



**KOOGLER & ASSOCIATES**

**ENVIRONMENTAL SERVICES**

4014 NW THIRTEENTH STREET  
GAINESVILLE, FLORIDA 32609  
352/377-5822 ■ FAX/377-7158

KA 102-00-03

August 11, 2000

**RECEIVED**

**AUG 15 2000**

**BUREAU OF AIR REGULATION**

Mr. Syed Arif, P.E.  
Florida Department of  
Environmental Protection  
Twin Towers Office Building  
2600 Blair Stone Rd  
Tallahassee, FL 32399-2400

Subject: Additional Information for PSD Application  
White Springs Agricultural Products, Inc  
File No. 0470002-39-AC, PSD-FL-297

Dear Mr. Arif:

This is in response to Mr. Linero's letter dated August 9, 2000, requesting additional information on the above referenced project. The responses below are presented in the order of the issues raised.

ITEM 1: Stack Test Data

It is our understanding, based on your recent telephone conversation with Pradeep Raval, that the historical stack test information being requested may be summarized in order to facilitate the data review. Such a summary is presented in Attachment 1. Since this information is being requested to determine appropriate permit limits, data on units to be shut down have been excluded. Copies of all the respective stack test reports can be submitted, if necessary for FDEP's review.

Emission calculations presented in Appendix A of the application have not been revised to reflect the "lb/ton" emissions data presented in Attachment 1. The use of a different method of calculating actual fluoride emissions will not affect rule applicability for the proposed project.

ITEMS 2 and 3: Hours of Operation

It is requested that all the emission units addressed in the application be allowed to operate continuously. The operating rates for all units included an hourly maximum operating rate (based on a daily average) and an annual maximum operating rate. The annual operation

caps are requested in recognition of the fact that the hourly maximum operating rates cannot be sustained for 8760 hours on an annual basis. As the emission calculations presented in the application were based on the requested operation caps, no changes in the application are necessary.

#### ITEM 4: Reference for X-Train Emission Factors

The following references were used in emission calculations for the X-Train:

- PM/PM10: 0.18 lb/ton product – Based on an estimate by plant personnel familiar with the plant operations.
- SO2: 0.6 lb/MMCF – Based on AP-42, Table 1.4-2 emission factor for natural gas combustion.
- NOX: 100 lb/MMCF - Based on AP-42, Table 1.4-1 emission factor for natural gas combustion.
- CO: 84 lb/MMCF - Based on AP-42, Table 1.4-1 emission factor for natural gas combustion.
- VOC: 2.8 lb/MMCF (non-methane) - Based on AP-42, Table 1.4-3 emission factor for natural gas combustion.
- BAGHOUSE: 0.015 gr/cf – based on performance of similar unit, including a reasonable margin of safety (see Attachment 2). As almost all such baghouses have a compliance demonstration requirement by conducting visible emissions testing in lieu of particulate matter testing, there is limited available test data.

#### ITEM 5: RBLC Data on BACT Limits

Our computer search of the RBLC data regarding BACT for fluorides from the units addressed in the application yielded very limited information. The available information is presented in Attachment 3.

#### ITEM 6: USFWS Comments

We concur with the USFWS comment that the proposed limits conform to BACT limits.

Mr. Syed Arif, P.E.  
Florida Department of  
Environmental Protection

August 11, 2000

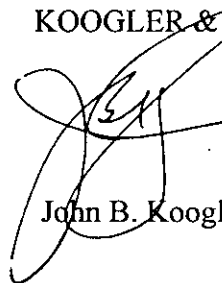
Regarding the magnitude of the estimated fluoride emissions increase as a result of the proposed project, please note that this estimate is a result of the calculation procedure imposed under PSD review. In accordance with the NSR requirements, the past actual emissions are subtracted from the future potential emissions. As most plants do not operate 8760 hours per year at their maximum allowable emission rate, this calculation procedure always results in an artificially magnified emissions increase. Industry has long argued for a fair calculation methodology of comparing past allowable emissions to future allowable emissions, or alternatively, past actual emissions to future actual emissions. However, such an approach has not been acceptable to EPA for calculating net emission changes from existing chemical plants.

Regarding the need for higher emission limits, WSAC seeks emission limits that both meet BACT criteria and allow for the typical variability in emissions under normal operating conditions. Furthermore, a greater "safety margin" is required at the proposed higher operating levels due to increased potential variability that can be expected under the higher operating levels.

If you have any questions, please do not hesitate to call Pradeep Raval or me.

Very truly yours,

KOOGLER & ASSOCIATES



John B. Koogler, Ph.D., P.E.

JBK:par  
Enc.

c: C. Pults, WSAC

*D. Arif*  
*C. Holladay*  
EPA  
NPS  
*C. Kirts, NEP*

**ATTACHMENT 1**


**HISTORICAL FLUORIDES TEST DATA**

HISTORICAL FLUORIDES TEST DATA						
WSAC						
<b>B PHOSPHORIC ACID PLANT</b>						
Year	F, lb/hr	Product, tph	F, lb/ton	Stk. acfm	Scrbr. gpm	DP, "H2O
1995	0.17	71.3	0.002	24811	1664	0.9
1996	0.11	73.9	0.001	23413	1560	0.7
1997	0.39	76.9	0.005	21857	1721	2.9
1998	0.08	70.7	0.001	23309	1640	NA
1999	0.13	79.8	0.002	29154	1737	2.15
NOTE: lb/ton is based on tons output; NA = not available.						
<b>D PHOSPHORIC ACID PLANT</b>						
Year	F, lb/hr	Product, tph	F, lb/ton	Stk. acfm	Scrbr. gpm	DP, "H2O
1995	0.08	72.8	0.001	29832	1250	NA
1996	0.2	72.2	0.003	35700	NA	3.8
1997	0.19	79.2	0.002	32637	NA	NA
1998	0.37	91.9	0.004	32041	NA	NA
1999	0.2	86.5	0.002	32205	NA	2.25
NOTE: lb/ton is based on tons output; NA = not available.						
<b>C&amp;D SUPERPHOSPHORIC ACID PLANT</b>						
Year	F, lb/hr	Product, tph	F, lb/ton	Stk. acfm	Scrbr. gpm	DP, "H2O
1995	1.08	67	0.016	11948	850	0.12
1995	0.1	84.7	0.001	15184	1140	1
1997	0.52	94.5	0.006	16546	709	1.5
1998	NA	NA	NA	NA	NA	NA
1999	NA	NA	NA	NA	NA	NA
NOTE: lb/ton is based on tons output; NA = not available.						
<b>ACID CLARIFICATION</b>						
Year	F, lb/hr	Product, tph	F, lb/ton	Stk. acfm	Scrbr. gpm	DP, "H2O
1995	2.12	98.5	0.022	32150	800	NA
1996	1.52	90.2	0.017	34281	726	7.1
1997	2.57	92.5	0.028	17241	625	1.7
1998	1.79	89.8	0.020	29735	994	3.1
1999	0.61	90.2	0.007	36155	930	4.9
NOTE: lb/ton is based on tons output; NA = not available.						
<b>X-TRAIN</b>						
Year	F, lb/hr	Product, tph	F, lb/ton	Stk. acfm	Reactor Scrbr. gpm	Reactor DP, "H2O
1995	0.28	36.4	0.008	102200	NA	NA
1995	0.22	39.6	0.006	91366	309	NA
1996	0.19	35.7	0.005	87266	300	NA
1996	0.14	39.6	0.004	91887	NA	NA
1997	0.25	37.8	0.007	103672	390	NA
1997	0.29	44.5	0.007	97915	290	NA
1998	0.21	33.9	0.006	97640	NA	NA
1998	0.15	35.3	0.004	94085	NA	NA
1999	0.23	35.3	0.007	93737	NA	14.3
NOTE: lb/ton is based on tons output; NA = not available.						


**ATTACHMENT 2**

**BAGHOUSE PERFORMANCE DATA**

TABLE 1  
SUMMARY OF SOURCE EMISSION TEST DATA

  
 Fugitive Dust Collection System  
 August 20, 1998

Run No.	Process Weight Rate (Tons/hr)	Stack Gas Flow Rate (SCFMD)	Stack Gas Temperature (F)	Stack Gas Moisture (%)	Particulate Matter	
					Conc. (gr/dscf)	Emission Rate (Lbs/Hr)
1	160.20	45,946	105	4.8	0.0090	3.54
2	155.19	45,761	105	4.4	0.0076	2.97
3	132.78	46,017	103	4.0	0.0096	3.80
Average	149.4	45,908	104	4.4	0.0087	3.43

Allowable Particulate Matter Emission Rate =  lbs/Hr

**ATTACHMENT 3**

**EPA RBLC DATABASE INFORMATION**




[Query Results](#)
[Facility Information](#)
[Plantwide Information](#)
[Process Information](#)

To learn more about the processes associated with this facility, click the Process Information button above.

You can then view pollutant information for each process.

## Facility Details

Completed

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**ID/Company:** FL-0112 / CARGILL FERTILIZER

**Plant Name:**

---

**Contact:** JOHN REYNOLDS  
**Phone:** (904) 488-1344      **E-Mail:**  
**Street:** 8813 HIGHWAY 41 SOUTH  
**City:** RIVERVIEW  
**State:** FL      **Zip:** 33569-      **County:** HILLSBOROUGH  
**Region:** 4      **SIC:** 2874      **Universal Plant ID:**

---

**Agency:** FL001 - FLORIDA DEPT OF ENV REGULATION  
**Contact:** JOHN REYNOLDS  
**Phone:** (850) 921-9536      **E-Mail:**  
**Street:**  
**City:**  
**State:** FL      **Zip:**

**Permit#:** 0570008-004-AC  
**New or**  
**Modified:**

**EST/ACT DATE**  
**Appl. Rcvd.:**  
**Permit Issued:** ACT 08/27/1996  
**Start-Up:**  
**Compl. Verified:**

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UTM zone/coordinate information not provided.

No affected Class 1 areas identified.

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### Facility Notes:

INCREASE IN PRODUCTION RATE FROM 139 TO 170 TONS P2O5/HR FOR NO. 3 AND 4 PHOSPHORIC ACID PLANTS. PACKED SCRUBBER USING POND WATER USED TO CONTROL FLUORIDES.

Date Entered: 11/27/1996

Date Last Modified: 11/27/1996

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For information about the pollutants related to this process, click on the Pollutant Information button above.

## Process Details

Completed

---

**ID/Company:** FL-0112 / CARGILL FERTILIZER  
**Plant Name:**

---

**Process:** PHOSPHORIC ACID PRODUCTION  
**Primary Fuel:** H2SO4 AND PHOS. ROCK  
**Throughput:** 170 TONS P2O5/HR

**Process Code:** 62.010  
**SCC Code:** 3-01-016

**6 Compliance Verified?** No  
**Verification Method**

-----  
**T**            **Stock Testing:** No

0

B


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[Plantwide Information](#)
[Process Information](#)
[Pollutant Information](#)

Click on the Pollutant Information button to return to the list of pollutants for this process or click on the Process Information button to return to the list of processes.

## Pollutant Details

Completed

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**ID/Company:** FL-0112 / CARGILL FERTILIZER

**Plant Name:**
**Process:** PHOSPHORIC ACID PRODUCTION
 

---

**Pollutant:** FLUORIDES      **CAS Number:** 16984-48-8

**Pollution Prevention/Add-on Control Equipment/Both/No Controls Feasible:** A  
**P2/Add-on Description:**

 PACKED SCRUBBER USING POND WATER
 

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**Ranking Info:** Number Considered: 0  
 Rank Selected: 0

**EMISSION LIMITS:**

<b>Primary:</b>	0.0135 LB F/TON P2O5	<b>Basis:</b> BACT-PSD
<b>Alternate:</b>	2.2900 LB/HR % Efficiency: 0	
<b>Standardized:</b>	0.0000 <b>Emission Type:</b> P	

<b>COST DATA:</b>	<b>Verified by Agency?</b> No	<b>Year Used in Cost Estimates:</b>
Capital Cost of Control Equip: \$		0
Annualized Cost: \$		0
Cost Effectiveness:		0 \$/ton

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[Facility Information](#)
[Plantwide Information](#)
[Process Information](#)

To learn more about the processes associated with this facility, click the Process Information button above.

You can then view pollutant information for each process.

## Facility Details

Completed

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**ID/Company:** FL-0120 / CARGILL FERTILIZER, INC.

**Plant Name:**

---

**Contact:** JOHN REYNOLDS  
**Phone:** (850) 921-9536      **E-Mail:**  
**Street:** 8813 HWY 40 SOUTH  
**City:** RIVERVIEW  
**State:** FL      **Zip:** 33569-      **County:** HILLSBOROUGH  
**Region:** 4      **SIC:** 2874      **Universal Plant ID:** 057008

---

**Agency:** FL001 - FLORIDA DEPT OF ENV REGULATION  
**Contact:** JOHN REYNOLDS  
**Phone:** (850) 921-9536      **E-Mail:**  
**Street:**  
**City:**  
**State:** FL      **Zip:**

<b>Permit#:</b> PSD-FL-234A	<b>EST/ACT DATE</b>
<b>New or</b>	<b>Appl. Rcvd.:</b>
<b>Modified:</b>	<b>Permit Issued:</b> ACT 06/08/1999
	<b>Start-Up:</b>
	<b>Compl. Verified:</b>

---

UTM zone/coordinate information not provided.

No affected Class 1 areas identified.

---

### Facility Notes:

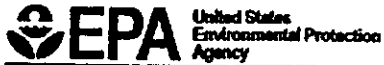
PROCESS MODIFIED: DEFLUORINATION OF PHOSPHORIC ACID BY REACTION WITH DIATOM ACEOUS EARTH AND LIMESTONE TO FORM A GRANULATED ANIMAL FEED PRODUCT INGREDI ENT. THIS ACTION WAS A PRODUCTION INCREASE.

Print Entered: 07/16/1999

Date Last Changed: 11/11/1999

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For information about the pollutants related to this process, click on the Pollutant Information button above.

## Process Details

Completed

---

**ID/Company:** FL-0120 / CARGILL FERTILIZER, INC.  
**Plant Name:**

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**Process:** FEED PRODUCTION, ANIMAL, AMMONIUM PHOSPHATE BASED  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 770 T/D  
**Process Code:** 70.007  
**SCC Code:** 30103002

**Compliance Verified?** No  
**Verification Method**

-----  
**Stack Testing:** No  
**Inspections:** No  
**Calculation:** No  
**Other Method:** No  
**Description:** EPA METHODS 5,13A,9

**Process Notes:**

ANIMAL FEED INGREDIENT PRODUCTION

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GEPROTECT=OFF

@PJL SET RESOLUTION=600



@PJL ENTER LANGUAGE=PCI

Navigation buttons: Query Results, Facility Information, Plantwide Information, Process Information, Pollutant Information

Click on the Pollutant Information button to return to the list of pollutants for this process or click on the Process Information button to return to the list of processes.

### Pollutant Details

Completed

**ID/Company:** FL-0120 / CARGILL FERTILIZER, INC.

**Plant Name:**

**Process:** FEED PRODUCTION, ANIMAL, AMMONIUM PHOSPHATE BASED

**Pollutant:** FLUORIDE      **CAS Number:** 16984-48-8

**Pollution Prevention/Add-on Control Equipment/Both/No Controls Feasible:** A  
**P2/Add-on Description:**

PACKED SCRUBBER, AND POND WITH WATER

**Ranking Info:** Number Considered: 0  
Rank Selected: 0

**EMISSION LIMITS:**

<b>Primary:</b>	0.5000 LB/H (BATCH)	<b>Basis:</b> BACT-PSD
<b>Alternate:</b>	4.3000 T/YR % Efficiency: 0	
<b>Standardized:</b>	0.0000 Emission Type: P	

<b>COST DATA:</b>	<b>Verified by Agency?</b> No	<b>Year Used in Cost Estimates:</b>
Capital Cost of Control Equip:	\$ 0	
Annualized Cost:	\$ 0	
Cost Effectiveness:		0 \$/ton

[Query Results](#)[Facility Information](#)[Plantwide Information](#)[Process Information](#)[Pollutant Information](#)

Click on a highlighted pollutant name in the list below for more information.

## Pollutant List

**Completed**

---

**ID/Company:**FL-0120 / CARGILL FERTILIZER, INC.**Plant Name:****Process:** FEED PRODUCTION, ANIMAL, AMMONIUM PHOSPHATE BASED

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Pollutant	Primary Emission Limit	Basis
<u>FLUORIDE</u>	.5 LB/H (BATCH)	BACT-PSD
<u>PM</u>	8 LB/H	BACT-PSD

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Click on the Pollutant Information button to return to the list of pollutants for this process or click on the Process Information button to return to the list of processes.

## Pollutant Details

**Completed**

**ID/Company:** FL-0120 / CARGILL FERTILIZER, INC.

**Plant Name:**

**Process:** FEED PRODUCTION, ANIMAL, AMMONIUM PHOSPHATE BASED

**Pollutant:** PM      **CAS Number:** PM

**Pollution Prevention/Add-on Control Equipment/Both/No Controls Feasible:** A  
**P2/Add-on Description:**

VENTURI SCRUBBER (GRANULATION AND PRODUCT HANDLIN)

**Ranking Info:** Number Considered: 0  
 Rank Selected: 0

**EMISSION LIMITS:**

Primary:	8.0000 LB/H	Basis: BACT-PSD
Alternate:	35.0000 T/YR % Efficiency: 0	
Standardized:	0.0000 Emission Type: P	

<b>COST DATA:</b>	Verified by Agency? No	Year Used in Cost Estimates:
Capital Cost of Control Equip: \$		0
Annualized Cost: \$		0
Cost Effectiveness:		0 \$/ton

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