ADMINISTRATIVE OFFICES, LEGAL & WATER MANAGEMENT DIVISION
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WASTE MANAGEMENT DIVISION
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TELEPHONE (813) 272-7164

ENVIRONMENTAL PROTECTION COMMISSION of Hillsborough County

RECEIVED
FEB 18 2000
BUREAU OF AIR REGULATION

FAX Transmittal Sheet

DATE: 2-18-2000

TO: Al Linero

FAX Phone: _____ **Voice Phone:** _____

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FROM: Noel Morera
(Circle applicable section below)

Air Division

-Compliance -Enforcement/Analysis

-Monitoring/Toxics -Permitting

SPECIAL INSTRUCTIONS: _____

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WETLANDS MANAGEMENT DIVISION
TELEPHONE (813) 272-5104

MEMORANDUM

DATE: February 18, 2000

TO: Al Linero

FROM: Noel Morera NM, THRU: Richard C. Kirby IV, P.E.

SUBJECT: CF Industries Application for a 20% Production Increase

The Environmental Protection Commission of Hillsborough County (EPC) has completed its review of the application received on January 19, 2000. The EPC has the following comments regarding this application:

1. C F Industries should look at the emissions changes up steam and down stream of the phosphoric acid plants and take these changes into account when determining how their emissions will be effected relating to PSD issues.
2. There is a new NESHAP for Phosphoric Acid Manufacturing and Phosphate Fertilizers Production (40 CFR Part 63, Subpart AA & BB, or 64FR31358) finalized on June 10, 1999. It appears that CF Industries may be subject to the new MACT.
3. Attachment 2 Table 5 of the permit application seems to predict that the higher the production rate of P_2O_5, the lower the scrubber outlet F lb./ton P_2O_5 will be. However, the actual test data for the June 21, 1999 test shows that when the unit was tested at 86.3 and 96.8 TPH P_2O_5 (input) the emissions increased from .004 to .006 lbs. F/ ton P_2O_5 (input). The evaluation of scrubber performance submitted by CF Industries therefore seems to operate contrary what the test data for this source shows. (see the attached sheets)

STR. UE
MO

P.O. Drawer L.
Plant City, Florida 33564-9005
Telephone: 813/782-1591

CF Industries, Inc.
Plant City Phosphate Complex

June 21, 1999

RECEIVED
JUL 06 1999
EPC of HC
AIR MANAGEMENT

Mr. Jerry Kissel
Florida Department of
Environmental Protection
3804 Coconut Palm Drive
Tampa, FL 33619-8318

SUBJECT: COMPLIANCE TEST - "B" PAP
Permit No. 0570005-007-AV
Emission Unit 009

Dear Mr. Kissel:

Enclosed are duplicate copies of the two recent compliance tests conducted at CF Industries, Inc., Plant City Phosphate Complex, on "B" Phosphoric Acid Plant. The tests were performed in accordance with "Specific Conditions 12 through 17" of Air Permit No. 0570005-007-AV, and at the rates specified in FDEP's letter dated May 26, 1999 (see Attachment 1).

In addition to the two compliance tests, CFII staff has enclosed copies of two preliminary test runs conducted on June 3, 1999, at 10% above the permitted rate, and June 4, 1999, at the permitted rate (see Attachment 2).

If there are any questions concerning the results, please give Michael Messina a call at 813-782-1591, ext. 290.

Sincerely,

J. Michael Messina
for TAE

T.A. Edwards,
Superintendent, Environmental Affairs

TAE/JHF/gm
u:\envrpt\225960.doc
Enclosures

cc: J.M. Messina
T.V. Ortoski
Sterlin Woodard/HCEPC

NEDS No. 005-09
LETTER MAILED 8-10-99
ARMS 8-1-99
TESTBANK
REVIEWED BY MO

B PAP

Permit No. 0570005-007-AV
Emission Unit 009

RUN NUMBER	1	1
DATE	03-Jun-99	04-Jun-99
TIME START	1:45 PM	10:33 AM
TIME END	2:55 PM	11:45 AM
BP, INCHES Hg	30.05	30.03
STACK PRESSURE, INCHES Hg	30.10	30.09
AVG.SQ.ROOT(VEL. HEAD) IN Hg	0.6650	0.6550
ORIFICE PRESS. OF METER, IN WATER	2.5400	2.4400
AVG STACK ,F	126.5	120.5
STACK, DRY BULB	126.5	120.5
METER TEMPERATURE, F	101.5	97.8
VOL. OF GAS, DM CONDITIONS, FT3	40.714	39.777
VOL. GAS, STP, DRY COND. FT3	38.690	38.016
STACK GAS MOISTURE, % VOLUME	10.23	8.81
MW OF STACK GAS, DRY COND.	28.85	28.85
MW OF STACK GAS, STACK COND.	27.74	27.89
PITOT CORRECTION FACTOR	0.84	0.84
STACK GAS VELOCITY, STACK COND. FT3/SEC	40.02	39.11
STACK AREA, FT2	12.566	12.566
EFFECTIVE STACK AREA, FT2	12.566	12.566
STACK GAS FLOW-RATE AT STP, SCFMD	24530	24599
NET TIME OF TEST, MINUTES	60	60
SAMPLE NOZZLE AREA, FT2	0.000325	0.000325
PERCENT ISOKINETIC	101.7	99.6
FLUORIDE, MG.	6.44	4.40
FLUORIDE, LB/HR	0.54	0.38
FLUORIDE, LB/DAY	12.94	9.02
FLUORIDE, LB/HR. LIMIT	**1.04**	**1.04**
FLUORIDE, LB/DAY LIMIT	**24.9**	**24.9**
PRODUCTION RATE, TPH P2O5 INPUT	96.8	86.3
PRODUCTION RATE, TPH LIMIT	**97.0**	**87.8**
PRODUCTION RATE, TPD P2O5 INPUT	2323	2071
PRODUCTION RATE, TPD LIMIT	**2328**	**2107**
PHOSPHATE ROCK SLURRY, TPH	478.74	437.02
100 % SULFURIC ACID, TPH	258.02	232.64
WATER, TPH	19.04	16.97
LBS F/TON OF P2O5 (INPUT) $\frac{25.8 \text{ TPH}}{2323 \text{ TPD}} \times .006 = .0065$	0.006	0.004
LBS F/TON OF P2O5 LIMIT	**0.02**	**0.02**
VISIBLE EMISSIONS	0%	
VISIBLE EMISSIONS LIMIT	**20%**	

Table 5 – 'B' PAP Fume Scrubber Predicted Performance at various NTU Assumptions

Production Rate TPD P_2O_5	F lb/day @ 1.2 lb/ton P_2O_5	Air Flow CFM	Temperature °F	Air Flow SCFM	F lb/day	Combined Air Flow SCFM	F Inlet Loading mg/SCF Combined Fumes	F lb/ton P_2O_5	NTU	Scrubber Outlet F mg/CF	Scrubber Outlet F lb/day	Scrubber Outlet F lb/ton P_2O_5
2107	2,661	20,499	Assumed 176	17,018	2,795	36,568	24.08	1.26	6	0.16	14.0	0.0053
2318	2,928	20,499	Assumed 176	17,018	3,062	36,568	26.38	1.25	6	0.16	14.5	0.0050
2528	3,193	20,499	Assumed 176	17,018	3,327	36,568	28.66	1.25	6	0.17	15.0	0.0047
2107	2,661	20,499	176	17,018	2,795	36,568	24.08	1.26	6.5	0.14	11.9	0.0045
2318	2,928	20,499	176	17,018	3,062	36,568	26.38	1.25	6.5	0.14	12.3	0.0042
2528	3,193	20,499	176	17,018	3,327	36,568	28.66	1.25	6.5	0.14	12.6	0.0039
2107	2,661	20,499	176	17,018	2,795	36,568	24.08	1.26	7	0.12	10.7	0.0040
2318	2,928	20,499	176	17,018	3,062	36,568	26.38	1.25	7	0.12	10.9	0.0037
2528	3,193	20,499	176	17,018	3,327	36,568	28.66	1.25	7	0.13	11.1	0.0035
2107	2,661	20,499	176	17,018	2,795	36,568	24.08	1.26	7.5	0.11	9.9	0.0037
2318	2,928	20,499	176	17,018	3,062	36,568	26.38	1.25	7.5	0.11	10.0	0.0034
2528	3,193	20,499	176	17,018	3,327	36,568	28.66	1.25	7.5	0.11	10.2	0.0032
2107	2,661	20,499	Assumed 176	17,018	2,795	36,568	24.08	1.26	8	0.11	9.5	0.0036
2318	2,928	20,499	Assumed 176	17,018	3,062	36,568	26.38	1.25	8	0.11	9.5	0.0033
2528	3,193	20,499	Assumed 176	17,018	3,327	36,568	28.66	1.25	8	0.11	9.6	0.0030