June 2, 1992

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Division of Air
Resources Management

Mr. Carlos Gonzalez,
Air Permit Engineer
Hillsborough County Environmental
Protection Commission
1410 N. 21st Street
Tampa, Florida 33605

Subject: Hillsborough County - AP Der File No. AC29-210979 (X-Train Cooler Installation)

Dear Mr. Gonzalez:

In response to your letter of April 21, 1992, the following is offered to answer your questions:

1. **Explain why NSPS for the DAP production does not apply (Section II:G4. of the application). It should be noted that the Y-Train (AO29-181935) is subject to the NSPS rules for DAP production.**

CFII agrees to accept NSPS for the DAP production on X-Train the same as on Y-Train.

2. **Pursuant to Rule 17-2.600(3) (a)9.,FAC, a BACT determination is required. Please provide the proposed fluoride emission limit for MAP production for our review.**

The existing permit AC29-167059 contains limits for production of DAP/MAP and GTSP. DAP/MAP limits are .06 pounds of F per ton of P_2O_5 input to the plant. This was determined to be BACT on the Y-Train and should not be different for X-Train since the plants are identical. BACT for MAP should be the same regardless of what plant it is produced in.

3. **Explain further how each of the actual emissions limits in Section III:c were derived. What will be each of the new proposed actual (allowable) emissions? With this information, the FDER and the EPCHC can determine if NSR for particulate matter emissions and PSD for fluoride emissions are triggered.**

The maximum lbs/hr emissions are the highest emission taken from past compliance tests. The actual tons per year are based on the 1991 compliance tests and uses the hours of operation during the year to calculate tons. These are the numbers reported in the annual operating report for 1991. The allowed emission rate per Ch.17-2 F.A.C. for fluorides is taken from F.A.C.17-2.600(3)a. For GTSP the allowable is 0.15 lbs/ton of P_2O_5 input to the unit. For DAP the allowable is 0.06 lbs/ton of P_2O_5 input to the unit. The allowable emission for MAP was determined by BACT when Y-Train was permitted for the addition of the cooler. Once

BACT is determined for a process it should be the same for other units using the same process. This was determined to be the same as for DAP or 0.06 lbs/ton P_2O_5 input.

The allowed emission for particulate was established years ago when CF Industries modeled the allowed particulate emissions at the time to exempt the complex from the requirements of RACT and showed no effect on the non-compliance area for particulate matter in Tampa.

The allowable particulate emissions in lbs/hr are taken from the present permit # AO29-167059. These are based on the allowed emissions by F.A.C. 17-2.600(3)a. at the previous production rate of 75 tons of product /hr for DAP and MAP. Particulates are based on the previous modeling done as mentioned above.

Since this is an existing source and no emissions increase is being proposed the allowable emissions should not change, particularly since the plant is already permitted for this emission. NSR for particulate matter and PSD for fluoride emissions should not be triggered as these are presently allowable.

4. Explain why the proposed limits for particulate matter emissions are different than the Y-Train.

The proposed emission limit for particulate matter is taken from the present existing permit and no increase is proposed. With no increase in emissions the addition of a cooler is not a modification by the definition of modification and emissions allowed should not change. Even though X-Train and Y-Train are identical units the emissions should be based on present allowable emissions.

5. Explain why the dryer heat input for this project is different than the Y-Train (49.5MMBTU/hr. vs. 45 MMBTU/hr.). It should be noted that the renewal application for the X-Train (6/20/89) states 49.7 MMBTU/hr.

The heat input for the dryer should be 49.5 MMBTU/hr the same as Y-Train. The 45MMBTU/hr is an error in the X-Train application.

6. Provide the manufacturer name, model number and specifications for the following:
a) the cooler
b) cooler cyclones
c) cooler scrubber
d) cooler scrubber fan.

These are not available at this time since the contract for the addition has not been awarded. These will be provided whenever they become available.

Department of Environmental Regulation

Routing and Transmittal Slip

To: (Name, Office, Location)

1. ~~Preston~~
2. ~~Bruce~~ Willard Can we discuss?
3. Please Keep, 2 lunches Preston
4. ASR 6/5/92

Remarks:

Jim McDonald, SW District, will have a teleconference at 10 AM Tuesday (6/9/92) to discuss proposed CF Chemical plant modification. Wants someone BAR in on it.

From	Date 6-4-92
MMR	Phone

7. Explain why in the schematic (CF Industries Drawing No. 5.1-F-001) shows that the input rate to the cooler is 85 TPH but the application states 100 TPH.

The 100 TPH stated in the application is the maximum production rate for the unit and is the maximum rate the plant will run. The 85 TPH on the schematic is the nominal flow rate used for design purposes.

8. Does the stack geometry and flow data in Section III:H. of the application include the cooler discharge?

Yes.

9. If NSPS for the DAP production is triggered, explain how the facility will comply with the requirements of 40 CFR 60.223(a), (b), (c).

Compliance will be exactly as is presently done on Y-Train. Flow meters are installed on both the acid and ammonia feeds to the unit. These are recorded hourly on the operator's log sheet. Samples of the acid feed to the process are taken hourly and sent to the laboratory every eight hours for analysis. Instruments would be installed to comply with 40CFR 60.223(c) as has been done on Y-Train.

10. Submit the <u>design</u> information necessary for the FDER and the EPCHC to write a condition similar to Specific Condition No. 15 for the Y-Train (AO29-181935).

The design and operating parameters for X-Train are exactly the same as for Y-Train. Therefore Specific Condition No. 15 would be the same as for Y-Train. The only possible exception would be for the new equipment associated with the cooler. Since the contract has not been awarded, this cannot be determined until that time. This will be supplied to you when available but is not expected to be different from Y-Train.

X DAP PERMIT NUMBER A029-167059

RUN NUMBER	1	2	3	1	2	3	1	2	3	1	2	3
DATE	27-Oct-87	27-Oct-87	27-Oct-87	20-Apr-88	20-Apr-88	20-Apr-88	18-Oct-89	18-Oct-89	18-Oct-89	18-Apr-89	18-Apr-89	18-Apr-89
TIME START	11:15 AM	12:52 PM	2:30 PM	10:30 AM	12:05 PM	1:40 PM	10:40 AM	12:25 PM	2:12 PM	10:30 AM	12:08 PM	1:35 PM
TIME END	12:25 PM	2:00 PM	3:36 PM	11:40 AM	1:15 PM	2:50 PM	11:55 AM	1:35 PM	3:23 PM	11:40 AM	1:15 PM	2:45 PM
BP, INCHES Hg	30.05	30.3	30.01	29.96	29.96	29.94	30.14	30.09	30.04	30.11	30.11	30.07
STACK PRESSURE, INCHES Hg	30.06	30.04	30.2	29.97	29.97	29.95	30.15	30.1	30.05	30.12	30.12	30.08
AVG.SQ.ROOT(VEL. HEAD) IN Hg	0.4668	0.4501	0.4351	0.5139	0.4909	0.4815	0.4901	0.4815	0.4875	0.461	0.456	0.457
ORIFICE PRESS. OF METER, IN WATER	1.16	1.22	1.18	1.59	1.37	1.39	1.3	1.26	1.21	1.064	1.037	1.024
AVG STACK ,F	139.8	141.8	141.7	146.7	128.5	127.6	141.8	141.8	142.4	135.5	134.9	134.9
STACK, DRY BULB	139.8	141.8	141.7	146.7	128.5	127.6	141.8	141.8	142.4	135.5	134.9	134.9
METER TEMPERATURE, F	96.8	105.5	106.5	89.5	100.6	104.6	100	104.9	108.3	97.8	97.7	101.5
VOL. OF GAS, DM CONDITIONS, FT3	34.403	35.358	34.821	42.156	39.907	39.844	39.319	38.717	37.943	35.813	35.554	35.274
VOL. GAS, STP, DRY COND. FT3	33.088	33.466	32.875	40.597	37.65	37.301	37.775	36.81	35.794	34.632	34.197	33.653
STACK GAS MOISTURE, % VOLUME	16	17.3	17.6	16.9	16.2	17.9	18.26	18.81	18.89	17.21	17.64	17.5
MW OF STACK GAS, DRY COND.	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74
MW OF STACK GAS, STACK COND.	27.02	26.88	26.85	26.93	27	26.81	26.78	26.72	26.71	26.89	26.85	26.86
PITOT CORRECTION FACTOR	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
STACK GAS VELOCITY, STACK COND. FT3/SEC	28.8	27.9	26.99	31.99	30.06	29.57	30.37	29.9	30.32	28.38	28.08	28.16
STACK AREA, FT2	66	66	66	66	66	66	66	66	66	66	66	66
EFFECTIVE STACK AREA, FT2	66	66	66	66	66	66	66	66	66	66	66	66
STACK GAS FLOW-RATE AT STP, SCFMD	84725	80504	77585	91814	89681	86438	86942	84882	85757	83051	81839	82076
NET TIME OF TEST, MINUTES	60	60	60	60	60	60	60	60	60	60	60	60
SAMPLE NOZZLE AREA, FT2	0.000458	0.000458	0.000458	0.000469	0.000469	0.000469	0.000452	0.000452	0.000452	0.000452	0.000452	0.000452
PERCENT ISOKINETIC	93.3	99.3	101.2	104.2	99	101.7	105.1	104.9	101	100.9	101.1	99.2
FLUORIDE, MG.	0.12	0.13	0.16	0.9	1.05	1.25	1.87	2.36	2.38	3.05	3.81	2.23
FLUORIDE, LB/HR	0.04	0.04	0.05	0.27	0.33	0.38	0.57	0.72	0.75	0.97	1.2	0.72
FLUORIDE, LB/DAY	1	1	1.2	6.5	7.9	9.2	13.6	17.2	18.1	23.2	28.9	17.2
AMMONIA, MG	1.7	0.73	0.85	13	3.1	2.5	1.85	1.6	1.32	1.45	1.47	1.17
AMMONIA, LB/HR	0.57	0.23	0.26	3.88	0.97	0.76	0.56	0.49	0.42	0.46	0.46	0.38
AMMONIA, LB/DAY	13.8	5.6	6.4	93.1	23.4	18.4	13.5	11.7	10	11	11.1	9
PARTICULATE, MG.	17	5.1	7.2	31.3	10.9	7.9	33.7	18.1	14.2	12.6	15.6	13.6
PARTICULATE, LB/HR	5.75	1.62	2.24	9.34	3.43	2.42	10.2	5.5	4.5	3.99	4.93	4.38
PARTICULATE, LB/DAY	137.9	38.9	53.8	224.3	82.3	58	245.7	132.2	107.8	95.7	118.3	105.1
PRODUCTION RATE TPH P205	38.6	38.6	38.6	36.9	36.9	36.9	38	38	38	36.8	36.8	36.8

DAP

1	2	3	1	2	3	1	2	3	4	
24-Oct-89	24-Oct-89	24-Oct-89	20-Jun-90	20-Jun-90	20-Jun-90	09-Apr-91	09-Apr-91	09-Apr-91	09-Apr-91	AVERAGE
11:32 am	1:09 pm	2:40 pm	10:24 am	12:02 pm	1:34 pm	10:35 AM	12:20 PM	2:15 PM	3:55 PM	ALL RESULT
12:43 pm	2:18 pm	3:46 pm	11:35 am	1:10 pm	2:40 pm	11:50 AM	1:40 PM	3:30 PM	5:05 PM	
30.19	30.14	30.11	30	30.01	29.99	30.12	30.1	30.05	30.04	30.07
30.19	30.14	30.11	30	30.01	29.99	30.13	30.11	30.06	30.05	30.07
0.443	0.456	0.445	0.448	0.491	0.487	0.4893	0.507	0.5094	0.5239	0.48
1.125	1.227	1.156	0.965	0.976	0.943	0.997	0.973	0.8908	0.9392	1.14
134.9	136.9	139.1	137.3	137.7	136.6	142.3	143.1	143.8	142.1	138.69
134.9	136.9	139.1	137.3	137.7	136.6	142.3	143.1	143.8	142.1	138.69
93.7	95.2	99.3	109.9	115.4	117.9	103.1	107.6	107.7	110.8	103.38
35.757	37.167	36.209	33.342	33.567	32.916	34.842	34.16	32.95	33.9	36.09
34.419	35.629	34.416	31.376	31.3	30.535	33.068	32.14	30.939	31.649	34.24
19.08	15.82	16.62	21.71	21.05	21.23	22.04	21.88	22.42	22.29	18.83
28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74
26.69	27.04	26.96	26.41	26.48	26.46	26.37	26.39	26.33	26.35	26.72
0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
27.33	28.02	27.45	30.43	30.55	30.33	30.59	31.72	31.95	32.81	29.62
66	66	66	66	66	66	66	66	66	66	66.00
66	66	66	66	66	66	66	66	66	66	66.00
78434	83237	80397	83602	84633	83921	83363	86445	86219	88912	84293.50
60	60	60	60	60	60	60	60	60	60	60.00
0.000468	0.000468	0.000468	0.000387	0.000387	0.000387	0.00039	0.00039	0.00039	0.00039	0.00044
103.4	100.8	100.8	105.8	104.3	102.6	111.7	104.7	101	100.2	102.10
1.33	0.98	0.54	0.96	0.81	0.82	1.01	0.94	0.51	0.57	1.26
0.4	0.3	0.17	0.34	0.29	0.3	0.34	0.33	0.19	0.21	0.41
9.6	7.3	4	8.1	6.9	7.1	8.1	8	4.5	5.1	9.71
13.5	0.8	0.9	1.4	1	0.8	6.6	1.9	2.7	2.4	2.85
4.06	0.25	0.28	0.49	0.36	0.29	2.2	0.67	0.99	0.89	0.91
97.5	5.9	6.7	11.8	8.6	7	52.7	16.2	23.8	21.4	21.75
11.6	11	7.3	2.9	1.7	0.8	5.8	6.7	4.5	7.5	11.23
3.49	3.39	2.25	11.61	5.92	6.68	1.93	2.38	1.66	2.78	4.56
83.7	81.4	54	278.6	142.2	160.2	46.3	57.1	39.7	66.8	109.55
			38.5	38.5	38.5	42.4	42.4	42.4	42.4	38.74

X TRAIN GTSP PERMIT NUMBER A029-167059

RUN NUMBER	1	2	3	1	2	3	1	2	3	1	2
DATE	24-Apr-84	24-Apr-84	24-Apr-84	28-Dec-84	28-Dec-84	28-Dec-84	23-Apr-85	23-Apr-85	23-Apr-85	29-Oct-85	29-Oct-85
TIME START	10:20 AM	12:45 PM	3:00 PM	11:00 AM	12:30 PM	2:00 PM	9:20 AM	11:00 AM	12:40 PM	9:20 AM	11:05 AM
TIME END	11:40 AM	2:00 PM	4:10 PM	12:10 PM	1:45 PM	3:15 PM	10:40 AM	12:10 PM	1:50 PM	10:40 AM	12:15 PM
BP, INCHES Hg	29.98	29.97	29.98	30.37	30.31	30.29	30.08	30.06	30.04	29.79	29.78
STACK PRESSURE, INCHES Hg	29.99	29.98	29.99	30.38	30.32	30.3	30.09	30.07	30.05	29.8	29.79
AVG.SQ.ROOT(VEL. HEAD) IN Hg	0.4542	0.4589	0.4517	0.4678	0.4757	0.4713	0.4548	0.4504	0.4395	0.4609	0.4638
ORIFICE PRESS. OF METER, IN WATER	1.1	1.12	1.08	1.28	1.32	1.29	1.67	1.63	1.57	1.5	1.54
AVG STACK ,F	113.6	115.1	116.9	102.9	104	104.4	101.9	130.8	103.4	105.5	103.7
STACK, DRY BULB	113.6	115.1	116.9	102.9	104	104.4	101.9	103.8	103.4	105.5	103.7
METER TEMPERATURE, F	98	105.7	109.4	89.5	91.4	92.8	89.8	99.5	101	100.9	106.5
VOL. OF GAS, DM CONDITIONS, FT3	35.548	36.607	35.718	35.187	35.839	35.443	39.044	40.002	39.202	39.173	40.067
VOL. GAS, STP, DRY COND. FT3	33.795	34.319	33.275	34.287	34.737	34.241	37.472	37.697	36.814	37.15	37.61
STACK GAS MOISTURE, % VOLUME	9.37	9.02	9.36	9.24	9.82	9.82	9.78	10.46	10.51	11.11	10.74
MW OF STACK GAS, DRY COND.	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74
MW OF STACK GAS, STACK COND.	27.73	27.77	27.73	27.75	27.68	27.69	27.69	27.62	27.61	27.55	27.59
PITOT CORRECTION FACTOR	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
STACK GAS VELOCITY, STACK COND. FT3/SEC	27.08	27.39	27.01	27.45	27.68	27.69	26.82	26.65	26	27.47	27.58
STACK AREA, FT2	66	66	66	66	66	66	66	66	66	66	66
EFFECTIVE STACK AREA, FT2	66	66	66	66	66	66	66	66	66	66	66
STACK GAS FLOW-RATE AT STP, SCFMD	89686	90764	88942	93954	94850	93914	90543	88926	86736	89917	90924
NET TIME OF TEST, MINUTES	60	60	60	60	60	60	60	60	60	60	60
SAMPLE NOZZLE AREA, FT2	0.000421	0.000421	0.000421	0.000409	0.000409	0.000409	0.000465	0.000465	0.000465	0.00043	0.00043
PERCENT ISOKINETIC	98.5	98.8	97.8	98.5	98.9	98.4	98.8	101.2	101.3	105	105.1
FLUORIDE, MG.	0.88	0.7	0.74	0.46	0.44	0.44	1.65	1.77	2.3	0.62	0.6
FLUORIDE, LB/HR	0.31	0.24	0.26	0.17	0.16	0.16	0.53	0.55	0.73	0.2	0.19
FLUORIDE, LB/DAY	7.4	5.87	6.27	4.1	3.8	3.8	12.6	13.2	17.5	4.8	4.6
		RATIO X 1.25		5.1	4.8	4.8					RATIO X 1.
PARTICULATE, MG.	36.9	7.7	6.7	10.1	12.9	13.3	17.6	22.3	15.1	10.4	12.5
PARTICULATE, LB/HR	12.93	2.69	2.36	3.65	4.65	4.82	5.61	6.94	4.7	3.32	3.99
PARTICULATE, LB/DAY	310.2	64.5	56.7	87.7	111.6	115.6	134.7	166.7	112.7	79.8	95.7
		RATIO X 1.25		109.6	139.5	144.5					RATIO X 1.
PRODUCTION RATE TPH P205 INPUT	26.2	26.2	26.2	20.2	20.2	20.2	23.3	23.3	23.3	21.32	21.32

GTSP

3	1	2	3	1	2	3	1	2	3	1	2	3	
29-Oct-85 12:35 PM 1:45 PM	29-Oct-85 10:25 AM 11:34 AM	29-Apr-86 12:25 PM 1:35 PM	30-Apr-86 10:09 AM 11:17 AM	21-Oct-86 11:50 AM 1:15 PM	21-Oct-86 1:50 PM 3:10 PM	21-Oct-86 3:35 PM 4:50 PM	9/12/90 10:57 am 12:05 pm	9/12/90 12:37 pm 1:43 pm	9/12/90 2:03 pm 3:09 pm	2/12/91 11:03 am 12:13 pm	2/12/91 12:52 pm 2:00 pm	2/12/91 2:27 pm 3:35 pm	AVERAGE ALL RESULT
29.96	30.12	30.09	30.11	30.19	30.15	30.12	30.04	30.02	29.99	30.23	30.2	30.14	30.08
29.97	30.13	30.1	30.12	30.2	30.16	30.13	30.05	30.04	29.99	30.22	30.19	30.13	30.09
0.4682	0.5856	0.5892	0.5835	1.63	1.6	1.56	0.5853	0.5839	0.582	0.534	0.532	0.535	0.64
1.55	2.43	2.43	2.42	0.4858	0.4819	0.4742	1.6708	1.6567	1.655	1.235	1.225	1.218	1.42
103.5	106.1	103.6	104.2	91.1	91.4	92	117.8	117.9	117	104.7	105.5	105.7	106.78
103.5	106.1	103.6	104.2	91.1	91.4	92	117.8	117.9	117	104.7	105.5	105.7	105.65
107.2	92	100.1	93.8	88.2	89.5	92.5	98.4	101.5	103.1	84.2	85.6	88.6	96.22
40.364	47.361	48.301	48.281	42.459	42.309	41.984	44.164	44.24	44.25	38.822	37.91	38.175	40.44
38.07	46.242	46.432	46.971	41.303	40.867	40.423	42.23	42.02	41.87	38.363	37.241	37.222	38.78
10.27	11.7	12.1	12	8.85	8.07	8.09	11.6	11.66	11.12	10.21	10.83	11.02	10.28
28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74	28.74
27.64	27.48	27.44	27.45	27.79	27.87	27.87	27.49	27.49	27.55	27.64	27.58	27.56	27.64
0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
27.73	34.77	34.95	34.61	28.27	28.07	27.61	35.14	35.09	34.92	31.52	31.48	31.7	29.78
66	66	66	66	66	66	66	66	66	66	66	66	66	66.00
66	66	66	66	66	66	66	66	66	66	66	66	66	66.00
92474	114178	114464	113612	98667	98310	96780	112923	112519	112767	105875	104750	105039	99229.75
60	60	60	60	60	60	60	60	60	60	60	60	60	60.00
0.00043	0.000449	0.000449	0.000449	0.000437	0.000437	0.000437	0.000392	0.000392	0.000392	0.000383	0.000383	0.000383	0.000423
104.6	98.6	98.6	100.6	105.7	105	105.5	104.7	104.5	103.9	102.4	101.9	101.5	101.66
0.44	1.7	1.78	1.15	2.11	1.58	1.6	1.425	0.652	0.622	0.64	0.74	0.66	1.07
0.14	0.55	0.58	0.37	0.67	0.5	0.51	0.5	0.23	0.22	0.24	0.27	0.25	0.36
3.4	13.3	13.9	8.8	16.1	12	12.1	12.1	5.5	5.3	5.7	6.6	5.9	8.53
25	15.6	16.4	10.4										
10.4	21.6	15.7	17.1	28	26.4	7.9	26.4	19.9	20.1	16.7	13.6	15.5	16.87
3.33	7.04	5.12	5.46	8.83	8.38	2.5	9.32	7.03	7.15	6.17	5.05	5.77	5.70
80	169	122.8	131	211.9	201.2	59.9	223.7	168.8	171.5	148.1	121.2	138.6	136.82
25	198.8	144.5	154.5										
21.32	20	20	20	21.7	21.7	21.7	23.3	23.3	23.3	21	21	21	22.13

07-13-92
14:15:30

BEST AVAILABLE COPY

*** SCREEN-1.1 MODEL RUN ***
*** VERSION DATED 88300 ***

C F Industries MAP Plant (X-train) Modifiction

July, 1992

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	.2800
STACK HEIGHT (M)	=	54.90
STK INSIDE DIAM (M)	=	2.80
STK EXIT VELOCITY (M/S)	=	13.40
STK GAS EXIT TEMP (K)	=	333.00
AMBIENT AIR TEMP (K)	=	293.00
RECEPTOR HEIGHT (M)	=	.00
IOPT (1=URB,2=RUR)	=	2
BUILDING HEIGHT (M)	=	.00
MIN HORIZ BLDG DIM (M)	=	.00
MAX HORIZ BLDG DIM (M)	=	.00

BUOY. FLUX = 30.94 M**4/S**3; MOM. FLUX = 309.66 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	0	.0	.0	.0	.0	.0	.0	
100.	.6428E-10	5	1.0	1.8	5000.0	131.4	18.1	17.4	NO
200.	.2092E-02	1	3.0	3.4	960.0	138.1	52.0	32.7	NO
300.	.1811	1	3.0	3.4	960.0	138.1	74.2	51.1	NO
400.	.6721	1	3.0	3.4	960.0	138.1	95.5	74.8	NO
500.	.9300	1	3.0	3.4	960.0	138.1	115.5	107.3	NO
600.	1.055	1	1.0	1.1	320.0	304.4	150.8	169.6	NO
700.	1.525	1	1.0	1.1	320.0	304.4	168.2	224.9	NO
800.	1.615	1	1.0	1.1	320.0	304.4	185.6	291.8	NO
900.	1.521	1	1.0	1.1	320.0	304.4	203.1	370.1	NO
1000.	1.405	1	1.0	1.1	320.0	304.4	220.5	459.4	NO
MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:									
780.	1.619	1	1.0	1.1	320.0	304.4	182.3	278.2	NO

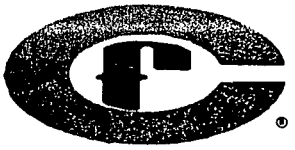
DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

Import Estimates
1 hr 1.62 ug/m³
8 hr 1.13
24 hr 0.65
annual 0.16

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	1.619	780.	0.

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



CF Industries, Inc.
Plant City Phosphate Complex

July 6, 1992

Mr. Carlos Gonzalez,
Air Permit Engineer
Hillsborough County Environmental
Protection Commission
1410 N. 21st Street
Tampa, Florida 33605

Subject: Hillsborough County - AP Der File No. AC29-210979 (X-Train Cooler Installation)

Dear Mr. Gonzalez:

In response to your letter of April 21, 1992, the following is offered to answer your questions:

1. **Explain why NSPS for the DAP production does not apply (Section II:G4. of the application). It should be noted that the Y-Train (AO29-181935) is subject to the NSPS rules for DAP production.**

CFII agrees to accept NSPS for the DAP production on X-Train the same as on Y-Train.

2. **Pursuant to Rule 17-2.600(3) (a)9.,FAC, a BACT determination is required. Please provide the proposed fluoride emission limit for MAP production for our review.**

The existing permit AC29-167059 contains limits for production of DAP/MAP and GTSP. DAP/MAP limits are .06 pounds of F per ton of P_2O_5 input to the plant. This was determined to be BACT on the Y-Train and should not be different for X-Train since the plants are identical.

3. **Explain further how each of the actual emissions limits in Section III:c were derived. What will be each of the new proposed actual (allowable) emissions? With this information, the FDER and the EPCHC can determine if NSR for particulate matter emissions and PSD for fluoride emissions are triggered.**

After discussions with DER, Tallahassee, and at their suggestions, the actual and potential emissions have been recalculated. A tabulation of actual and potential emissions is attached as Attachment 1. These are based on the highest stack result for both fluorides and particulates. From actual operating hours for the year, the tons per year emitted were calculated. These were used to calculate the proposed potential emissions by adding 2.9 tons per year to the fluorides and 14.9 tons per year to the particulate emissions to arrive at the total tons per year potential emissions. From this the pounds per hour and pounds per ton was calculated for each pollutant. These are less than the significant emission rate increase and therefore would not trigger NSR or PSD.

4. Explain why the proposed limits for particulate matter emissions are different than the Y-Train.

The proposed emission limit for particulate matter based on Attachment 1 is based on the highest actual emission plus 14.9 tons per year increase.

5. Explain why the dryer heat input for this project is different than the Y-Train (49.5MMBTU/hr. vs. 45 MMBTU/hr.). It should be noted that the renewal application for the X-Train (6/20/89) states 49.7 MMBTU/hr.

The heat input for the dryer should be 49.5 MMBTU/hr the same as Y-Train. The 45MMBTU/hr is an error in the X-Train application.

6. Provide the manufacturer name, model number and specifications for the following:
a) the cooler
b) cooler cyclones
c) cooler scrubber
d) cooler scrubber fan.

These are not available at this time since the contract for the addition has not been awarded. These will be provided whenever they become available.

7. Explain why in the schematic (CF Industries Drawing No. 5.1-F-001) shows that the input rate to the cooler is 85 TPH but the application states 100 TPH.

The 100 TPH stated in the application is the maximum production rate for the unit and is the maximum rate the plant will run. The 85 TPH on the schematic is the nominal flow rate used for design purposes.

8. Does the stack geometry and flow data in Section III:H. of the application include the cooler discharge?

Yes.

9. If NSPS for the DAP production is triggered, explain how the facility will comply with the requirements of 40 CFR 60.223(a), (b), (c).

Compliance will be exactly as is presently done on Y-Train. Flow meters are installed on both the acid and ammonia feeds to the unit. These are recorded hourly on the operator's log sheet. Samples of the acid feed to the process are taken hourly and sent to the laboratory every eight hours for analysis. Instruments would be installed to comply with 40CFR 60.223(c) as has been done on Y-Train.

10. Submit the <u>design</u> information necessary for the FDER and the EPCHC to write a condition similar to Specific Condition No. 15 for the Y-Train (AO29-181935).

The design and operating parameters for X-Train are exactly the same as for Y-Train. Therefore Specific Condition No. 15 would be the same as for Y-Train. The only possible exception would be for the new equipment associated with the cooler. Since the contract has not been awarded, this cannot be determined until that time. This will be supplied to you when available but is not expected to be different from Y-Train.

Sincerely,

JE Parsons/RJ Fischer

J.E. Parsons
General Manager

JEP/CJM/tjj

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

CF Industries, Inc.
Plant City Phosphate Complex

July 9, 1992

Mr. C. H. Fancy, PE
Deputy Chief
Bureau of Air Quality Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: BACT Determination for Cooler Addition to "X" Train

Dear Mr. Fancy:

CF Industries, Inc. has been working with the Southwest District and Hillsborough County EPC for a construction permit to add a product cooler to our "X" Train DAP/MAP/GTSP plant. Per our discussion with Willard Hanks and at the request of the Southwest District and Hillsborough County, information given them today (7/8/92) is attached along with a previous BACT determination done for our "Y" Train, which is identical to the change on "X" Train. We request that a BACT determination be done for our "X" Train.

Your expeditious handling of this request will be appreciated since construction is scheduled to begin in September.

If there are any additional questions, please contact Jim Martin at 813-782-1591.

Sincerely,

J. E. Parsons / RAK
J. E. Parsons
General Manager

JEP/ck
cc: P. R. Roberts/T. A. Edwards
C. J. Martin/Env. File

June 2, 1992

Mr. Carlos Gonzalez,
Air Permit Engineer
Hillsborough County Environmental
Protection Commission
1410 N. 21st Street
Tampa, Florida 33605

Subject: Hillsborough County - AP Der
File No. AC29-210979 (X-Train
Cooler Installation)

Dear Mr. Gonzalez:

In response to your letter of April 21, 1992, the following is offered to answer your questions:

1. **Explain why NSPS for the DAP production does not apply (Section II:G4. of the application). It should be noted that the Y-Train (AO29-181935) is subject to the NSPS rules for DAP production.**

CFII agrees to accept NSPS for the DAP production on X-Train the same as on Y-Train.

2. **Pursuant to Rule 17-2.600(3) (a)9.,FAC, a BACT determination is required. Please provide the proposed fluoride emission limit for MAP production for our review.**

The existing permit AC29-167059 contains limits for production of DAP/MAP and GTSP. DAP/MAP limits are .06 pounds of F per ton of P_2O_5 input to the plant. This was determined to be BACT on the Y-Train and should not be different for X-Train since the plants are identical. BACT for MAP should be the same regardless of what plant it is produced in.

3. **Explain further how each of the actual emissions limits in Section III:c were derived. What will be each of the new proposed actual (allowable) emissions? With this information, the FDER and the EPCHC can determine if NSR for particulate matter emissions and PSD for fluoride emissions are triggered.**

The maximum lbs/hr emissions are the highest emission taken from past compliance tests. The actual tons per year are based on the 1991 compliance tests and uses the hours of operation during the year to calculate tons. These are the numbers reported in the annual operating report for 1991. The allowed emission rate per Ch.17-2 F.A.C. for fluorides is taken from F.A.C.17-2.600(3)a. For GTSP the allowable is 0.15 lbs/ton of P_2O_5 input to the unit. For DAP the allowable is 0.06 lbs/ton of P_2O_5 input to the unit. The allowable emission for MAP was determined by BACT when Y-Train was permitted for the addition of the cooler. Once

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)	Initial / Date
Bruce Mitchell	
2. DARM-BAR	Initial / Date
3. DER-Tallahassee	Initial / Date
4. Twin Towers	Initial / Date

REMARKS:

Hard copy of draft response ~~which~~ which I FAXED to you earlier.

RECEIVED

JUN 0 8 1992

Division of Air Resources Management

INFORMATION	
	Review & Return
	Review & File
	Initial & Forward

DISPOSITION	
	Review & Respond
	Prepare Response
	For My Signature
	For Your Signature
	Let's Discuss
	Set Up Meeting
	Investigate & Report
	Initial & Forward
	Distribute
	Concurrence
	For Processing
	Initial & Return

FROM:

Jim McDonald

DATE 6-3-92

PHONE