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STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

June 2, 1987

Mr. Wayne Aronson
Chief
Program Support Section
U.S. EPA, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Dear Mr. Aronson:

RE: Proposed Modification Requests - No. 5 DAP Plant
Gardinier, Inc.
Past PSD Permit: PSD-FL-026
State Construction Permit: AC 29-135083

Enclosed for your review and comment are requests for modifications for the above referenced existing source and facility. Assessment as to whether or not the modifications requested are subject to PSD or nonattainment new source review, or both, is currently under review. If you have any comments or questions, please contact John Reynolds at the above address or at (904)488-1344. Any comments that you have should be submitted to the Bureau by June 28, 1987.

Sincerely,

R. Bruce Mitchell
Bureau of Air Quality
Management

/bm

Attachment

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

June 8, 1987

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. E. O. Morris
Manager
Environment & Development
Gardinier, Inc.
P. O. Box 3269
Tampa, Florida 33601

Dear Mr. Morris:

Re: Proposed Modification - No. 5 DAP Plant
PSD Permit: PSD-FL-026
Construction Permit: AC 29-27760 ~ (AC 29-135083)
Operating Permit: AO 29-56011

The following additional information is required for preliminary review of Gardinier's No. 5 DAP air permit application received on May 29, 1987:

1. An explanation is needed for reallocating the remaining 6.59 lbs/hr of fluoride emissions to the Triple Superphosphate Storage Buildings in view of the fact that ROP-TSP is being phased out and also that Chapter 17-2.600, FAC, would prevent any exceedance of the fluoride standard for this source. A separate application will be required for any source if its emissions increase.

2. Clarification is required regarding the proposed fuel oil rate since about two gallons of fuel oil are typically required to dry one ton of DAP. The typical maximum of 240 gallons of fuel oil per hour containing 2.5% sulfur would generate about 94 lbs/hr of SO_2 compared to the proposed level of 31.8 lbs/hr.

3. In view of the substantial SO_2 and PM offsets claimed from shutting down the No. 3 and No. 4 TSP dryers, an estimate is needed of actual vs. permitted SO_2 and PM emissions from these sources and the basis for the emission estimates.

This additional information is required in order to make a rule applicability assessment under Chapter 17-2.500 (PSD) and

17-2.510 (NSR). PSD or RACT applicability will depend on verification of offsets and/or modified emissions limitations. If PSD rules do not apply, a modification of the PSD permit will need to be submitted to the EPA.

If you have any questions on the above, please contact me at the above address or call John Reynolds at (904)488-1344.

Sincerely,

C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

CHF/JR/s

cc: W. Aronson
B. Thomas
J. Campbell
D. Buff
M. Flores

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STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

June 22, 1987

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. E. O. Morris
Manager, Environmental and Development
Gardinier, Inc.
P. O. Box 3269
Tampa, Florida 33601

Dear Mr. Morris:

Re: No. 5 DAP Plant Modification Application
Construction Permit No. AC 29-135083

Per your request for a modification to your No. 5 DAP Plant, a certified incompleteness letter was sent to you on June 9, 1987, referencing the previously assigned construction permit number (AC 29-27760). To avoid confusion, the Department has assigned the modification application a new tracking number, which is referenced above, and would you please refer to this number on all future correspondence regarding this modification request.

If there are any questions, please call John Reynolds at (904)488-1344 or write to me at the above address.

Sincerely,

C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

CHF/JR/s

cc: J. Campbell
B. Thomas
D. Buff
W. Aronson
M. Flores

PM
6-25-87
Tampa, FL

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DER
JUN 29 1987
BAQM

GARDINIER INC.

Post Office Box 3269 ○ Tampa, Florida 33601 ○ Telephone 813-677-9111 ○ TWX 810-876-0648 ○ Telex-52666 ○ Cable-Gardinphos

June 22, 1987

Mr. Clair H. Fancy
Manager, Air Quality Management
Florida Department of
Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32301

Subject: Proposed Modification - No. 5 DAP Plant
Operating Permit AO29-56011
Construction Permit Application No. AC29-135083

Dear Mr. Fancy:

Gardinier, Inc. has prepared answers to the questions you submitted in your letter dated June 8, 1987 regarding the above subject. For clarity, we will restate the questions, followed by the appropriate answers.

Q.1. An explanation is needed for reallocating the remaining 6.59 lbs/hr of fluoride emissions to the Triple Superphosphate Storage Buildings in view of the fact that ROP-TSP is being phased out and also that Chapter 17-2.600, FAC, would prevent any exceedance of the fluoride standard for this source. A separate application will be required for any source if its emissions increase.

A.1. The basis for reallocating the remaining 6.59 lb/hr fluoride (F) emissions to the three Triple Superphosphate (TSP) Storage Buildings is the fluoride standard for the Gardinier facility, i.e., FAC, Chapter 17-2.600(3)(b). This is the F emission standard for existing sources and limits F emissions from the entire phosphate complex to 0.4 lb/ton P_2O_5 input. Based upon 1971 production records, the allowable F emissions from the complex were determined to be 24.7 lb/hr (see permit application for documentation). Gardinier is not requesting any increase in the allowable F emissions from the complex.

The F emission limiting standard does not limit emissions from any particular source within the phosphate complex. The current allowable F emissions from each source within the complex has been established solely by Gardinier's requested allocation.

Thus, each individual source has an allowable F emission rate, but not an F "standard". Gardinier desires to change the allowable allocation between sources within the complex, but not the F standard of 0.4 lb/ton of P_2O_5.

As documented in the permit application, requests to reallocate F emissions at Gardinier were granted in 1984 and 1985. The reallocations requested previously are identical in concept to the currently requested reallocation, and both involve increasing the F emissions allocated to the TSP storage buildings. The TSP storage buildings have never been required to have an operating permit, but emissions from these sources have always been included in the allowable F allocation.

It is noted that the proposed modification to the No. 5 DAP Plant is not expected to result in an increase in actual emissions of F from the TSP storage buildings.

Q.2. Clarification is required regarding the proposed fuel oil rate since about two gallons of fuel oil are typically required to dry one ton of DAP. The typical maximum of 240 gallons of fuel oil per hour containing 2.5% sulfur would generate about 94 lbs/hr of SO_2 compared to the proposed level of 31.8 lbs/hr.

A.2. Gardinier's operating experience with the No. 5 DAP Plant has shown that, as a maximum, one therm (100,000 BTU) is required to produce one ton of DAP product. This would equate to about 0.7 gallons of fuel oil per ton of DAP. Thus, a maximum of 12.0 x 10^6 BTU/hr is required to produce 120 tons/hr of DAP. This maximum estimate of heat input rate is based upon measurement of DAP process variables and fuel usage rates. A DAP plant is unlike a granular TSP plant, which typically requires about 2 gallons of fuel oil per ton of product produced.

Q.3. In view of the substantial SO_2 and PM offsets claimed from shutting down the No. 3 and No. 4 TSP Dryers, an estimate is needed of actual vs. permitted SO_2 and emissions from these sources and the basis for the emission estimates.

A.3. Historic data concerning actual annual particulate matter (PM) and sulfur dioxide (SO_2) emissions from the sources to be shut down are provided in Table 1. Actual annual emissions (tons/yr) for each calendar year from 1978 through 1986 are presented. These figures were obtained from the Annual Operating Report submitted to FDER each year.

The annual PM emissions for each source display year-to-year variations, reflective of variations in unit emission rates and

annual production rates. Because of the depressed nature of the phosphate industry in recent years, annual production has been far below capacity and PM emissions have been commensurately low. The highest annual emissions during this 9-year period are more representative of actual plant capacity, although still well below the potential emissions if the plant were operating at or near full capacity. Total PM emissions from the sources to be shut down were highest in 1979 at 56.87 tons/yr.

Hourly PM emissions can vary considerably based upon process rate, process conditions and scrubber operation. PM compliance test data for the last two years of operation are summarized in Table 2. The maximum hourly emission rates from any of the compliance tests for each source would reflect the actual maximum hourly emission rate for the source. However, maximum emissions could have been higher in previous years.

Based upon the information presented in Tables 1 and 2, a comparison of actual and allowable PM emissions for each source to be shut down is provided below:

Source	Actual (lb/hr)	Allowable (lb/hr)	Actual (ton/yr)	Allowable (ton/yr)
No. 3 TSP Reactor Belt	4.7	5.25	8.78	23.00
No. 3 TSP Dryer Scrubber	6.4	8.25	8.06	36.14
No. 4 TSP Reactor Belt	4.5	5.25	8.00	23.00
No. 4 TSP Dryer Scrubber	6.2	8.25	8.13	36.14
ROP/TSP Sizing Unit Scrubber	1.9	4.50	23.90	19.71

SO_2 emissions have been low since 1982 because of the almost exclusive use of natural gas to fuel the dryers during these years. The use of natural gas has been based solely upon the lower cost of this fuel vs. fuel oil. Fuel oil would have been utilized if it were cheaper. Therefore, a more representative year of operation in regard to SO_2 emissions is 1981, when larger quantities of fuel oil were burned in the dryers. SO_2 emissions from the two dryers in 1981 totaled 23.8 tons/yr.

Actual maximum hourly SO_2 emissions have not been estimated historically and data to calculate such emissions is not readily available. However, it can be presumed that during years of significant fuel oil usage the maximum potential emissions from the dryers were experienced for an hour sometime during the year. The maximum potential hourly SO_2 emission rate for the dryers is 38.4 lb/hr each (see permit application for basis).

Based upon these considerations, a comparison of actual and allowable SO_2 emissions for the two dryers is provided below:

Source	Actual (lb/hr)	Allowable (lb/hr)	Actual (Ton/yr)	Allowable (Ton/yr)
No. 3 TSP Dryer Scrubber	38.4	38.4	12.80	168.19
No. 4 TSP Dryer Scrubber	38.4	38.4	11.00	168.19

Gardinier, Inc. requests to arrange a permit application meeting within the next two weeks to discuss and clarify issues regarding this subject application. Please feel free to call if you require any additional information.

Very truly yours,

E. O. Morris
Manager
Environmental & Development

EOM:rw
Enclosures
cc: Mr. Henk Mathot
Mr. R. Nettles
Mr. S. Pinney
Mr. W. Thomas/DER/Tampa
Mr. J. Campbell/HCEPC

Table 1. Summary of Annual Particulate Matter and Sulfur Dioxide Emissions, 1978-1986, Gardinier, Inc.

Year	No. 3 TSP Reactor Belt	No. 3 TSP Dryer	No. 4 TSP Reactor Belt	No. 4 TSP Dryer	ROP/TSP Sizing	TOTALS
			PM EMISSIONS (TPY)			
1978	1.88	8.54	2.45	7.97	1.51	22.35
1979	8.78	8.06	8.00	8.13	23.90	56.87
1980	3.70	5.20	3.40	4.50	6.80	23.60
1981	5.23	7.84	6.65	8.76	10.60	39.08
1982	3.25	5.16	2.30	5.24	6.09	22.04
1983	1.80	3.80	2.80	7.10	10.70	26.20
1984	2.41	1.94	1.96	4.18	2.71	13.20
1985	3.20	5.40	3.70	3.10	1.50	16.90
1986	2.90	3.90	2.50	4.00	7.30	20.60
			SO2 EMISSIONS (TPY)			
1978		7.04		6.30		13.34
1979		3.04		2.95		5.99
1980		3.00		2.90		5.90
1981		12.80		11.00		23.80
1982		0.85		0.46		1.31
1983		0.09		0.10		0.19
1984		0.005		0.006		0.01
1985		0.00		0.00		0.00
1986		0.04		0.04		0.08

Source: FDER Annual Operating Reports, Gardinier, Inc.

Table 2. Summary of Particulate Stack Tests, 1985-1986, Gardinier, Inc.

Date of Test	Production Rate (tons/hr)		Particulate Emissions		
	P205	Product	lb/hr	lb/ton P205	lb/ton Product
No. 3 Triple Superphosphate Reactor Belt					
Feb-5-85	24.0	48.3	3.1	0.129	0.064
Mar-7-85	23.7	46.7	2.0	0.084	0.043
Aug-6-85	24.8	51.6	3.4	0.137	0.066
Jun-3-86	22.9	45.6	4.7	0.205	0.103
Dec-9-86	20.7	43.3	3.7	0.179	0.085
No. 3 Triple Superphosphate Dryer Scrubber					
Feb-7-85	23.8	47.9	4.7	0.197	0.098
Mar-5-85	24.4	49.2	6.7	0.275	0.136
Aug-13-85	26.5	54.9	3.0	0.113	0.055
Jun-5-86	24.5	48.8	6.4	0.261	0.131
Dec-10-86	21.2	42.7	4.7	0.222	0.110
No. 4 Triple Superphosphate Reactor Belt					
Feb-19-85	25.5	50.9	4.5	0.176	0.088
Aug-15-85	23.8	48.9	2.3	0.097	0.047
May-27-86	24.5	48.4	3.8	0.155	0.079
Oct-24-86	24.4	47.8	3.3	0.135	0.069
No. 4 Triple Superphosphate Dryer Scrubber					
Feb-22-85	26.9	52.5	2.9	0.108	0.055
Aug-16-85	24.2	50.5	2.8	0.116	0.055
May-28-86	23.8	47.3	5.0	0.210	0.106
Oct-24-86	23.7	49.8	6.2	0.262	0.124
ROP/TSP Sizing Unit Scrubber					
Feb-27-85	33.2	71.0	0.7	0.021	0.010
Sep-10-85	41.0	86.0	0.6	0.015	0.007
Mar-27-86	43.0	94.0	1.4	0.033	0.015
Aug-27-86	35.9	75.0	14.1	0.393	0.188
Sep-8-86	36.7	76.8	0.5	0.014	0.007
Nov-17-86	40.9	86.0	0.8	0.020	0.009
Nov-26-86	20.5	45.2	1.9	0.093	0.042
Dec-19-86	39.4	83.8	1.3	0.033	0.016

PM
6-23-87
Tampa, FL

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GARDINIER INC.

Post Office Box 3269 ○ Tampa, Florida 33601 ○ Telephone 813-677-9111 ○ TWX 810-876-0648 ○ Telex-52666 ○ Cable-Gardinphos

June 22, 1987

Mr. Clair H. Fancy
Manager, Air Quality Management
Florida Department of
Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32301

Subject: Proposed Modification - No. 5 DAP Plant
Operating Permit A029-56011
AC29-135083

Dear Mr. Fancy:

Gardinier, Inc. has prepared answers to the questions you submitted in your letter dated June 8, 1987 regarding the above subject. For clarity, we will restate the questions, followed by the appropriate answers.

Q.1. An explanation is needed for reallocating the remaining 6.59 lbs/hr of fluoride emissions to the Triple Superphosphate Storage Buildings in view of the fact that ROP-TSP is being phased out and also that Chapter 17-2.600, FAC, would prevent any exceedance of the fluoride standard for this source. A separate application will be required for any source if its emissions increase.

A.1. The basis for reallocating the remaining 6.59 lb/hr fluoride (F) emissions to the three Triple Superphosphate (TSP) Storage Buildings is the fluoride standard for the Gardinier facility, i.e., FAC, Chapter 17-2.600(3)(b). This is the F emission standard for existing sources and limits F emissions from the entire phosphate complex to 0.4 lb/ton P_2O_5 input. Based upon 1971 production records, the allowable F emissions from the complex were determined to be 24.7 lb/hr (see permit application for documentation). Gardinier is not requesting any increase in the allowable F emissions from the complex.

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JUN 25 1987
BAQM

Thus, each individual source has an allowable F emission rate, but not an F "standard". Gardinier desires to change the allowable allocation between sources within the complex, but not the F standard of 0.4 lb/ton of P_2O_5.

As documented in the permit application, requests to reallocate F emissions at Gardinier were granted in 1984 and 1985. The reallocations requested previously are identical in concept to the currently requested reallocation, and both involve increasing the F emissions allocated to the TSP storage buildings. The TSP storage buildings have never been required to have an operating permit, but emissions from these sources have always been included in the allowable F allocation.

It is noted that the proposed modification to the No. 5 DAP Plant is not expected to result in an increase in actual emissions of F from the TSP storage buildings.

Q.2. Clarification is required regarding the proposed fuel oil rate since about two gallons of fuel oil are typically required to dry one ton of DAP. The typical maximum of 240 gallons of fuel oil per hour containing 2.5% sulfur would generate about 94 lbs/hr of SO_2 compared to the proposed level of 31.8 lbs/hr.

A.2. Gardinier's operating experience with the No. 5 DAP Plant has shown that, as a maximum, one therm (100,000 BTU) is required to produce one ton of DAP product. This would equate to about 0.7 gallons of fuel oil per ton of DAP. Thus, a maximum of 12.0 x 10^6 BTU/hr is required to produce 120 tons/hr of DAP. This maximum estimate of heat input rate is based upon measurement of DAP process variables and fuel usage rates. A DAP plant is unlike a granular TSP plant, which typically requires about 2 gallons of fuel oil per ton of product produced.

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A.3. Historic data concerning actual annual particulate matter (PM) and sulfur dioxide (SO_2) emissions from the sources to be shut down are provided in Table 1. Actual annual emissions (tons/yr) for each calendar year from 1978 through 1986 are presented. These figures were obtained from the Annual Operating Report submitted to FDER each year.

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annual production rates. Because of the depressed nature of the phosphate industry in recent years, annual production has been far below capacity and PM emissions have been commensurately low. The highest annual emissions during this 9-year period are more representative of actual plant capacity, although still well below the potential emissions if the plant were operating at or near full capacity. Total PM emissions from the sources to be shut down were highest in 1979 at 56.87 tons/yr.

Hourly PM emissions can vary considerably based upon process rate, process conditions and scrubber operation. PM compliance test data for the last two years of operation are summarized in Table 2. The maximum hourly emission rates from any of the compliance tests for each source would reflect the actual maximum hourly emission rate for the source. However, maximum emissions could have been higher in previous years.

Based upon the information presented in Tables 1 and 2, a comparison of actual and allowable PM emissions for each source to be shut down is provided below:

Source	Actual (lb/hr)	Allowable (lb/hr)	Actual (ton/yr)	Allowable (ton/yr)
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No. 3 TSP Dryer Scrubber	6.4	8.25	8.06	36.14
No. 4 TSP Reactor Belt	4.5	5.25	8.00	23.00
No. 4 TSP Dryer Scrubber	6.2	8.25	8.13	36.14
ROP/TSP Sizing Unit Scrubber	1.9	4.50	23.90	19.71

SO_2 emissions have been low since 1982 because of the almost exclusive use of natural gas to fuel the dryers during these years. The use of natural gas has been based solely upon the lower cost of this fuel vs. fuel oil. Fuel oil would have been utilized if it were cheaper. Therefore, a more representative year of operation in regard to SO_2 emissions is 1981, when larger quantities of fuel oil were burned in the dryers. SO_2 emissions from the two dryers in 1981 totaled 23.8 tons/yr.

Actual maximum hourly SO_2 emissions have not been estimated historically and data to calculate such emissions is not readily available. However, it can be presumed that during years of significant fuel oil usage the maximum potential emissions from the dryers were experienced for an hour sometime during the year. The maximum potential hourly SO_2 emission rate for the dryers is 38.4 lb/hr each (see permit application for basis).

Based upon these considerations, a comparison of actual and allowable SO_2 emissions for the two dryers is provided below:

Source	Actual (lb/hr)	Allowable (lb/hr)	Actual (Ton/yr)	Allowable (Ton/yr)
No. 3 TSP Dryer Scrubber	38.4	38.4	12.80	168.19
No. 4 TSP Dryer Scrubber	38.4	38.4	11.00	168.19

Gardinier, Inc. requests to arrange a permit application meeting within the next two weeks to discuss and clarify issues regarding this subject application. Please feel free to call if you require any additional information.

Very truly yours,

Ozzie Morris

E. O. Morris
Manager
Environmental & Development

EOM:rw
Enclosures
cc: Mr. Henk Mathot
Mr. R. Nettles
Mr. S. Pinney
John Reynolds
Bill Thomas, BAQM
Bill Thomas, Tampa
6/25/87 WMH

Table 1. Summary of Annual Particulate Matter and Sulfur Dioxide Emissions, 1978-1986, Gardinier, Inc.

Year	No. 3 TSP Reactor Belt	No. 3 TSP Dryer	No. 4 TSP Reactor Belt	No. 4 TSP Dryer	ROP/TSP Sizing	TOTALS
			PM EMISSIONS (TPY)			
1978	1.88	8.54	2.45	7.97	1.51	22.35
1979	8.78	8.06	8.00	8.13	23.90	56.87
1980	3.70	5.20	3.40	4.50	6.80	23.60
1981	5.23	7.84	6.65	8.76	10.60	39.08
1982	3.25	5.16	2.30	5.24	6.09	22.04
1983	1.80	3.80	2.80	7.10	10.70	26.20
1984	2.41	1.94	1.96	4.18	2.71	13.20
1985	3.20	5.40	3.70	3.10	1.50	16.90
1986	2.90	3.90	2.50	4.00	7.30	20.60
			SO2 EMISSIONS (TPY)			
1978		7.04		6.30		13.34
1979		3.04		2.95		5.99
1980		3.00		2.90		5.90
1981		12.80		11.00		23.80
1982		0.85		0.46		1.31
1983		0.09		0.10		0.19
1984		0.005		0.006		0.01
1985		0.00		0.00		0.00
1986		0.04		0.04		0.08

Source: FDER Annual Operating Reports, Gardinier, Inc.

Table 2. Summary of Particulate Stack Tests, 1985-1986, Gardinier, Inc.

Date of Test	Production Rate (tons/hr)		Particulate Emissions		
	P2O5	Product	lb/hr	lb/ton P2O5	lb/ton Product
No. 3 Triple Superphosphate Reactor Belt					
Feb-5-85	24.0	48.3	3.1	0.129	0.064
Mar-7-85	23.7	46.7	2.0	0.084	0.043
Aug-6-85	24.8	51.6	3.4	0.137	0.066
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May-28-86	23.8	47.3	5.0	0.210	0.106
Oct-24-86	23.7	49.8	6.2	0.262	0.124
ROP/TSP Sizing Unit Scrubber					
Feb-27-85	33.2	71.0	0.7	0.021	0.010
Sep-10-85	41.0	86.0	0.6	0.015	0.007
Mar-27-86	43.0	94.0	1.4	0.033	0.015
Aug-27-86	35.9	75.0	14.1	0.393	0.188
Sep-8-86	36.7	76.8	0.5	0.014	0.007
Nov-17-86	40.9	86.0	0.8	0.020	0.009
Nov-26-86	20.5	45.2	1.9	0.093	0.042
Dec-19-86	39.4	83.8	1.3	0.033	0.016

File copy

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

June 29, 1987

Mr. Wayne Aronson
Chief
Program Support Section
U.S. EPA, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Dear Mr. Aronson:

RE: Proposed Modification Requests - No. 5 DAP Plant
Gardinier, Inc.
Past PSD Permit: PSD-FL-026
State Construction Permit: AC 29-135083

Enclosed for your review and comment is a response to a request for additional information for the above referenced existing source and facility. Assessment as to whether or not the modifications requested are subject to PSD or nonattainment new source review, or both, is currently under review. If you have any comments or questions, please contact John Reynolds at the above address or at (904)488-1344. Any comments that you have should be submitted to the Bureau by July 23, 1987.

Sincerely,

R. Bruce Mitchell
Bureau of Air Quality
Management

/bm

Attachment

PM
7.27.87
Atlanta, GA

AC 29-135083
File

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

DER

JUL 29 1987

BAQM

JUL 27 1987

Mr. Clair Fancy, Deputy Chief
Bureau of Air Quality Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301-8241

Re: Gardinier Inc. - Proposed No. 5 DAP Plant Modification
AC29-135083

Dear Mr. Fancy:

This is in regard to your letter of June 29, 1987, regarding Gardinier's response to FDER comments on their application of May 26, 1987. In our review of the application submitted to EPA on June 2, 1987, we had questions as to the use of actual emissions for netting calculations as addressed in your June 8, 1987, letter to Gardinier. Therefore, their response of June 22, 1987, is crucial in determining the acceptance of their proposed actual emissions decreases.

In their proposal, 1979 actual emissions are used for TSP and 1981 actual emissions are used for SO_2. The regulations state that actual emissions are generally the most recent two year average of actual emissions. Therefore, the company's use of highest actual emissions in two seperate years over a ten year period does not appear to represent actual emissions at this facility. We would assume that a contemporaneous and continuous time period would be used in assessing actual emissions from this source. Therefore, if the years 1979 and 1981 are the boundaries of the continuous time period a three year average should be used. However, the ultimate acceptance of the representative period for actual emissions is FDER's responsibility.

If you have any comments or questions regarding this letter, please contact Mr. Michael Brandon at (404) 347-2864.

Sincerely,

Bruce P. Miller

Bruce P. Miller, Chief
Air Programs Branch
Air, Pesticides, and Toxics
Management Division

copied: John Reynolds
Miguel Flores
CHF/BT
Bill Thomas - SW Dist

7/31/87

Inter Office
Tampa
8/18/87

File Copy

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

For Routing To Other Than The Addressee	
To:	Location:
To:	Location:
To:	Location:
From:	Date:

TO: Clair Fancy

FROM: Bill Thomas

DATE: August 18, 1987

SUBJECT: Gardinier AC29-135083, DAP, Intent to Issue, Allowable F Emissions

Please refer to the Technical Evaluation; Section IV, Conclusions; 2nd paragraph, which deals with allowable Fluoride emissions.

Attached is Nancy Wright's letter of April 6, 1984 concerning handling of the "0.4 rule". This is in accordance with Department practice in recent years.

Accordingly, Gardinier should be provided a total facility F emission allowance of 24.7 lbs/hr. NSPS source allowances should be deducted from the total: No. 4 Phos. Acid, 1.2 lbs/hr. and No. 5 DAP, 3.3 lbs/hr. The remaining 20.2 lbs/hr. F may be allocated to other sources by Gardinier. The allocations then become standards that must be complied with.

Please contact me if you have questions.

WCT/js

Attachments

cc: Jerry Campbell

Copied: John Reynolds
Claire Fancy
Bill Thomas
8/21/87

DER
AUG 21 1987
BAQM

Jim Esther

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

April 6, 1984

Calvin J. Livingston, Esquire
Holland & Knight
Post Office Drawer BW
Lakeland, Florida 33802

Dear Cal:

After lengthy discussions with staff of both BAQM and the Southwest District Office and review of the history the "0.4 rule" (Rule 17-2.600(3)(b)), the Department has arrived at a counter-proposal which we believe is consistent with the intent of the rule. As I explained in our conversation on April 5th, the following is a summary of an acceptable application of the "0.4 rule."

The "0.4 rule" applies to all plant complexes which existed in January 1972 and had an operating phosphoric acid section (as did Agrico). These complexes were allowed total emissions of flourides of 0.4 pounds per ton of P_2O_5 input to the phosphoric acid section. The 0.4 figure was derived by estimating phosphoric acid production for the industry and the related uncontrolled flouride emissions, then comparing those emissions to safe grass levels of flouride. To interpret this rule consistently with the overall purpose of air quality regulation--to maintain and enhance air quality--expansion of the capacity for phosphoric acid production should not result in an increase in allowable flouride emissions. Therefore, the permitted phosphoric acid capacity on the effective date of the regulations should act as a "cap" for total flouride emissions within the plant.

When the 0.4 rule first applied to a plant complex, the total allowable emissions could be allocated among the sources by the plant (unless otherwise stated in the plant's permit.) As

existing souces are replaced or modified, the allocation may shift due to specific limits placed on new sources. The new sources are still included within the 0.4 rule for purposes of determining the allocation for remaining existing sources. Under the new source rules, a plant may, however, elect to adhere to a limit which is more stringent than new source requirements to allow for a higher allocation on an existing source. In addition, the allocation for a non-operating source (for example, permitted but not constructed) may be shifted to an existing source until such time as the source begins operation. The "total emissions" concept of the 0.4 rule allows for some flexibility in allocation.

As an alternative to allocation under the 0.4 rule, an existing source may, of course, choose to comply with the standard for new sources.

Sincerely,

Nancy

Nancy E. Wright
Assistant General Counsel

NEW/cv

cc: Steve Smallwood
Dan Williams

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION) Claire Fancy	Initial	
	Date	
2.	Initial	
	Date	
3. DER	Initial	
	Date	
4. AUG 21 1987	Initial	
	Date	

REMARKS: BAQM

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: Bill Thomas, Tpa

DATE 8-18-87

PHONE

DM
24 Aug 87
Jampa, FL

GARDINIER INC.

Post Office Box 3269 ○ Tampa, Florida 33601 ○ Telephone 813 – 677-9111 ○ TWX 810 – 876-0648 ○ Telex-52666 ● Cable - Gardinphos

August 24, 1987

DER
AUG 26 1987
BAQM

Mr. Clair Fancy
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 323-99-2400

Subject: Proof of Publication - Intent to Issue Permit
No. 5 Diammonium Phosphate Plant Modification
AC 29-135083

Dear Sir:

You will find attached Proof of Publication of Intent to Issue Permit by the Department of Environmental Regulation.

If there are any questions, please contact me.

Sincerely,

E. O. Morris
Environmental Manager

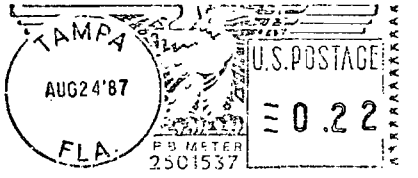
:gf

cc: D. Williams
J. Campbell/HCEPC
R. Cabina

Copied: John Reynolds - 8/28/87 MR

GARDINIER INC.
P. O. BOX 3269 TAMPA, FLORIDA 33601

GIBSONTON
DROP SHIPMENT
AUTHORIZATION 1



Mr. Clair Fancy
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 323-99-2400

Publish 20th

DER

AUG 26 1987

AUG 21 RECD

44

THE TAMPA TRIBUNE

Published Daily
Tampa, Hillsborough County, Florida

AC 29-135083

State of Florida
County of Hillsborough } ss.

Before the undersigned authority personally appeared G. T. Gleason, who on oath says that he is Controller of The Tampa Tribune, a daily newspaper published at Tampa in Hillsborough County, Florida; that the attached copy of advertisement being a .....

LEGAL NOTICE

in the matter of NOTICE OF PROPOSED AGENCY ACTION

was published in said newspaper in the issues of .....

AUGUST 20, 1987

Affiant further says that the said The Tampa Tribune is a newspaper published at Tampa, in said Hillsborough County, Florida, and that the said newspaper has heretofore been continuously published in said Hillsborough County, Florida, each day and has been entered as second class mail matter at the post office in Tampa, in said Hillsborough County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm, or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

G. T. Gleason

Sworn to and subscribed before me, this 20th *day of* AUGUST *A.D. 19* 87

Lisle A. Zualta

Notary Public, State of Florida

My Commission Expires Nov. 23, 1990

Bonded Thru Troy Fain - Insurance Inc.

(SEAL)

LISLE A. ZUALTA NOTARY PUBLIC STATE OF FLORIDA

State of Florida
Department of
Environmental Regulation
Notice of Proposed
Agency Action on
Permit Application

The Department of Environmental Regulation gives notice of its intent to issue a permit to Gardinier, Inc., to modify the No. 5 Diammonium Phosphate plant (DAP) at its East Tampa plant located six and one-half miles southeast of Tampa on U.S. Highway 41 in Hillsborough County. The project involves shutting down the existing run-of-pile triplesuperphosphate units and shifting that production capacity over to the No. 5 DAP plant. As a result of the transfer of production and the contemporaneous shutdowns, emissions of all affected criteria air pollutants will be reduced. Consequently, the modification is exempted from the new source review requirements under FAC Rules 17-2.500 and 17-2.510. The Department has determined that the proposed modifications will not interfere with reasonable further progress toward attaining the ambient air quality standards.

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Failure to file a request for hearing within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this preliminary statement. Therefore, persons who may not object to the proposed agency action may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Model Rule 28-5.207 at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009 Apalachee Parkway, Tallahassee, Florida 32399-2400. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Failure to petition to intervene with the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Dept. of
Environmental Regulation
SW District
4520 Live Oak
Fair Blvd.
Tampa, Florida 33610-7349

Department of
Environmental Regulation
Bureau of Air
Quality Management
2600 Blair Stone Road
Tallahassee,
Florida 32399-2400

Hillsborough County
Environmental Protection
Commission
410 North 21st Street
Tampa, Florida 33605

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

3687 8/20/87

PM
2 Sept. 87
Tampa, FL
Full Copy

COMMISSION
RODNEY COLSON
PAM IORIO
RUBIN E. PADGETT
JAN KAMINIS PLATT
HAVEN POE
JAMES D. SELVEY
PICKENS C. TALLEY II

ROGER P. STEWART
DIRECTOR

1900 - 9th AVE
TAMPA, FLORIDA 33605
TELEPHONE (813) 272-5960

DER
SEP 4 1987
BAQM

MEMORANDUM

Date August 27, 1987

To John Reynolds thru Bill Thomas, DER (Tallahassee)

From Henry Robert Lue (HRL) thru Jerry Campbell (JC), EPC

Subject: Amendments to Gardinier, Inc. #5 DAP Plant Modification Draft -AC29-125083 (3)

Attached are our comments on the draft permit to modify Gardinier, Inc. No. 5 DAP plant.

1. Specific condition #1 should read as follows:

   1. Maximum permitted production (input) rate for this plant shall be 55.2 TPH P_2O_5. If the production rate exceeds the maximum permitted rate by 10% at anytime, a compliance test must be conducted after notifying the Environmental Protection Commission of Hillsborough County (EPCHC) and the results of this test submitted to the EPCHC within 10 working days. Any emissions in excess of those listed in Specific Condition #2 will constitute a violation of this permit. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C.

2. Please add the following as separate conditions:

   a) To show compliance with the annual allowable emission rate, hours of operation shall be 8760 hours per year.

   b) In accordance with Section 17-2.650(2)(c)5.b., F.A.C., visible emissions shall not be greater than 20% opacity.

   c) Compliance with the emission limitation of Specific Condition #2 shall be determined using EPA Methods 1, 2, 3, 4, 5, 9, 13A and 13B contained in 40CFR60 Appendix A and adopted by reference in Section 17-2.700, F.A.C. The minimum requirements for stack sampling facilities, source sampling and reporting shall be in accordance with Section 17-2.700, F.A.C. and 40CFR60, Appendix A.

   d) An application for an operating permit - Certificate of Completion of Construction, DER Form 17-1.122(20) - shall be submitted to the Environmental Protection Commission of Hillsborough County within 45 days of completion of compliance testing or at least 60 days prior to the expiration date of this permit, whichever occurs first.

e) If the construction permit expires prior to the permittee requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct which can take up to 90 days to process a complete application.

f) An Operation & Maintenance plan must be submitted with the operating permit application. The Plan must be consistent with the requirements of Section 17-2.650(2)(f) & (g), F.A.C.

g) All the notifications and record keeping requirements of 40CFR60.7 shall be submitted to the Air Section of the Southwest District and the Environmental Protection Commission of Hillsborough County within the stipulated time frame.

NB: Since the source is subjected to NSPS, general condition #13 of the permit should show this:

ie. 13. This permit also constitutes:
( ) .....
( ) .....
(X) Compliance with New Source Performance Standard

3. Re-write specific condition #9 as three separate conditions as follows:

A. Within thirty (30) days of completion of construction, the DAP plant shall be tested for particulate, sulfur dioxide, fluorides and visible emissions. Two copies of the test data shall be submitted to the Air Section of the EPC/HC within 45 days of such testing. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C.

B. Testing of emissions must be accomplished within $\pm$ 10% of the maximum production (input) rate of 55.2 TPH P_2O_5. The actual production rate shall be specified in each test result. Failure to submit the production rates or operation at conditions which do not reflect actual operating conditions may invalidate the data. [Section 403.16(1)(c), Florida Statutes].

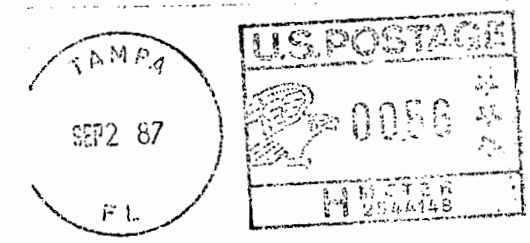
C. The Environmental Protection Commission of Hillsborough County shall be notified in writing 15 days in advance of any compliance test to be conducted on this source.

HRL/ch
CAH3A/A2

Copied: CHF/BT
Jose Regnado } 914187

Environmental Protection Commission
of
Hillsborough County

1900 9th Avenue
Tampa, Florida 33605



Mr. John Reynolds
CAPS Engineer
Flroida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

OPTIONS SELECTED FOR THE MASTER DETAIL REPORT -- AIRF09 - 08/27/87

DISTRICT:	40
OFFICE:	HIL
COUNTY:	29
FACILITY NUMBER:	0008
FACILITY TYPE:	
SOURCE NUMBER:	55
SIC:	
BEGINNING SCC:	
ENDING SCC:	

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FACILITY ID: 40HIL290008

FACILITY INFORMATION RECORD

***** FACILITY INFORMATION *****

STATUS: A = ACTIVE DATE OF PERMANENT SHUTDOWN: .. / .. / .. # OF SRC:
OWNER: GARDINIER OWNER CODE: P = PRIVA
NAME/LOC: US HWY 41 ZIP CODE: 33601
CITY: GIBSONTON CITY CODE: .... MAJOR FAC: Y (Y OR N
TYPE: 99 = OTHER TABLE 500-1: . (Y OR N
UTM ZONE: 17 EAST: 362 . 9 (KM) NORTH: 3082 . 2 (KM)
LATITUDE: 27 : 51 : 28 LONGITUDE: 82 : 23 : 15
CDS: 1 = A1A VOC: 0 = NOT FINAL COMPLIANCE DATE: ../../..
COMMENT: PHOSPHATE FERTILIZER MANUFACTURNG STORAGE AND SHIPPI

***** OWNER/AUTHORIZED REPRESENTATIVE INFORMATION *****

NAME: R. J. CABINA (LAST NAME FIRST)
ORG/FIRM: GARDINIER, INC.
ADDRESS: P O BOX 3269 CITY: TAMPA
STATE: FL ZIP CODE: 33601 - .... PHONE: (813) 677 - 9111
CONTACT: STEVEN BOSWELL PHONE: (813) 677 - 9111

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FACILITY SOURCE ID: 40HIL29000855

SOURCE INFORMATION RECORD

***** CONSTRUCTION PERMIT/PPS INFORMATION *****
PERMIT #: AC29 - 135083 PPS #: .... FEE PAID: ..... (PERMIT ON
DATE ISSUED: 05 / 06 / 80 DATE EXPIRES: 08 / 31 / 88
APP COMPLETE: .. / .. / ..

***** OPERATION PERMIT INFORMATION *****
PERMIT #: A029 - -56011 FEE PAID: ..... AOR REQUIRED: . (Y OR
DATE ISSUED: 10 / 29 / 82 DATE EXPIRES: 07 / 15 / 87

***** SOURCE DESCRIPTION/TRACKING INFORMATION *****
DESCRIPTION: DAP PLANT #5 W/ VENTURI TAIL GAS SCRUBBERS
STATUS: A = ACTIVE # OF SCC: 005 # OF POLLUTANT: 008 MAJOR SRC: Y (Y OR
INITIAL CONSTRUCTION DATE: 05 / 06 / 80 TYPE: E1 = **********
SIC: 2874 = PHOSPHATIC FERTILIZERS
NSPS: ... NESHAP: ... 111D: ... PSD: ... NAA/NSR: ... RACT: PR
COMMENT: BECAUSE OTHER SOURCES WILL BE SHUT DOWN, THE MODIFICATION
WILL RESULT IN AN OVERALL EMISSION REDUCTION.
START UP DATE: .. / .. / .. SHUT DOWN DATE: .. / .. / ..

SOURCE SCHEDULE/RATE RECORD

***** OPERATING SCHEDULE INFORMATION *****
TYPICAL OPERATING SCHEDULE: 24 (HR/DAY) 7 (DAY/WK) 52 (WK/YR)
TYPICAL % OPERATING BY SEASON: 25 (DJF) 25 (MAM) 25 (JJA) 25 (SON)
PERMITTED OPERATING SCHEDULE: 24 (HR/DAY) 7 (DAY/WK) 52 (WK/YR) 8760 (HR/YR
AOR YR: 86 OPERATING SCHEDULE: 16 (HR/DAY) 7 (DAY/WK) 52 (WK/YR) 5824 (HR/YR

***** OPERATING RATE INFORMATION *****
MAX PROCESS RATE: 0000055 UNITS: TPH P205
MAX PRODUCTION RATE: 0000055 UNITS: TPH P205

SOURCE EMISSION POINT RECORD

***** EMISSION POINT INFORMATION *****
EMISSION POINT TYPE: 1 = SINGLE POINT
STACK HEIGHT: 133 (FT) EXIT DIA: 07 . 0 (FT) EXIT TEMP: 0108 (
ACTUAL VOLUME FLOW RATE: 0116500 (ACFM) DRY STANDARD FLOW RATE: 0099300 (DSC
EXIT VEL: 0050 (FT/SEC) NONSTK EMIS HT: 0000 (FT) BLDG HT: .... WD: .... (
POINT UTM: EAST: 362 . 90 (KM) NORTH: 3082 . 50 (KM) GEP STK HT: ... (
COMMENT: .....

***** CONTROL EQUIPMENT INFORMATION *****
CONTROL A: .....
CONTROL B: .....
CAPITAL COST: A $ ..... B $ ..... TOTAL OPER COST $ ..... AOR YR:

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FACILITY SOURCE ID: 40HIL29000855

SOURCE SCC RECORD

SCC #: 3-90-004-99 = IN-PROCESS FUEL RESIDUAL OIL GENERAL
UNITS: KGALB = 1000 GAL BR MAX HOURLY RATE: **** . *** ANNUAL LIMIT: 0000
ESTIMATE ANNUAL RATE: ******* %S: 2 . 50 %ASH: 00 . 1 MMBTU: ..
ACTUAL AOR YR: 86 ANNUAL RATE: ..... %S: . . .. %ASH: .. . . MMBTU: ..
COMMENTS: RESIDUAL FUEL USAGE

SOURCE SCC RECORD

SCC #: 3-90-006-99 = IN-PROCESS FUEL NATURAL GAS GENERAL
UNITS: MCFB = MIL CUFT BURN MAX HOURLY RATE: **** . *** ANNUAL LIMIT: 0000
ESTIMATE ANNUAL RATE: ******* %S: . . .. %ASH: .. . . MMBTU: 01
ACTUAL AOR YR: 86 ANNUAL RATE: ******* %S: . . .. %ASH: .. . . MMBTU: 01
COMMENTS: NATURAL GAS--MCF BURNED

SOURCE SCC RECORD

SCC #: 3-01-030-02 = CHEM MANF NH4PO4 AMMONIATOR/GRANULATOR
UNITS: TONM = TONS PROD MAX HOURLY RATE: **** . *** ANNUAL LIMIT: 0483
ESTIMATE ANNUAL RATE: ******* %S: . . .. %ASH: .. . . MMBTU: ..
ACTUAL AOR YR: 86 ANNUAL RATE: ******* %S: . . .. %ASH: .. . . MMBTU: ..
COMMENTS: GRANULATOR--TONS PROCESSED

SOURCE SCC RECORD

SCC #: 3-01-030-01 = CHEM MANF NH4PO4 DRYERS & COOLERS
UNITS: TONM = TONS PROD MAX HOURLY RATE: **** . *** ANNUAL LIMIT: 0483
ESTIMATE ANNUAL RATE: ******* %S: . . .. %ASH: .. . . MMBTU: ..
ACTUAL AOR YR: 86 ANNUAL RATE: ..... %S: . . .. %ASH: .. . . MMBTU: ..
COMMENTS: DRYER--TONS PROCESSED

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FACILITY SOURCE ID: 40HIL29000855

SOURCE POLLUTANT RECORD

****** POLLUTANT/CONTROL INFORMATION ******
POLLUTANT ID: SO2 = SULFUR DIOXIDE % EFF: 95
PRI: 001 = WET SCRUBBER HIGH EFF SEC: ... = ...

***** EMISSION INFORMATION *****
POTENTIAL EMISSION: 00031 . 8300 (LB/HR) 000139 . 4000 (TON/YR)
ESTIMATED EMISSION: 000050 . 0000 (TON/YR) EST CODE: *
ACTUAL EMISSION: 000000 . 0500 (TON/YR) AOR CODE: * AOR YR: 86
ALLOWABLE EMISSION: .... (LB/HR) .... (TON/YR)
ALLOWABLE EMISSION: 00000 . 580000(LB/TON P205) OTHER UNIT
REGULATION CODE: OTHER = OTHER THAN LISTED CEM?: N (Y OR N
TEST FREQUENCY: 0 = NONE REQUIRED FREQUENCY BASE DATE: .. / .. /
COMMENT: REGULATED UNDER 17-2.520

SOURCE POLLUTANT RECORD

****** POLLUTANT/CONTROL INFORMATION ******
POLLUTANT ID: PM = PARTICULATE MATTER % EFF: 99
PRI: 053 = VENTURI SCRUBBER SEC: 001 = WET SCRUBBER HIGH EFF

***** EMISSION INFORMATION *****
POTENTIAL EMISSION: 00020 . 0000 (LB/HR) 000087 . 6000 (TON/YR)
ESTIMATED EMISSION: 000016 . 0000 (TON/YR) EST CODE: *
ACTUAL EMISSION: 000005 . 5200 (TON/YR) AOR CODE: * AOR YR: 86
ALLOWABLE EMISSION: 00025 . 5000 (LB/HR) 000111 . 8000 (TON/YR)
ALLOWABLE EMISSION: 00000 . 030000(GR/DSCF) OTHER UNIT
REGULATION CODE: RACT = REASON AVAILB CONTROL TCH CEM?: N (Y OR N
TEST FREQUENCY: 6 = EVERY 6 MONTHS FREQUENCY BASE DATE: 05 / 30 /
COMMENT: .....

SOURCE TEST RECORD

CURRENT TEST DATE: 04 / 24 / 87 NEXT TEST DATE: 10 / 31 / 87
TEAM NAME: GARDINIER
MAX PROCESS RATE: 0000055 ACTUAL: ..... UNITS: .....
MAX PRODUCTION RATE: 0000055 ACTUAL: 0000093 UNITS: TPH
POLLUTANT ID: PM = PARTICULATE MATTER TEST PASS? Y (Y OR
PERMIT ALLOWABLE EMIS: 00025 . 500000 UNITS: LB/HR
TEST ALLOW EMIS: 00010 . 000000 TEST ACT EMIS: 00005 . 100000
UNITS: GR/DSCF AUDIT TYPE: .
% TEST ACTUAL BELOW (-) OR ABOVE (+) TEST ALLOWABLE: 049 . 00 SIGN: -
COMMENTS: 650(2)(B)
.....
.....

6

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FACILITY SOURCE ID: 40HIL29000855

SOURCE POLLUTANT RECORD

****** POLLUTANT/CONTROL INFORMATION ******

POLLUTANT ID: NOX = NITROGEN OXIDES % EFF: ..
PRI: ... = ... SEC: ... = ...

***** EMISSION INFORMATION *****

POTENTIAL EMISSION: .... (LB/HR) .... (TON/YR)
ESTIMATED EMISSION: .... (TON/YR) EST CODE: *
ACTUAL EMISSION: 000002 . 2100 (TON/YR) AOR CODE: * AOR YR: 86
ALLOWABLE EMISSION: .... (LB/HR) .... (TON/YR)
ALLOWABLE EMISSION: ....(.....) OTHER UNIT
REGULATION CODE: ..... = ... CEM?: . (Y OR
TEST FREQUENCY: 0 = NONE REQUIRED FREQUENCY BASE DATE: .. / .. /
COMMENT: .....

SOURCE POLLUTANT RECORD

****** POLLUTANT/CONTROL INFORMATION ******

POLLUTANT ID: FL = FLUORIDE % EFF: 95
PRI: 001 = WET SCRUBBER HIGH EFF SEC: ... = ...

***** EMISSION INFORMATION *****

POTENTIAL EMISSION: 00003 . 3100 (LB/HR) 000014 . 5000 (TON/YR)
ESTIMATED EMISSION: 000001 . 0000 (TON/YR) EST CODE: *
ACTUAL EMISSION: 000000 . 7100 (TON/YR) AOR CODE: * AOR YR: 86
ALLOWABLE EMISSION: 00003 . 3100 (LB/HR) 000014 . 5000 (TON/YR)
ALLOWABLE EMISSION: 00000 . 060000(LB/TON P205) OTHER UNIT
REGULATION CODE: RULE600 = SPEC SRCE EMISS LIMIT STD CEM?: N (Y OR
TEST FREQUENCY: 6 = EVERY 6 MONTHS FREQUENCY BASE DATE: 05 / 30 /
COMMENT: .....

SOURCE TEST RECORD

CURRENT TEST DATE: 04 / 24 / 87 NEXT TEST DATE: 10 / 31 / 87
TEAM NAME: GARDINIER
MAX PROCESS RATE: 0000055 ACTUAL: ..... UNITS: .....
MAX PRODUCTION RATE: 0000055 ACTUAL: 0000093 UNITS: TPH
POLLUTANT ID: FL = FLUORIDE TEST PASS? Y (Y OR
PERMIT ALLOWABLE EMIS: 00003 . 310000 UNITS: LB/HR
TEST ALLOW EMIS: 00001 . 400000 TEST ACT EMIS: 00000 . 500000
UNITS: LB/TON P205 AUDIT TYPE: .
% TEST ACTUAL BELOW (-) OR ABOVE (+) TEST ALLOWABLE: 064 . 28 SIGN: -
COMMENTS: 600(3)(B)
FLUORINE VIOLATION RE-TESTED 4/24/87
.....

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FACILITY SOURCE ID: 40HIL29000855

SOURCE POLLUTANT RECORD

****** POLLUTANT/CONTROL INFORMATION ******

POLLUTANT ID: CO = CARBON MONOXIDE % EFF: ..
PRI: ... = ... SEC: ... = ...

***** EMISSION INFORMATION *****

POTENTIAL EMISSION: .... (LB/HR) .... (TON/YR)
ESTIMATED EMISSION: .... (TON/YR) EST CODE: *
ACTUAL EMISSION: 000000 . 5500 (TON/YR) AOR CODE: * AOR YR: 86
ALLOWABLE EMISSION: .... (LB/HR) .... (TON/YR)
ALLOWABLE EMISSION: ....(.....) OTHER UNIT
REGULATION CODE: ..... = ... CEM?: . (Y OR N
TEST FREQUENCY: 0 = NONE REQUIRED FREQUENCY BASE DATE: .. / .. /
COMMENT: .....

SOURCE VE/TEST RECORDS

***** VE INFORMATION *****

POLLUTANT ID: VE = VISIBLE EMISSIONS
ALLOW % OPACITY: NORMAL: 010 EXCEPT: ... TIME: ... (MIN)
REG CODE: ..... = ... CEM ? . (Y OR N)
TEST FREQ: 6 = EVERY 6 MONTHS FREQ BASE DATE: 01 / 01 / 87

***** TEST INFORMATION *****

CURRENT TEST DATE: 06 / 25 / 87 NEXT TEST DATE: 07 / 01 / 87
OBSERVER NAME: C. GONZALEZ-HCEPC
TEST LENGTH: 012 (MIN) TEST PASS ? N (Y OR N)
TEST % OPACITY: NORMAL: 010 EXCEPT: ... TIME: ... (MIN)
COMMENTS: .....
.....
.....

11

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NUMBER OF RECORDS PRINTED	
FACILITY:	1
SOURCE:	1
AOR:	1
SCC:	4
POLLUTANT:	5
POLLUTANT TEST:	2
VE:	1
VE-TEST:	1
FUGITIVE EMISSION:	0
BOILER:	0
INCINERATOR/RRF:	0
STORAGE TANK:	0

12

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Atlanta, GA

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

4APT/APB-am

SEP 10 1987

DER

SEP 11 1987

BAQM

Mr. Clair Fancy, Deputy Chief
Bureau of Air Quality Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301-2400
AC 29-135083
Re: Gardinier, Inc. - Proposed No. 5 DAP Plant Modification

Dear Mr. Fancy:

This is in reference to the August 12, 1987, technical evaluation for the proposed production increase at the No. 5 DAP plant at Gardinier, Inc. We have reviewed the evaluation and do not concur with the conclusions reached in the technical evaluation. We believe the proposed modification of the No. 5 DAP plant is subject to PSD review for the following reasons:

1. The evaluation states that SO_2 emissions from the No. 5 DAP plant are 70 tons per year based on the firing of fuel oil. However, the existing PSD permit (PSD-Fl-026) limits the emissions from this plant to 43.8 tons per year based on the permitted limit of 10 lbs/hr of SO_2 (year round operation). This would equate to a net increase resulting from the production increase of 95.6 tons per year.

2. The use of allowable emissions (TSP, SO_2 and Fl) for No. 3 and No. 4 TSP reacton belts, No. 3 and No. 4 TSP Dryers, and the ROP/TSP sizing unit is not consistent with the rules for Prevention of Significant Deterioration (PSD). The use of allowable emissions by the State in making netting calculations for PSD applicability determinations is an exception only in situations where no actual emission data is available and when those emissions limits are federally enforceable (i.e., construction permit or source specifically referenced as part of the SIP). Operating permits do not constitute a federally enforceable instrument for regulating emissions.

3. As referenced in our July 27, 1987, letter regarding representative periods for determining actual emissions, a contemporaneous time frame should be used to reflect normal operating rates and fuel usage. Gardinier's submittal of June 22, 1987, showed actual emissions from each of the above referenced sources from which contemporaneous emission decreases are claimed for the

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EXPRESS MAIL NEXT DAY SERVICE

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ORIGIN	Date In: 9/10/87	Postage $ 10.75
Post Office ZIP Code 30365	Time In: 4:45 A.M. P.M.	Return Receipt Fee $
Initials of Receiving Clerk	Weight: 1 lbs.	

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- [ ] Accepted for this destination after deposit deadline for next day delivery therefore, for delivery by second day.

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- [ ] International On Demand

Total Postage & Fees $ 10.75

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Account Number (If any) (Using an authorized number indicates postage and fees paid.)

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Federal Agency Control No.:

FROM: U.S. EPA, Region IV
Mr. Bruce P. Miller, Chief
Air Programs Branch, APTMD
345 Courtland St., NE
Atlanta, GA 30365 3065

Label 11-B (Sept. 1985) ★ U.S.G.P.O.-1985-480-021

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Initials of Delivery Employee:

X Signature of Addressee or Agent: L Aman

DELIVERY WAS ATTEMPTED

Date: Time: A.M. P.M.

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TO: Telephone Number

Mr. Clair Fancy, Deputy Chief
Bureau of Air Quality Mgt.
Twin Towers Office Bldg.
2600 Blair Stone Rd.
Tallahassee, FL 32301-2400

years 1978 through 1986. There is no reasonable way to assume that 1979 for TSP and 1981 for SO_2 are representative of actual emissions when the sources under consideration have burned natural gas for the past five of the nine years reported.

In summary, Region IV-EPA believes the proposed modification of the No. 5 DAP plant would be subject to PSD for TSP, and SO_2 under the current proposal. The permit conditions of PSD permit PSD-FL-026 will, therefore, remain in effect until such time as the FDER issues a PSD permit which replaces the corresponding conditions for DAP unit No. 5.

If you have any questions you may contact me or Mr. Brandon of my staff at (404) 347-2864.

Sincerely,

Wayne D Aumen / Acting for

Bruce M. Miller, Chief
Air Programs Branch
Air, Pesticides, and Toxics
Management Division

Copied: W. Thomas, SW Dist
J. Campbell - EPC HC
CHF/BT
John Reynolds
} 9/11/87 (mj)

22 Oct 1987
Gainesville, FL

file copy

KBN

October 21, 1987
87030

DER
OCT 26 1987
BAQM

Mr. Bruce M. Miller, Chief
Air Programs Branch
Air, Pesticides, and Toxics
Management Division
U.S. Environmental Protection Agency Region IV
345 Courtland Street
Atlanta, Georgia 30365

Re: Gardinier, Inc. - Proposed No. 5 DAP Plant Modification AC 29-135083 (Issued
- Proposed Dock Conveying System AC29-136776

Dear Mr. Miller:

KBN Engineering and Applied Sciences, Inc. (KBN) of Gainesville, Florida, prepared the air construction permit application for the above referenced projects. We have received a copy of USEPA's letters dated July 27, 1987, and September 10, 1987, commenting on the Florida Department of Environmental Regulation's (FDER) technical evaluation for the proposed modification. In these letters, USEPA raised several issues, and indicated that the agency felt the proposed modification should be subject to PSD review. On behalf of Gardinier, I would like to offer some comments and points of clarification on these issues which may help to resolve USEPA's concerns.

Three specific comments were presented in the September 10 letter. The first relates to the current allowable SO_2 emissions from the No. 5 DAP plant. The letter was correct in stating that the current allowables are 43.8 tons per year (TPY). This is the figure that Gardinier used in their application. The discrepancy apparently stems from the FDER construction permit which limited SO_2 emissions to a higher level of 70.1 TPY. FDER may have used this limit contained in the construction permit since USEPA does not consider operating permits to be federally enforceable. Based upon the 43.8 TPY current allowable, the increase in SO_2 emissions resulting from the proposed production rate increase would be 95.6 TPY, as correctly stated in your letter.

The second concern raised in the Agency's letter was that allowable emissions for SO_2, TSP and Fl were used in the netting calculations instead of actual emissions. In the case of TSP, the FDER's technical evaluation showed an offset credit of 56.9 TPY based upon actual TSP emissions in 1979 from the sources to be shut down. Thus, actual emissions (not allowables) were used in the netting calculation for TSP.

KBN ENGINEERING AND APPLIED SCIENCES, INC.
P. O. Box 14288 5700 SW 34th Street Gainesville, FL 32604 904/375-8000

Isaac

For Fl, FDER showed in the technical evaluation an offset credit from the sources to be shutdown based upon the allowable Fl emissions "allocated" to these sources. FDER shows this in a netting calculation to demonstrate the modification is not subject to PSD. Although the technical evaluation does not explain the use of the allowables in the netting calculation, there are several facts which indicate this is appropriate.

First, it is noted that the total allowable Fl emissions from the Gardinier plant are not increasing as a result of the proposed production rate increase. In fact, the total allowable Fl is actually decreasing from 24.7 lb/hr to 23.1 lb/hr, for a total decrease of 1.6 lb/hr and 7.0 TPY. Second, USEPA notes in its comments that the use of allowable emissions for PSD source applicability determinations is allowed where: 1) no actual emission data is available, or 2) those emission limits are federally enforceable. The total allowable Fl emission limit for the facility (24.7 lb/hr currently; 23.1 lb/hr after modification) is based upon Florida Administration Code, Chapter 17-2, Section 17-2.600(3), which is part of the approved State Implementation Plan, and therefore this limit is considered to be federally enforceable. In addition, there are several sources regulated under the fluoride allocation that have not been tested for actual emissions (e.g., the three triple superphosphate storage buildings).

The PSD significant emission rate for Fl is 3.0 TPY. The requested increase in allowable Fl emissions due to the No. 5 DAP plant production rate increase itself is 1.91 lb/hr and 8.4 TPY. This results in an increase of 5.4 TPY above the significance level. Actual Fl emissions from the five sources to be shut down for the last nine years are shown in Table 1. The table shows two separate years out of the last nine which experienced Fl emissions from these sources in excess of the 5.4 TPY level. Thus, if either of these two years were considered as representative, sufficient actual emissions from these sources would be available to offset the increase from the No. 5 DAP plant. Because of the historic market conditions of the Florida phosphate industry (discussed in more detail below), the 1978-1979 time period is considered to be more representative of normal source operation in regards to Fl emission from the sources to be shut down. However, the use of allowable Fl emissions from the facility, as described above, and the fact that allowable emissions from the entire facility are decreasing by 7.0 TPY, provides justification for avoiding PSD review.

In the case of SO_2, the allowable emissions from the sources to be shut down are considered creditable because this level of emissions was considered in a recent PSD permit issued for the No. 8 H_2SO_4 plant at Gardinier. This permit was for a production rate increase, and the allowable SO_2 emissions from these sources were utilized in determining compliance with ambient air quality standards and PSD increments.

FDER, in their recently issued (10/16/87) final determination for the No.5 DAP Plant modification, stated their justification for the contemporaneous emission reduction credits for SO_2. We believe FDER's approach to determining the creditable offsets is reasonable, particularly in light of the historic operating conditions of Gardinier (discussed in more detail below).

The third concern raised by USEPA in the September 10 letter concerned the "representative" time period for determining contemporaneous emissions decreases from the sources to be shut down. It was stated that there was no reasonable way to assume that 1979 for TSP and 1981 for SO_2 are representative of actual emissions since the sources under consideration have burned natural gas for the past five years.

An understanding of the state of the phosphate industry in Florida is critical to the determination of what constitutes a "representative" period for emissions. The Florida phosphate industry has been very depressed since late 1981. This depressed state is reflected in the annual phosphate products production at the Gardinier plant. As a result of the depressed market conditions, emissions have been lower than normal since 1982, and the years prior to 1982 are considered to be more representative of "normal" operation of the sources. Gardinier had declared Chapter 11 bankruptcy in 1985.

Another factor which affected SO_2 emissions is that Gardinier had take or pay contracts for natural gas utilized in the production of ammonia. In 1981, ammonia became cheaper to purchase than produce, and ammonia production was cut back. The ammonia plant was finally shut down in 1983. Due to the take or pay contracts, Gardinier was forced to utilize natural gas until October 1986. The present contract is providing Gardinier with economical natural gas, but has a cancellation clause if the price exceeds No.6 fuel oil, at which time Gardinier would utilize fuel oil.

The FDER PSD regulations (federally approved) define "actual emissions" as:

> The actual rate of emission of a pollutant from a source as determined in accordance with the following provisions:
>
> (a) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the source actually emitted the pollutant during a two year period which precedes the particular date and which is representative of the normal operation of the source.

> The Department may allow the use of a different time period upon a determination that it is more representative of the normal operation of the source. Actual emissions shall be calculated using the source's actual operating hours, production rates and types of materials processed, stored, or combusted during the selected time period.

This definition directly parallels the definition of actual emissions in the federal PSD regulations. The definition clearly states that the reviewing authority (in this case, FDER) may allow the use of a different time period upon a determination that it is more representative of normal operation of the source. There are no limits placed upon when the "different time period" can occur. This is left up to the discretion of the reviewing authority. There are also no prohibitions against using different representative time periods for different pollutants. Clearly, if particular years of operation are more representative of normal emissions of a particular pollutant, because of special conditions, then these can be used to establish the more representative actual emissions of the source.

In USEPA's August 7, 1980, preamble to the final PSD rules, published in the Federal Register, the concept of the "time period representative of normal source operation" is discussed. USEPA states, (FR, Vol. 45, No. 154, pg. 52699):

> Under the final PSD regulations, the phrase "actual emissions" means the rate at which an emission unit actually emits a particular pollutant... In general, that rate as of a particular date equals the average rate in tons per year at which the unit actually emitted the pollutant during a two-year period which precedes the particular date and is representative of normal source operation.

Note that references are made to "a particular pollutant," "a particular date," and "the pollutant." This clearly indicates that the representative period can be pollutant specific.

USEPA further discusses the concept of actual emissions in regards to PSD increment consumption (FR, Vol. 45, No. 154, pg. 52718):

> The two year period of concern should generally be the two years preceding the date as of which increment consumption is being calculated, provided that the two-year period is representative of normal source operation. The reviewing authority has discretion to use another two-year period if the authority determines that some other period of time is more typical of normal source operation than the two years immediately preceding the date of concern.

Again, this explanation clearly allows discretion to the reviewing authority. No time constraints whatsoever are placed upon when the "some other period of time" can occur. It is acknowledged that the Gardinier situation is special and normally the most recent two-year period of time would be used to establish actual emissions for netting purposes. However, we believe the adverse market conditions the Florida phosphate industry has experienced in recent years, and the special conditions Gardinier was forced to operate under in regards to natural gas usage, is justification for selecting other time periods to determine representative actual emissions for particular pollutants.

We thank you for considering these comments, and hope they are useful in your review. It would be helpful to Gardinier to know if USEPA will be revising the federal PSD permit for the No. 5 DAP plant (PSD-FL-026), or if the state will revise the permit. Please advise Gardinier (call Mr. Ozzie Morris at 813-677-9111) or myself of the status of the situation as soon as possible, either in writing or by telephone. Also, please call if you have any questions concerning this letter.

Sincerely,

David A. Buff

David A. Buff, M.E. P.E.
Principal Engineer

DAB/afb

cc: Ozzie Morris, Gardinier
John Reynolds, FDER
Mike Brandon, USEPA

Copied: John Reynolds
Bill AC 29-136776 - Dock Conveying
CHF/BT
Jerry Campbell - EPCHC
Bill Thomas - Tampa
10/26/87 mp

PM
22 Oct 1987
Gainesville, FL

Full Copy

KBN

October 21, 1987
87030

DER
OCT 26 1987
BAQM

Mr. Bruce M. Miller, Chief
Air Programs Branch
Air, Pesticides, and Toxics
Management Division
U.S. Environmental Protection Agency Region IV
345 Courtland Street
Atlanta, Georgia 30365

Re: Gardinier, Inc. - Proposed No. 5 DAP Plant Modification AC 29-135083 (Issued)
- Proposed Dock Conveying System AC29-136776

Dear Mr. Miller:

KBN Engineering and Applied Sciences, Inc. (KBN) of Gainesville, Florida, prepared the air construction permit application for the above referenced projects. We have received a copy of USEPA's letters dated July 27, 1987, and September 10, 1987, commenting on the Florida Department of Environmental Regulation's (FDER) technical evaluation for the proposed modification. In these letters, USEPA raised several issues, and indicated that the agency felt the proposed modification should be subject to PSD review. On behalf of Gardinier, I would like to offer some comments and points of clarification on these issues which may help to resolve USEPA's concerns.

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KBN ENGINEERING AND APPLIED SCIENCES, INC.
P. O. Box 14288 · 5700 SW 34th Street · Gainesville, FL 32604 · 904/375-8000

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KBN

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1987

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USA 22

10/26

~~CH~~:
~~BT~~ } FYI

Thanks

John Reynolds
Bureau of Air Quality
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

KBN ENGINEERING AND APPLIED SCIENCES, INC.

P. O. Box 14288 5700 SW 34th Street Gainesville, FL 32604

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Sincerely,

David A. Buff

David A. Buff, M.E. P.E.
Principal Engineer

DAB/afb

cc: Ozzie Morris, Gardinier
John Reynolds, FDER
Mike Brandon, USEPA

Copied: John Reynolds
Bill AC 29-136776 - Dock Conveying
CHF/BT
Jerry Campbell - EPCHC
Bill Thomas - Tampa
10/26/87 mf

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PM
21 April 1988
Tampa, FL

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GARDINIER INC.

Post Office Box 3269 ○ Tampa, Florida 33601 ○ Telephone 813 - 677 - 9111 ○ TWX 810 - 876 - 0648 ○ Telex - 52666 ○ Cable - Gardinphos

April 20, 1988

Mr. Clair Fancy
Deputy Chief
Bureau of Air Quality
Management
Department Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 323-99-2400

SUBJECT: Permit No. AC29-135083
Request for 90 Day Extension of
Expiration Date - No. 5 DAP Plant

Dear Mr. Fancy:

Gardinier and the Department has had several conversations with the EPA regarding the subject permit and Gardinier's present PSD Permit.

We seem to have resolved all issues in the permit's favor except for the allowable SO2 emissions. We have verbally agreed to compromise with EPA.

Gardinier requests an extension of the subject construction permits' expiration date by 90 days to resolve all issues with EPA and the Gardinier PSD Permit.

If we can supply any additional information, please feel free to call.

Very truly yours,

E. O. Morris
Environmental Manager

cc: Bill Thomas/DER/TPA
Rudy Cabina
File P-44

Permit issued Oct. 16, 1988

Copied: John Reynolds
CHF/BT
4-25-88

GARDINIER INC.
P. O. BOX 3269 TAMPA, FLORIDA 33601

GIBSONTON
DROP SHIPMENT
AUTHORIZATION 1

TAMPA FLA APR 21 '88 U.S.POSTAGE PB METER 2501537 = 0.25

4/25/88

~~CHF~~
~~RT~~ > FYI

Perm ltr.

CLAIR FANCY
DER
TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FL 323-99-2400

PM
Feb. 24, 1988
Tampa, FL

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GARDINIER INC.

Post Office Box 3269 ○ Tampa, Florida 33601 ○ Telephone 813 – 677-9111 ○ TWX 810 – 876-0648 ○ Telex-52666 ○ Cable - Gardinphos

February 22, 1988

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Mr. Clair H. Fancy, P.E.
Deputy Chief
Bureau Of Air Quality Management
Florida State Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 323-99-2400

SUBJECT: Air Construction Permit NO. AC29-135083
Modification of the No. 5 DAP

Permanently Ceasing Operation of the
CTM System Permits: A029-69658, 73831,
73832, 74082, 74083

Dear Mr. Fancy:

As required by the air construction permit No. AC29-135083, Condition 10, Gardinier is notifying the Department that the CTM System is permanently shut down. Operating permits AO29-69658, 73831, 73832, 74082, and 74083 may be cancelled.

If we can supply any additional information, please feel free to call.

Very truly yours,

E. O. Morris
Environmental Manager

cc: Bill Thomas/DER/Tampa
Jerry Campbell/HCEPC
Cabina
Barreiro
Mathot
Nettles
Pinney
Singletary

Copied: John Reynolds } 2.26.88
CHF/BT

GARDINIER INC.
P. O. BOX 3269
TAMPA, FLORIDA 33601

First Mail

2/26/88

~~CHF~~
~~BG~~ > FYI

(M)

Mr. Clair H. Fancy
Bureau of Air Quality Management
Florida Department of Environmental Regulation
Twin Towers Office Bldg
2600 Blair Stone Road
Tallahassee, FL 323-99-2400

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

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AUG 17 1988
DER - BAQM

AUG 12 1988

4APT/APB-aes

Mr. C. H. Fancy, P.E., Deputy Director
Bureau of Air Quality Management
Twin Towers Office Building
Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Gardinier, Inc., Modification to PSD-FL-026

Dear Mr. Fancy:

This is in response to your letter of inquiry of July 5, 1988, concerning EPA's modification to Gardinier's PSD permit. An item-by-item discussion of each of the concerns in your letter follows. Let me first mention that on June 14, 1988, EPA issued this modification to the PSD permit upon the company's acceptance of the conditions proposed by EPA. These conditions effectively limit the source's potential to emit using netting calculations performed in accordance with the PSD regulations. This was required in order to exempt the source from PSD review for the requested modifications.

Our letter of July 27, 1987, states that FDER has the responsibility of accepting a representative period for the determination of actual emissions. However, the emissions rate you selected for netting calculations did not involve any period of actual emissions reported by the company for the TSP dryers. According to Mr. John Reynolds of your staff, the emissions reductions assumed the TSP dryers had always burned fuel oil rather than natural gas as reported by the company. Therefore, the determination of the appropriate emissions limits for the DAP dryer never actually involved the determination of a representative actual emissions period by FDER for credible reduction from the shut down of the TSP dryers. When EPA performed the calculations for contemporaneous emission reductions, no credit was allowed for the use of fuel oil in the TSP dryers due to the fact that those dryers had used natural gas for a number of years. This procedure was fully explained in the permit modification of June 14, 1988.

The hourly limit of 32.4 lb/hr assumes the sulfur dioxide emissions are based on a fuel oil density of 8.0 lb/gal as given in the application, rather than the 7.88 lb/gal used for AP-42 emissions factors and in your calculations. The purpose of the daily limit is to provide a short term emissions limit for the yearly cap on sulfur dioxide emissions. Compliance with the daily limit can be determined much more readily than for the yearly cap which was required to exempt the source from PSD review. It is also more enforceable. This daily limit will allow more flexibility in the operation

of the DAP dryer in firing oil and at the same time provides assurances that the source will not exceed the yearly maximum for emissions of sulfur dioxide. In reference to the wording regarding the case of "or" between the daily and yearly limit, the conjunction simply states that the daily limit of 458 lb/day equates to 83.7 tons per year based on a 365 day year. EPA feels that the use of "and" in this instance is not preferable, since it would require the source to exceed both the short term and long term limits before a violation would occur. You are correct though in your statement that an annual standard alone is not federally enforceable.

If you have any further questions or comments regarding the permit modification letter of June 14, 1988, please contact me or Mr. Michael Brandon at (404) 347-2864.

Sincerely,

Bruce P. Miller

Bruce P. Miller, Chief
Air Programs Branch
Air, Pesticides, and Toxics
Management Division

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CARGILL
FERTILIZER, INC.

8813 Highway 41 South - Riverview, Florida 33569 - Telephone 813-677-9111 - TWX 810-876-0648 - Telex 52666 - FAX 813-671-6146

May 1, 1991 AIRBORNE OVERNIGHT DELIVERY

RECEIVED
MAY 3 1991
Bureau of
Air Regulation

Mr. Clair Fancy, P.E.
Bureau of Air Regulation
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Modifications to #3 MAP, #4 MAP and MAP Cooler
Permits AO29-152717, AO29-152718 and AO29-152266

Dear Mr. Fancy:

This is in response to your letter dated April 23, 1991 regarding the above-referenced applications received by your office on March 19, 1991. Each item of your letter is addressed in order below.

1. Copies of the current operating permits for these three sources are enclosed.

2. The permits for the subject sources do not directly limit P_2O_5 feed rates to the sources. However, emission limits are based on maximum production rates for #3 MAP and #4 MAP of 19 TPH and 21 TPH, respectively. Note, however, that the Operation and Maintenance Plans which are part of the permits indicate production rates of 18-22 TPH for each source. Based on the nominal maximum production rates of 19 and 21 TPH and assuming a P_2O_5 efficiency of 97%, P_2O_5 input rates for #3 and #4 MAP are calculated to be 9.81 and 10.85 TPH, respectively. Similarly, the MAP Cooler emission limits are based on a production rate of 38.5 TPH.

3. The actual measured ammonia emissions using the attached stationary source sampling procedure for the No. 3 MAP, No. 4 MAP, and the No. 5 DAP units are 1.5, 5.89, and 0.45 lbs/hr. respectively.

recycled paper

The allowable emission rate was established by negotiation between the Hillsborough County Environmental Commission (EPC) and Cargill Fertilizer, Inc. (named at that time Gardinier, Inc.) to address potential nuisance odors. The consulting company of Dames & Moore provided modeling of the allowable ammonia emissions and provided assurance of no ammonia nuisance odors. At the request of the EPC, Cargill Fertilizer, Inc. modified the operational permits to include ammonia emission point source limits based on the attached sampling procedure. Cargill has not received any ammonia nuisance odor complaints since the emission limit was set. To my knowledge, the DER has not set any ammonia emission limits on any other fertilizer production plant in the state.

As indicated by the enclosed modeling analysis provided by KBN Engineering and Applied Sciences, Inc., your suggested AAC ammonia levels are exceeded by the allowable emissions. However, the actual ammonia emissions do not exceed your suggested ACC level. The allowable emissions do not exceed the odor threshold.

We assume, based on our knowledge of the literature, the DER suggested AAC level was based on application of safety factors to occupational standards. However, this process generally is inappropriate for ammonia for several reasons. First, ammonia metabolizes in the body and excess amounts within reason can be handled biologically; thus, exceeding a specified limit is much less of concern for ammonia than for other pollutants. Next, peak rather than cumulative exposure are of concern for ammonia; thus, use of safety factors to adjust for inhaled quantities is inappropriate. Finally, there is little evidence that any population groups are particularly sensitive to the irritation affects of ammonia.

Ammonia is a widely used industrial chemical that can be toxic to humans if they are exposed to sufficient concentrations for sufficient times. However, ammonia is relatively unique in that it is produced in humans (human blood contain 1 ppm ammonia) and other mammals and metabolizes readily. As such, humans can tolerate relatively high concentrations of ammonia with little or no possibility of lasting affects. The most recent health assessment concludes that adverse effects are unlikely to result below about 50 ppm (34,765 micrograms/cubic meter); however, odor and irritation thresholds for ammonia can be somewhat lower. Attached for your review, is an evaluation of the "Health Effects For Ammonia".

Recycled Paper

Cargill Fertilizer, Inc and the EPC have addressed any problems associated with ammonia affectively. We have provided the necessary technology and operation and maintenance measures that prevent malfunctions and emergency releases which are typically the cause of high short-term community concentrations.

4. The requested increases in MAP production will not increase phosphoric acid production. Rather, the produced phosphoric acid will be used to produce the MAP produced rather than PFS or one of the other dry products (GTSP & DAP). As a consequence, the only secondary effects of the increased MAP production will be a slight increase in material handling. Currently, total dry products production (MAP, DAP and GTSP) is permitted at approximately 235 TPH. Assuming all of the increased MAP production offsets PFS production, the requested increase will raise this total to 245 TPH (a 4.3% increase). Total particulate emissions from the downstream material handling systems were reported at a total of 20.93 tons for 1990. Assuming that emissions increase proportional to material handling, the MAP production increase would result in an additional 0.9 tons per year. Inclusion of this into the PM/PM10 emissions estimated in the application will result in a net increase from the project of 13.59 TPY. This is below the significant emission rate of 15 TPY for the particulate matter and is not subject to new source review. Further, based on our product quality with its added de-dusting agents and our complete emission control system, we expect any increases to be less than that indicated.

5. Cargill Fertilizer, Inc. never received a permit in response to the March 1990 application. The current application is a continuation of that permitting process and contemplates the same production increase.

<u>Amendment to Application (AO29-152717) - Phase II</u>

In addition to the above, due to further evaluations, we would like to make some additional improvements to the cooler system pollution control equipment (AO29-152717). The improvements to the system proposed in the subject application will allow the unit to operate at the increased rates desired. However, further evaluation of the system has revealed that significant efficiency improvements can be realized by use of a different control equipment configuration. The current system, including the modifications proposed in the application, consists of an

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evacuation duct containing spray nozzles leading to two wet cyclone control devices. While this system is effective in achieving the necessary emission control efficiency, it results in the loss of any particulate product captured by the system. This loss occurs due to the capture of the particulate matter by the water in the cyclones. This water is drained to the facility process water system. We have determined that by replacing this control system with two dry cyclones followed by a wet venturi scrubber, a significant portion of the particulate matter (which represents lost product) can be recovered and returned to the production process.

Due to the longer lead times required for replacement of the pollution control system, we propose that the construction permit be issued to include two phases. Phase I, to be completed by December 31, 1991, will be for the upgrade of the existing system which allows for the production increase as described in the application. Phase II, to be completed by December 31, 1992, will be for the replacement of the existing control system (including the stack) with a new system as described above and presented on the attached drawing. These Phase II activities will allow for improved efficiencies and waste minimization without increasing emissions permitted under Phase I. The attached Figure 1 shows the existing and the Phase I cooler and emission control systems as provided in the construction permit application. Figure 2 & 3 (attached) show the completed Phase II system.

Should you have any questions, or require additional information, please feel free to contact me.

Sincerely,

E. O. Morris
Environmental Manager

cc: Bill Thomas/FDER/Tampa
David Buff/KBN
Jerry Campbell/HCEPC
E. O. Morris
P-8, 9, 10

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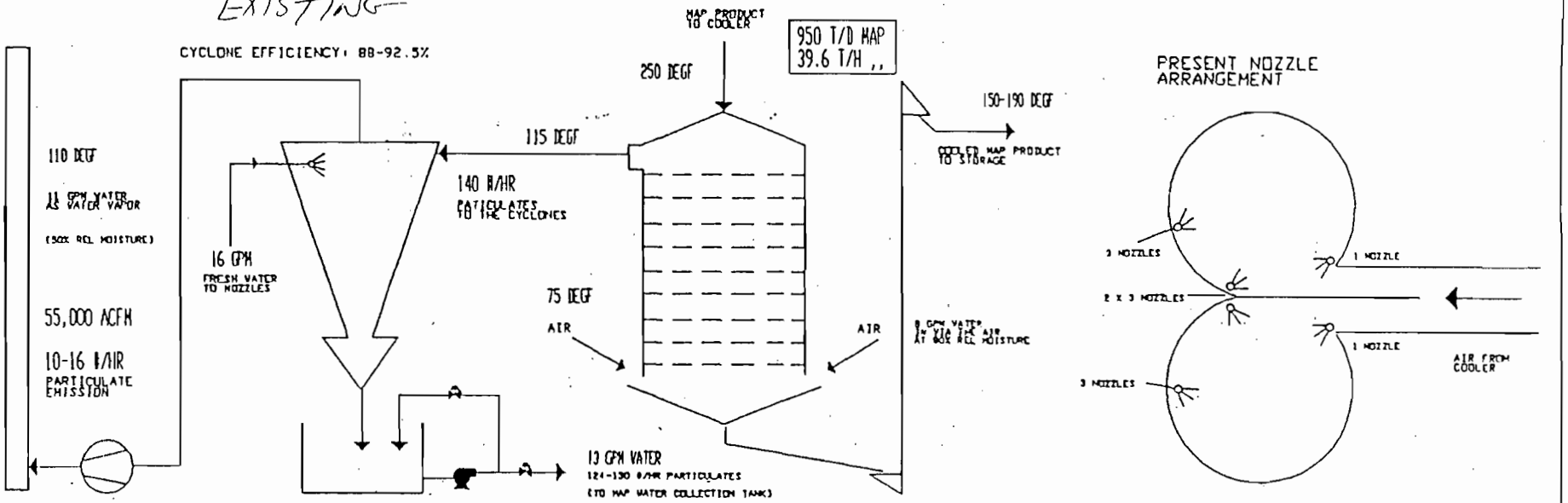
MAP COOLER STACK PARTICULATE EMISSION AT MAX PRESENT PERMITTED PRODUCTION RATE

PARTICULATE EMISSION: 10-16 #/HR

EXISTING



MAP COOLER STACK PARTICULATE EMISSION AT REQUESTED HIGHER PRODUCTION RATE

PARTICULATE EMISSION: 7-10 #/HR

WITH: -- ADDITIONAL CYCLONE INLET NOZZLES
-- AIR RECYCLE TO COOLER

ORIGINAL PROPOSAL (REVISED)

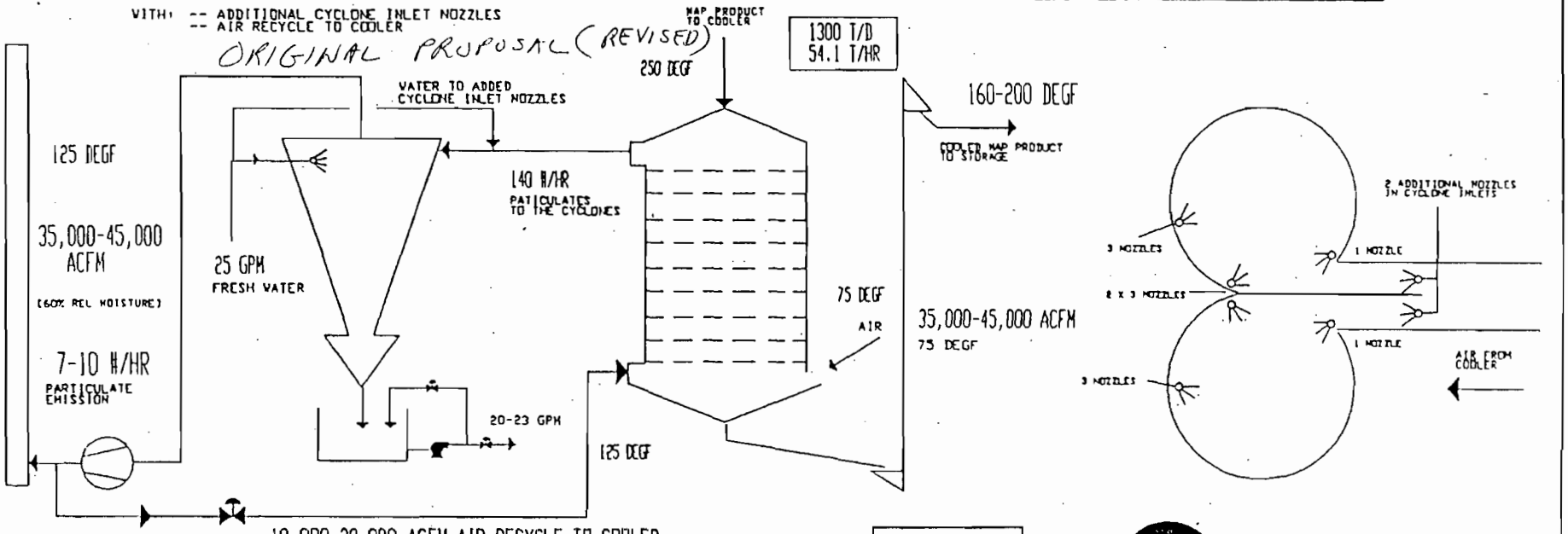


FIG 1

Cargill Fertilizer, Inc.
8813 Highway 41 South
Riverview FL 33569

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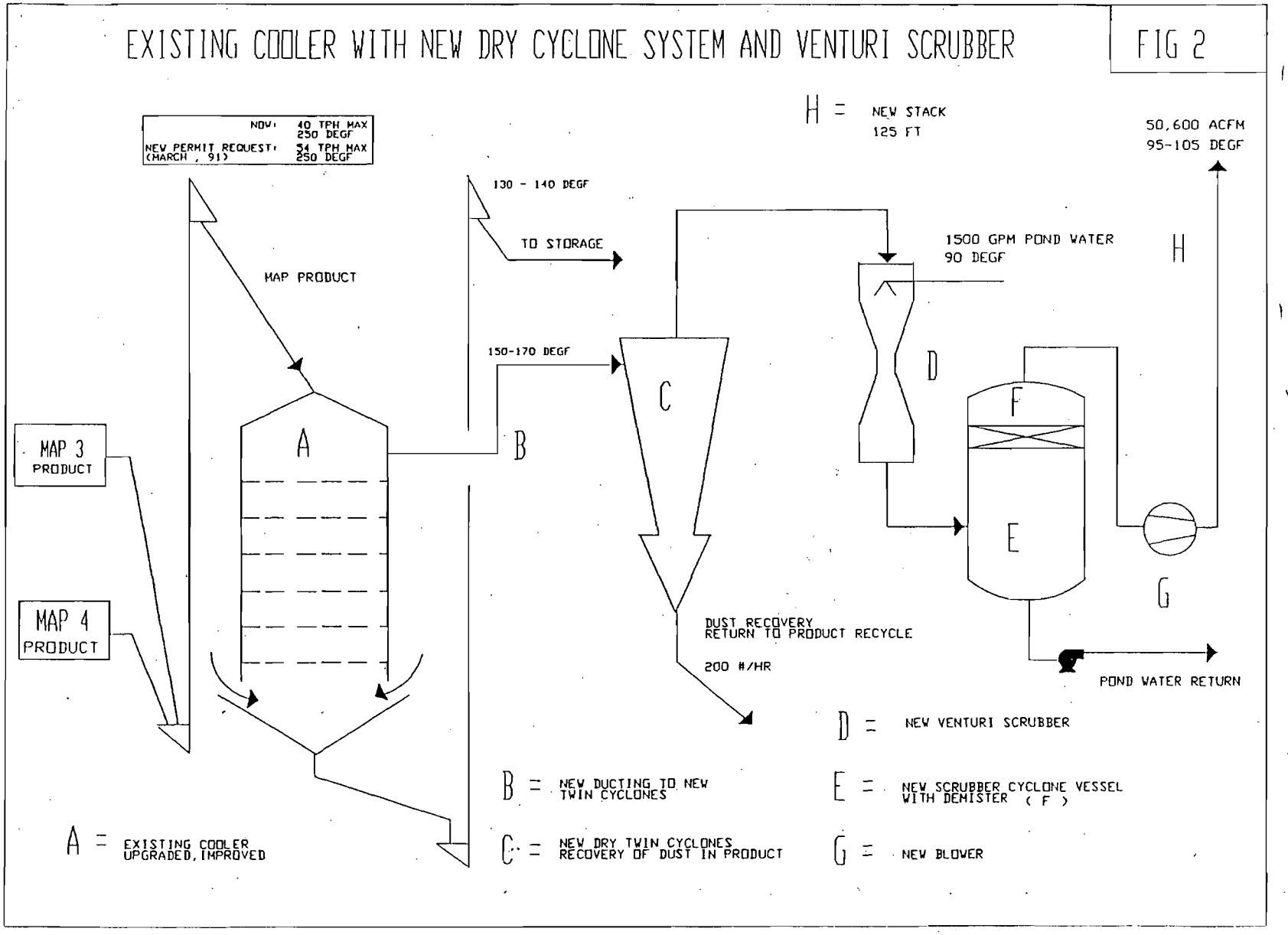
EXISTING COOLER WITH NEW DRY CYCLONE SYSTEM AND VENTURI SCRUBBER

FIG 2



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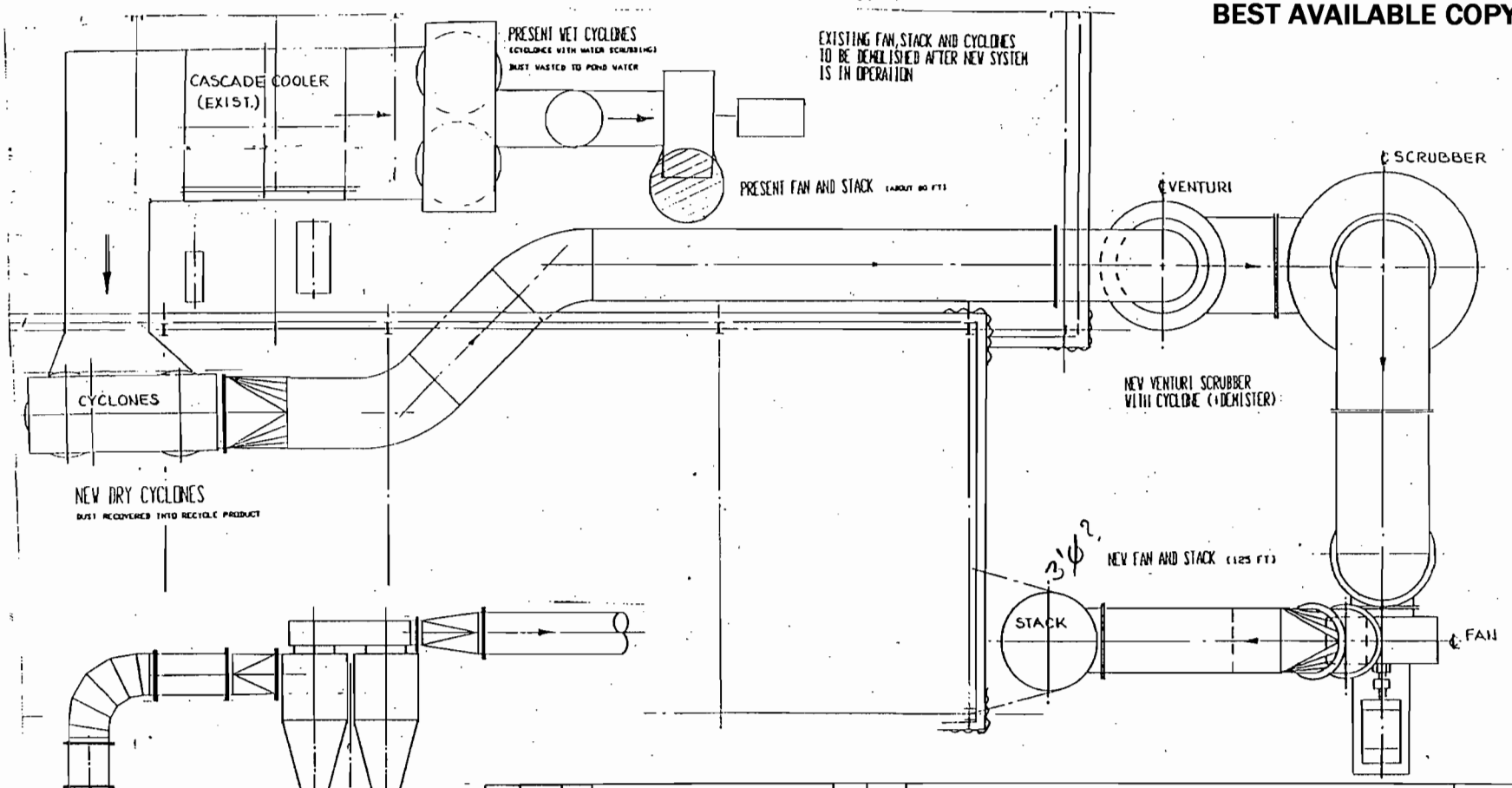

FIG

PROPOSED M.A.P. CYCLONE/SCRUBBER INSTALLATION CARGILL

TAMPA FLORIDA

Badger
A Raytheon Company

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This drawing is not to be used for construction or for ordering material unless dated and signed.

Certified _____
Date _____

Scale : 3/

Design

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KBN

April 29, 1991

Mr. Ozzie Morris
Cargill Fertilizer, Inc.
8813 Highway 41 South
Riverview, FL 33569

Dear Ozzie:

Per your request, KBN Engineering and Applied Sciences, Inc. (KBN) is pleased to submit these results of the ammonia air dispersion analyses for the Cargill phosphate fertilizer plant located in Riverview, Florida. The ammonia impacts were predicted for the existing No. 5 DAP unit and the existing Nos. 3 and 4 MAP units on an 8-hour and 24-hour averaging period basis. The attached text describes the general methodology used in the modeling, including descriptions of the emission data and receptors and building downwash considerations.

If you have any questions concerning these analyses, please call Dave Buff or me at your earliest convenience.

Thank you,

Gail C. Rampersaud

Gail C. Rampersaud
Associate Engineer

Attachments

KBN ENGINEERING AND APPLIED SCIENCES, INC.
1034 Northwest 57th Street Gainesville, Florida 32605 904/331-9000 FAX: 904/332-4189

EQUAL EMPLOYMENT OPPORTUNITY / AN AFFIRMATIVE ACTION EMPLOYER

Source Description

The source operating parameters for the ammonia sources at the Cargill facility are presented in Table 1. The No. 5 DAP stack is located in the production area at the east end of the No. 5 storage building. The Nos. 3 and 4 MAP units are located in the production area at the east end of the Nos. 3 and 4 storage building. Since the stack and operating parameters are identical for these two units, they were modeled together and collocated at a position halfway between each stack location. Two scenarios were modeled to predict ammonia impacts. The first scenario involved modeling all sources at their permitted emission rate. The second scenario involved modeling all sources at their actual emission rate as determined from the facility's 1990 annual report. Model results are presented for both of these scenarios.

General Methodology

The Industrial Source Complex short-term (ISCST) dispersion model (EPA,1990a) was used to predict the 8-hour and 24-hour ammonia impacts. Concentrations were predicted using a 5-year period of meteorological data from 1982 through 1986. This data consisted of hourly surface weather observations collected from the National Weather Service (NWS) station at the Tampa International Airport, which is located approximately 20 kilometers northwest of the Cargill facility, and mixing heights developed from twice-daily upper-air data collected at the NWS station at Ruskin.

Receptors

A general receptor grid was used consisting of receptors located along 36 radials spaced at 10-degree increments outward from the facility, with the origin of the grid residing at the No. 5 DAP stack location. Receptors were spaced at 1000, 1200, 1500 and 2000 meters downwind from the origin along each radial. Discrete receptors were also placed along the plant property boundaries on the west side of U.S. Highway 41 and are summarized in Table 2. Since maximum predicted impacts are expected to occur close to the plant (due to downwash), property owned and fenced on the east side of U.S. Highway 41 and south of the plant (across the Alafia River) were not marked with discrete receptors. Since the general grid starts at 1000 meters downwind, it was necessary to use additional discrete receptors beyond plant property to account for the area not covered by the general grid. This was done for radials where the plant property was closer (within 600 meters) to the grid origin. These extra receptors were spaced at 600 and/or 800 meters downwind of the grid origin.

Maximum screening grid concentrations for both scenarios were refined using a refined receptor grid. Since all predicted maximum concentrations occurred at the plant property boundary, the refined grid consisted of radials spaced every 2 degrees on each side of the screening radial which resulted in the maximum predicted impact, extending to the next nearest screening radial. Receptors were placed along the actual plant property boundary on these radials.

Building Downwash

For this analysis, all sources were modeled with building data to assess the potential for building downwash to occur. The specific building data used for each source is summarized in Table 3. This building data was compiled with the use of the Breezewake program, developed by Trinity Consultants, Inc. All storage and production buildings in the ammonium phosphate production area were considered in the determination of potential building downwash effects for each source. The breezewake program analyzes all building and source locations and determines the building or buildings of influence (height and projected width) in each 10-degree radial section. All modeled stacks met the Schulman-Scire criteria for downwash determination and therefore, direction specific building data were used by the model.

$E = 25.2\ \frac{g}{s}\ \frac{lb}{454\ g}\ \frac{3600\ s}{hr} = 200\ lbs/hr$

Model Results

The maximum (highest) predicted ammonia screening impacts for 5 years of meteorological data and at the permitted emission rates are summarized in Table 4, and screening impacts using the actual emission rates are summarized in Table 5. The results of the refined analysis for both permitted and actual emissions are presented in Table 6. Based on these refined values, the maximum 8-hour and 24-hour ammonia concentrations at the permitted emission rate are 1,231 ug/m^3 and 848 ug/m^3, respectively. These predicted impacts exceed the no threat level (NTL) established in the Florida Air Toxics Working List (Draft Version 1.0, January, 1991) of 180 ug/m^3 for the 8-hour, and 43.2 ug/m^3 for the 24-hour averaging periods. The maximum predicted impacts for the 8-hour and 24-hour averaging periods using actual emission rates are 45.4 ug/m^3 and 31.2 ug/m^3, respectively. These predicted impacts are 25 percent of the 8-hour, and 72 percent of the 24-hour NTL's for ammonia.

MAI (8hr) = 1231 ug/m^3 MAC = 180 ug/m^3 (8hr)

MAI (24hr) = 848 ug/m^3 MAC = 43.2 ug/m^3 (24hr)

$\frac{25.2\ g/s}{1231\ ug/m^3} = \frac{X\ (max\ allow\ E\ 8hr)}{180}$

$X_{8hr} = \frac{180}{1231} \times 25.2 = 3.68\ g/s \cdot \frac{3600\ sec}{hr} \cdot \frac{lb}{454\ g} = 29.2\ lbs/hr$

$X_{24hr} = \frac{43.2/25.2}{848} = 1.28\% \rightarrow 10.2\ lbs/hr$

∴ EACH MAP ALLOWED 5.1 lbs/hr, EXCEEDED BY UNIT 4

Table 1. Operating and Emission Data for the Units Used in the Ammonia Modeling

Parameter	Units	
	MAP 3,4*	DAP #5
Stack Data		
Location (X,Y), ft (m)	0,87.9 (0,26.8)	0,0 (0,0)
Height, ft (m)	90 (27.43)	132.5 (40.39)
Diameter, ft (m)	3.33 (1.01)	7.0 (2.13)
Operating Data		
Flow Rate, ACFM	35,000	120,000
Temperature, F (K)	140 (333)	120 (322)
Velocity, ft/sec (m/sec)	66.98 (20.42)	51.97 (15.84)
Emission Data		
Ammonia		
Permitted, lb/hr (g/s)	200.0 (25.2)**	20.0 (2.52)
Actual, lb/hr (g/s)	7.39 (0.93)***	0.45 (0.057)

* MAP units 3 and 4 have been combined and collocated for modeling purposes.
** MAP units 3 and 4 individual permitted emissions are 100 lb/hr (12.6 g/s) each.
*** MAP units 3 and 4 actual emissions are 1.5 lb/hr (0.19 g/s) and 5.89 lb/hr (0.74 g/s), respectively.

Table 2. List of Discrete Receptors Used to Identify Plant Property Boundaries

Direction (degrees)	Distance (meters)			Direction (degrees)	Distance (meters)		
10	1589			190	643	800	
20	1369			200	697	800	
30	1236			210	786		
40	1148			220	934		
50	1077			230	1023		
60	1044			240	486	975	
70	1040			250	483	806	
80	1045			260	485	698	
90	988			270	500	600	800
100	605	800		280	533	600	800
110	446	600	800	290	590	800	
120	415	600	800	300	684	800	
130	421	600	800	310	844		
140	442	600	800	320	1019		
150	481	600	800	330	1289		
160	545	600	800	340	1829		
170	606	800		350	1836		
180	614	800		360	1829		

Note: Grid centered at Unit DAP #5 stack.
Distances represent closest distance to plant property within a 10-degree radial sector.

Table 3. Building Dimensions Associated with Cargill Ammonia Sources

Source	Area of Influence (degrees)	Associated Buildings	Building Height (feet)	Building Length (feet)	Building Width (feet)	Most Dominant Building (Model Input) Height (feet)	Most Dominant Building (Model Input) Length & Width* (feet)
MAP 3,4	10, 40-150, 220-330, 350-360	#5 MAP Production, high section	127	36	30	127	137
		#3,4 MAP Production building	100	100	80		
	20-30, 160-210, 340	GTSP Production building	127	100	120		
DAP #5	10-150,210-360	#5 MAP Production, high section	127	36	30	127	137
		#3,4 MAP Production building	100	100	80		
	160-200	GTSP Production building	127	100	120		

* Calculated to result in model simulation of projected crosswind width.

Table 4. Predicted Ammonia Screening Impacts for All and Individual Sources Using Permitted Emissions

Averaging Period/ Year	All Sources			MAP 3,4			DAP 5		
		Receptor Location			Receptor Location			Receptor Location	
	Concentration (ug/m3)	Direction (degrees)	Distance (meters)	Concentration (ug/m3)	Direction (degrees)	Distance (meters)	Concentration (ug/m3)	Direction (degrees)	Distance (meters)
8-Hour *									
1982	885	260	485	882	260	485	23.0	240	486
1983	906	270	500	900	270	500	34.5	190	643
1984	969	250	483	951	250	483	25.6	160	545
1985	863	280	533	857	280	533	47.1	180	614
1986	1116	260	485	1111	260	485	30.8	190	643
24-Hour *									
1982	452	250	483	446	250	483	15.4	120	415
1983	503	270	500	497	270	500	14.8	190	643
1984	656	250	483	646	250	483	14.4	190	643
1985	515	250	483	509	250	483	16.7	180	614
1986	475	250	483	465	250	483	14.3	240	486

* Values reported are highest concentrations.

Table 5. Predicted Ammonia Screening Impacts for All and Individual Sources Using Actual Emissions

Averaging Period/ Year	All Sources			MAP 3,4			DAP 5		
		Receptor Location			Receptor Location			Receptor Location	
	Concentration (ug/m3)	Direction (degrees)	Distance (meters)	Concentration (ug/m3)	Direction (degrees)	Distance (meters)	Concentration (ug/m3)	Direction (degrees)	Distance (meters)
8-Hour *									
1982	32.6	260	485	32.5	260	485	0.5	240	486
1983	33.4	270	500	33.2	270	500	0.8	190	643
1984	35.5	250	483	35.1	250	483	0.6	160	545
1985	31.8	280	533	31.6	280	533	1.1	180	614
1986	41.1	260	485	41.0	260	485	0.7	190	643
24-Hour *									
1982	16.6	250	483	16.5	250	483	0.3	120	415
1983	18.5	270	500	18.3	270	500	0.3	190	643
1984	24.1	250	483	23.8	250	483	0.3	190	643
1985	18.9	250	483	18.8	250	483	0.4	180	614
1986	17.4	250	483	17.2	250	483	0.3	240	486

* Values reported are highest concentrations.

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Table 6. Predicted Ammonia Refined Impacts for All Sources Using Permitted and Actual Emissions.

Scenario/ Averaging Period	Concentration (ug/m3)*	Receptor Location				
		Direction (degrees)	Distance (meters)	Day	Hour Ending	Year
Permitted Emissions						
8-Hour	1,231	252	408	263	8	1986
24-Hour	848	252	408	351	24	1984
Actual Emissions						
8-Hour	45.4	252	408	263	8	1986
24-Hour	31.2	252	408	351	24	1984

* Florida no threat level for ammonia is 180 ug/m3 for 8-hour, and 43.2 ug/m3 for 24-hour.

PM
6-15-88
Atlanta, GA

file copy

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

JUN 14 1988

RECEIVED

JUN 20 1988

DER - BAQM

4APT/APB-aes

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. E. O. Morris, Manager
Environment and Development Division
Gardinier, Inc.
P.O. Box 3269
Tampa, Florida 33601

Re: No. 5 DAP Plant Production Increase, Modification to PSD Permit (PSD-FL-026)

Dear Mr. Morris:

This letter is in response to your May 26, 1987, request to modify your Federal Prevention of Significant Deterioration (PSD) permit, PSD-FL-026, to allow for a production increase at the No. 5 diammonium phosphate dryer located within your South Tampa phosphate chemical complex. By letter dated July 27, 1987, EPA notified the Florida Department of Environmental Regulation (FDER) that your proposed use of actual emissions in netting calculations for sulfur dioxide and particulate matter was not in accordance with EPA regulations. On August 12, 1987, the FDER issued the technical evaluation and preliminary determination for the proposed modification. EPA made comments regarding the netting calculations for the modification on September 10, 1987. FDER subsequently issued state permits and a recommendation to EPA Region IV to modify the federal permit for PSD-FL-026 (without incorporating any of EPA's recommended changes in the preliminary determination) on October 16, 1987.

On October 21, 1987, KBN Engineering submitted correspondence to EPA Region IV regarding the use of actual emissions in netting calculations for TSP, F^-, and SO_2. EPA reviewed the proposal and concluded that: the review for TSP increases would be performed under nonattainment rules as the area did not attain the NAAQS for particulate matter and therefore netting would not apply; F^- netting calculations were performed in accordance with the source-specific allowable emissions limits placed upon the facility by the State Implementation Plan, and SO_2 emissions netting calculations could not be based on actual emissions older than five years due to the voluntary use of alternate fuels. The FDER was also notified that their allowance of netting credits would not be considered in modifying the federal PSD permit. The FDER proposal was to assume that the sources to be shut down for netting credit had burned fuel oil with a sulfur content of 2.5% by weight regardless of the fact that these sources had used natural gas for the past 10 years.

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

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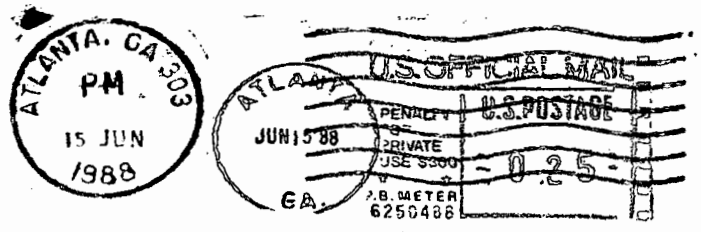
PENALTY FOR PRIVATE USE, $300

AIR-4



Mr. Clair Fancy
Bureau of Air Quality Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

On March 2, 1988, KBN Engineering submitted a proposal to EPA, independent of the FDER assessment, for the modification of the federal permit. EPA responded in a letter dated April 7, 1988, stating that the proposed SO_2 emissions increase from the modification would have to be limited to less than the PSD applicability level of 40 tons per year. KBN Engineering tentatively agreed to the modifications to PSD permit PSD-FL-026 as stated below. These permit modifications were subsequently accepted by Gardinier. Therefore we are limiting the fuel oil sulfur content, the heat input, and the SO_2 emissions from the dryer in accordance with EPA regulations for Prevention of Significant Deterioration (40 CFR 52.21).

Specific conditions 1, 2, 3, and 4 of federal PSD permit PSD-FL-026 are hereby modified as follows:

1. a. Throughput will be limited to 110,400 lb/hr of equivalent P_2O_5 feed. Thus, the operating capacity listed in Table 1, item A.2., will be changed from 46,000 to 110,400.

   b. No. 3 and No. 4 triple superphosphate reactor belts and dryers and the run of pile/triple superphosphate sizing unit shall be shut down and prohibited from operating.

2. Emissions of fluorides from the No. 5 diammonium phosphate plant shall not exceed 3.3 pounds per hour and 0.06 pounds per ton of equivalent P_2O_5 feed.

3. Emissions of particulate matter from the No. 5 diammonium phosphate dryer shall not exceed 20 pounds per hour and 0.36 pounds per ton of equivalent P_2O_5 feed.

4. a. Emissions of sulfur dioxide from the No. 5 diammonium phosphate plant shall not exceed 32.4 lb/hour, 458.4 lb/day (on a 30 day rolling average), or 83.7 tons per year. (Daily values are to be determined through fuel usage records and reported sulfur content.)

   b. Fuel sulfur content shall not exceed 2.5% by weight.

   c. Heat input to the diammonium phosphate dryer shall not exceed 12 mm BTU/hr.

Please be advised that the modification to your PSD permit herein described shall become a binding part of permit PSD-FL-026. This permit modification

shall become effective upon receipt of this letter, unless you notify us of your unacceptance of the conditions contained herein within ten (10) days after receipt of this letter.

If you have any questions or comments regarding this permit amendment, please contact me.

Sincerely yours,

Lee C. Dillon, Jr. for

Greer C. Tidwell
Regional Administrator

cc: Clair Fancy
Florida Department of Environmental Regulation

cc: John Reynolds
B. Thomas, SW Dist
Ivan Choronenko, ACEPC
CHF/BT
6-20-84