>	O <sub>2</sub> Sample	O <sub>2</sub> Reference	O <sub>2</sub> % Error <sup>3</sup>	SO <sub>2</sub> Sample	SO <sub>2</sub> Reference	SO <sub>2</sub> Error <sup>4</sup>	Span Test Period <sup>5</sup>
1	CR		-9322	-9301	21	15.1	15.0	+0.66	898	904	-6	07:16 - 07:42
2	JW		-9327	-9322	5	15.2	15.0	+1.33	902	904	-2	07:20 - 07:32
3	DL		-9355	-9327	28	15.0	15.0	0	902	904	-2	13:42 - 14:09
4	KR		-9329	-9355	26	15.2	15.0	+1.33	905	904	+1	7:33 - 7:59
5	KK		-9357	-9329	28	15.1	15.0	+0.66	907	904	+3	9:27 - 9:53
6	CR		-9350	-9357	7	15.1	15.0	+0.66	899	904	-5	06:41 - 07:07
7	AUB		-9354	-9350	4	15.2	15.0	1.33	907	904	+3	07:16 - 07:48
8	CR		-9341	-9354	13	15.1	15.0	+0.66	904	904	0	08:11 - 08:42
9	KK		-9362	-9391	+21	15.0	15.0	0	900	904	+4	07:20 - 07:47
10	KK		-9376	-9362	+14	15	15.0	0	896	904	+8	07:24 - 07:57
11	KK		-9396	-9376	+20	15.0	15.0	0	896	904	+8	07:34 - 08:00
12	CR		-9395	-9396	-1	15.0	15.0	0	899	904	-5	06:31 - 07:03
13	CR		-9407	-9395	+12	15.0	15.0	0	896	904	-8	06:22 - 06:53
14	CR		-9418	-9407	+11	15.0	15.0	0	901	904	-3	07:15 - 07:47
15	WS		-9428	-9418	+10	15.0	15.0	0	902	904	-2	07:17 - 08:17
16	YCP		-9430	-9428	+2	15.1	15.0	+0.66	902	904	-2	07:11 - 07:36
17	KK		-9442	-9430	+12	15.1	15.0	+0.66	899	904	-5	07:41 - 08:08
18	CR		-9438	-9442	-4	15.0	15.0	0	895	904	-9	07:17 - 07:50
19	CR		-9433	-9438	-5	15.0	15.0	0	904	904	0	06:28 - 07:01
20	CR		-9431	-9433	-2	15.1	15.0	+0.66	904	904	0	06:17 - 06:50
21	KR		-9448	-9431	+17	15.1	15.0	+0.66	903	904	-2	07:33 - 07:59
22	KK		-9453	-9448	+5	15.1	15.0	+0.66	904	904	0	07:17 - 07:43
23	KK		-9464	-9453	+11	15.0	15.0	0	903	904	-1	08:33 - 09:00
24	CR		-9460	-9464	4	15.0	15.0	0	905	904	+1	07:09 - 07:40
25	CR		-9469	-9460	9	15.1	15.0	+0.66	904	904	0	07:19 - 07:50
26	CR		-9470	-9469	1	15.0	15.0	0	906	904	+2	06:56 - 07:29
27	DR		-9478	-9470	8	15.2	15.0	+1.33	905	904	+1	07:00 - 07:27
28	DR		-9468	-9478	10	15.1	15.0	+0.66	905	904	+1	06:48 - 07:14
29	KK		-9498	-9468	+30	15.1	15.0	+0.66	903	904	-1	07:41 - 08:08
30	CR		-9497	-9498	1	15.1	15.0	+0.66	898	904	-6	07:07 - 07:38
31	CR		-9507	-9497	10	15.2	15.0	+1.33	898	904	-6	07:10 - 07:42

Notes:

1) Type of gas (SO <sub>2</sub> /O <sub>2</sub> )	Date Changed	Cylinder No.	ppm
SO <sub>2</sub>	12/18/07	0237736	904
O <sub>2</sub>	1/21/07	0237829	15.0
O <sub>2</sub>	5/26/07	0237819	15.0

2) |Ref Count Δ| ≤ 200

5) Note maintenance performed on separate sheet.

3) |O<sub>2</sub> % Error| ≤ 3%

4) |SO<sub>2</sub> Error| ≤ 25 ppm

I-SAP Daily SO2 Emissions Test Log for Month of MAY 07

Send copy of this document to Lab each month.

Day	Tech	Bottle Change (N)	Zero Ref Count	Prev Day Zero Ref Count	Ref Count Δ <sup>2</sup>	O <sub>2</sub> Sample	O <sub>2</sub> Reference	O <sub>2</sub> % Error <sup>3</sup>	SO <sub>2</sub> Sample	SO <sub>2</sub> Reference	SO <sub>2</sub> Error <sup>4</sup>	Span Test Period <sup>5</sup>
1	CR		-9322	-9301	21	15.1	15.0	+0.66	892	894	-2	07:16 - 07:42
2	JW		-9327	-9322	5	15.1	15.0	+0.66	897	894	+3	07:54 - 07:44
3	VK		-9355	-9327	28	15.0	15.0	0	896	894	+2	13:42 - 14:09
4	VK		-9329	-9355	26	15.1	15.0	+0.66	898	894	+4	7:33 - 7:59
5	VV		-9357	-9329	28	15.0	15.0	0	897	894	+3	9:27 - 9:53
6	CR		-9350	-9357	-7	15.1	15.0	+0.66	896	894	+2	06:41 - 07:07
7	WUB		-9354	-9350	4	15.2	15.0	1.33	903	894	+9	07:16 - 07:48
8	CR		-9341	-9354	13	15.1	15.0	+0.66	898	894	+4	08:11 - 08:42
9	VK		-9362	-9341	+21	15.0	15.0	0	893	894	+1	07:20 - 07:47
10	VK		-9396	-9362	+34	15.0	15.0	0	890	894	+4	07:24 - 07:51
11	VK		-9396	-9396	0	15.0	15.0	0	893	894	-1	07:34 - 08:00
12	CR		-9395	-9396	-1	14.9	15.0	-0.66	893	894	-1	06:31 - 07:03
13	CR		-9407	-9395	12	15.0	15.0	0	891	894	-3	06:22 - 06:53
14	CR		-9418	-9407	+11	15.0	15.0	0	893	894	-1	07:15 - 07:47
15	WS		-9428	-9418	+10	15.0	15.0	0	897	894	+3	07:15 - 08:17
16	YQ		-9430	-9428	+2	15.1	15.0	+0.66	896	894	+2	07:11 - 07:36
17	VK		-9442	-9430	+12	15.0	15.0	0	894	894	0	07:41 - 08:08
18	CR		-9438	-9442	-4	15.0	15.0	0	891	894	-3	07:17 - 07:50
19	CR		-9433	-9438	-5	15.1	15.0	+0.66	894	894	0	06:28 - 07:01
20	CR		-9431	-9433	-2	15.2	15.0	+1.33	897	894	+3	06:17 - 06:50
21	VK		-9448	-9431	+17	15.0	15.0	0	897	894	+3	07:33 - 07:59
22	VK		-9453	-9448	+5	15.0	15.0	0	897	894	+3	07:17 - 07:43
23	VK		-9464	-9453	+11	15.0	15.0	0	898	894	+4	08:33 - 09:00
24	CR		-9460	-9464	-4	15.0	15.0	0	898	894	+4	07:09 - 07:40
25	CR		-9469	-9460	9	15.1	15.0	+0.66	899	894	+5	07:19 - 07:50
26	CR		-9470	-9469	1	15.2	15.0	+1.33	896	894	+2	06:56 - 07:29
27	DR		-9478	-9470	8	15.2	15.0	+1.33	899	894	+5	07:00 - 07:27
28	DR		-9468	-9478	-10	15.2	15.0	+1.33	897	894	+3	06:48 - 07:14
29	VW		-9498	-9468	+30	15.1	15.0	+0.66	896	894	+2	07:41 - 08:08
30	CR		-9497	-9498	-1	15.1	15.0	+0.66	895	894	+1	07:07 - 07:38
31	CR		-9507	-9497	10	15.1	15.0	+0.66	891	894	-3	07:10 - 07:42

Notes:

1) Type of gas (SO <sub>2</sub> /O <sub>2</sub> )	Date Changed	Cylinder No.	ppm
SO <sub>2</sub>	1/21/07	CC150077	894
O <sub>2</sub>	3/5/07	CC237996	15.0

2) |Ref Count Δ| ≤ 200

5) Note maintenance performed on separate sheet.

3) |O<sub>2</sub> % Error| ≤ 3%

4) |SO<sub>2</sub> Error| ≤ 25 ppm





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CHECK WDPF System for alarm points with "Scan Removed" PROCEDURE:

1. Using the Data Analysis Maintenance Menu, select MENU, OPERATOR Programs, Point Search.
2. Select PROPERTIES, click SCAN REMOVED, Apply.
3. Select BEGIN.
4. Review the list of points that are off scan. If there is any point which might be questionable, then check with the I/E Wetside Supervisor.

NOTE: You may have the TG operator obtain the Scan Removed Report while you're performing the SO<sub>2</sub>/O<sub>2</sub> Emissions Span Tests.

Also: The WDPF System may require up to 5 minutes generating the report. The review may be performed from drop 200 if the TG operator's console is in use.

5. Confirm, below, SCAN REMOVED report has been generated

WDPF "ALARM SCAN REMOVED" REPORT LOG FOR MONTH OF MAY 07

DAY	TECH	DAY	TECH
1	DCR	16	Y.O
2	JOW	17	K.K
3	W	18	DCR
4	KK	19	DCR
5	W	20	DCR
6	DCR	21	K.K
7	PUB	22	K.K
8	DCR	23	K.K
9	KK	24	DCR
10	KK	25	DCR
11	KK	26	DCR
12	DCR	27	DR
13	DCR	28	DR
14	DCR	29	KK
15	WUB	30	DCR
		31	DCR