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

JAN 29 1981

REF: 4AH-AF

Ms. Carolyn Dekle
State A-95 Coordinator
Florida State Planning and Development Clearinghouse
Office of Planning and Budget
The Capitol
Tallahassee, Florida 32301

RE: USS Agri-Chemicals
Fort Meade Phosphate Chemical Complex
PSD-FL-064

Dear Mr. Smallwood:

I wish to bring to your attention that USS Agri-Chemicals proposes to modify their phosphate chemical complex near the town of Fort Meade, Florida, and that emissions of air pollutants will thereby be increased. The U.S. Environmental Protection Agency (EPA) has reviewed the proposed modification under the authority of Federal Prevention of Significant Deterioration Regulations (40 CFR 52.21) and reached a preliminary determination of approval with conditions for this construction. This approval applies only to Federal regulatory requirements and has no bearing on State or local functions.

Please also be aware that the attached public notice announcing the Agency's preliminary determination, the availability of pertinent information for public scrutiny, and the opportunity for public comment will be published in a local newspaper, Lakeland Ledger, in the near future. This notice has been mailed to you for your information and in accordance with regulatory requirements. You need take no action unless you wish to comment on the proposed construction.

If you have questions, please feel free to call Mr. Kent Williams, Chief, New Source Review, at 404/881-4552 or Mr. Jeffrey Shumaker of TRW Inc. at 919/541-9100. TRW is under contract to EPA, and its personnel are acting as authorized representatives of the Agency in providing aid to the Region IV PSD review program.

Sincerely yours,

Tommie A. Gibbs

Tommie A. Gibbs, Chief
Air Facilities Branch

TAG:JLS:clu

Attachment

PUBLIC NOTICE

(PSD-FL-064)

A modification to an existing air pollution source is proposed by USS Agri-Chemicals near the town of Fort Meade, in Polk County, Florida. The source is a phosphate chemical complex and it is proposed to increase production of sulfuric acid and phosphoric acid by replacing existing producing plants by new plants. The modification will increase emissions of air pollutants by the following amounts in tons per year:

SO_2	NO_x	Fluorides	Acid Mist
582	46	40	28

The maximum increment consumed by the modified source is as follows:

	Annual	24-Hour	3-Hour
SO_2	<1%	<1%	<1%

The proposed construction has been reviewed by the U.S. Environmental Protection Agency (EPA) under Federal Prevention of Significant Deterioration (PSD) Regulations (40 CFR 52.21), and EPA has made a preliminary determination that the construction can be approved provided certain conditions are met. A summary of the basis for this determination and the application for a permit submitted by USS Agri-Chemicals are available for public review in the office of Mr. Everette B. Howe, City Manager, City Hall, Eight West Broadway, Fort Meade, Florida.

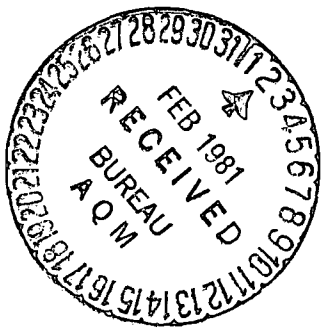
Any person may submit written comments to EPA regarding the proposed modification. All comments, postmarked not later than 30 days from the date of this notice, will be considered by EPA in making a final determination regarding approval for construction of this source. These comments will be made available for public review at the above location. Furthermore, a public hearing can be requested by any person. Such requests should be submitted within 15 days of the date of this notice. Letters should be addresses to:

Mr. Tommie A. Gibbs, Chief
Air Facilities Branch
U.S. Environmental Protection Agency
345 Courtland Street, NE
Atlanta, Georgia 30365

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

JAN 29 1981

REF: 4AH-AF



Mr. Steve Smallwood, Chief
Bureau of Air Quality Management
Division of Environmental Programs
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

RE: USS Agri-Chemicals, PSD-FL-064

Dear Mr. Smallwood:

Enclosed for your review and comment are the Public Notice and Preliminary PSD Determination for the USS Agri-Chemicals proposed modification to their phosphate chemical complex located near Fort Meade, Florida. The public notice will appear in a local newspaper, Lakeland Ledger, in the near future.

Please let my office know if you have comments or questions regarding this determination. You may contact Mr. Kent Williams, Chief, New Source Review, at 404/881-4552 or Mr. Jeffrey Shumaker of TRW Inc. at 919/541-9100. TRW Inc. is under contract to EPA, and TRW personnel are acting as authorized representatives of the Agency in providing aid to the Region IV PSD review program.

Sincerely yours,

Tommie A. Gibbs

Tommie A. Gibbs, Chief
Air Facilities Branch

TAG:JLS:clu

Enclosure

PUBLIC NOTICE

(PSD-FL-064)

A modification to an existing air pollution source is proposed by USS Agri-Chemicals near the town of Fort Meade, in Polk County, Florida. The source is a phosphate chemical complex and it is proposed to increase production of sulfuric acid and phosphoric acid by replacing existing producing plants by new plants. The modification will increase emissions of air pollutants by the following amounts in tons per year:

SO_2	NO_x	Fluorides	Acid Mist
582	46	40	28

The maximum increment consumed by the modified source is as follows:

	Annual	24-Hour	3-Hour
SO_2	<1%	<1%	<1%

The proposed construction has been reviewed by the U.S. Environmental Protection Agency (EPA) under Federal Prevention of Significant Deterioration (PSD) Regulations (40 CFR 52.21), and EPA has made a preliminary determination that the construction can be approved provided certain conditions are met. A summary of the basis for this determination and the application for a permit submitted by USS Agri-Chemicals are available for public review in the office of Mr. Everette B. Howe, City Manager, City Hall, Eight West Broadway, Fort Meade, Florida.

Any person may submit written comments to EPA regarding the proposed modification. All comments, postmarked not later than 30 days from the date of this notice, will be considered by EPA in making a final determination regarding approval for construction of this source. These comments will be made available for public review at the above location. Furthermore, a public hearing can be requested by any person. Such requests should be submitted within 15 days of the date of this notice. Letters should be addresses to:

Mr. Tommie A. Gibbs, Chief
Air Facilities Branch
U.S. Environmental Protection Agency
345 Courtland Street, NE
Atlanta, Georgia 30365

Preliminary Determination
USS Agri-Chemicals
PSD-FL-064

I. Applicant

USS Agri-Chemicals
Post Office Box 150
Bartow, Florida 33830

II. Project Location

The proposed modification is located at the applicant's Fort Meade Phosphate Chemical Complex in Polk County on Highway 630 West, approximately 4 kilometers west of Fort Meade, Florida. The UTM coordinates are: Zone 17, 416.0 kilometers east and 3069.0 kilometers north.

III. Project Description

The applicant proposes to increase production of sulfuric acid from 547,500 to 1,355,000 short tons per year of phosphoric acid from 200,000 to 484,000 short tons per year, and of fluorsilicic acid from 8,100 to 15,000 short tons per year. The applicant further proposes to construct a wet phosphate rock grinding unit with 1,600,000 short tons per year production capacity. The gypsum disposal area and cooling pond area will be enlarged to accomodate the increased heat and disposal load of the production increase. Table 1 summarizes the capacity levels of the new, modified, and replaced facilities.

IV. Source Impact Analysis

The existing plant is a major source (potential to emit greater than 100 tons per year) of particulate matter (PM), sulfur dioxide (SO_2), nitrogen oxides (NO_x), and fluorides. Moreover, the proposed modification significantly increases emissions of air pollutants regulated under the Clean Air Act (Act) as amended August 7, 1977. Thus, in accordance with Title 40 Code of Federal Regulations, Part 52.21 (40 CFR 52.21) as promulgated August 7, 1980 (45FR52676), the proposed construction will be a major modification and shall be subject to a Prevention of Significant Deterioration (PSD) review.

TABLE 1
SUMMARY OF PROJECT

Facility	Maximum Operating Rate
New	
Sulfuric Acid Plant	183.3[a]
Phosphoric Acid Plant	70.5
Modified	
Cooling Pond - Before	60[c]
Cooling Pond - After	123[c]
Increase	63[c]
To Be Shut Down	
Sulfuric Acid Plant	62.5[a]
Phosphoric Acid Plant	25.5[b]

[a] tons per hour 100% H_2SO_4 produced

[b] tons per hour equivalent P_2O_5 feed

[c] acres of cooling water surface

The PSD review shall be applied to each pollutant regulated under the Act as amended August 7, 1977 for which the modification would result in a significant net emissions increase. Table 2 summarizes emissions of all pollutants regulated under the Act which are affected by the proposed modification. As the table shows, the net emissions increases for SO_2, acid mist, NO_x, and fluorides are significant for the proposed modification. The net increase of PM and carbon monoxide (CO) emissions is not significant, and therefore is not subject to PSD review.

PSD review analyzes the following:

A. Best Available Control Technology (BACT);
B. National Ambient Air Quality Standards (NAAQS) Impacts;
C. PSD Increments Impacts;
D. Class I Area Impacts;
E. Growth Impacts;
F. Soils, Visibility, and Vegetation Impacts.

A. Best Available Control Technology (BACT)

The applicant has submitted an application which has been determined to be complete before August 7, 1980. This application showed the modification was subject to 40 CFR 52.21 as in effect on June 19, 1978. Therefore, in accordance with 40 CFR 52.21(i)(9) the requirements for BACT specified in the 1980 PSD regulations, 40 CFR 52.21(j), shall not apply. Instead the requirements in accordance with 40 CFR 52.21(j) as in effect on June 19, 1978 shall be applied. The latter does not require a BACT review for facilities emitting NO_x or fluorides, because the increase of uncontrolled NO_x emissions is less than 100 tons per year, and the increase of controlled emissions of fluorides is less than 50 tons per year. However, all applicable emission limitations under the State Implementation Plan (SIP) and under the standards of performance under Title 40 Code of Federal Regulations Part 60 (40 CFR 60, NSPS) and Part 61 (40 CFR 61, NESHAPS) must be met.

The new phosphoric acid plant which emits fluorides is subject to NSPS requirements. There are no applicable NESHAPS requirements. NESHAPS

TABLE 2
EMISSIONS SUMMARY
(tons per year)

	Facility	PM	SO_2	Acid Mist	NO_x	CO	Fluorides
A.	New Construction						
	Sulfuric Acid Plant	0	2920[a]	110[a]	88[b]	1	0
	Phosphoric Acid Plant	0	0	0	0	0	5[c]
B.	Modified (After)						
	Cooling Pond	0	0	0	0	0	72[d]
C.	Modified (Before)						
	Cooling Pond	0	0	0	0	0	35[d]
D.	Increase from New and Modified	0	2920	110	88	1	42
E.	To Be Shut Down						
	Sulfuric Acid Plant	0	2338[e]	82[e]	42[b]	.5	0
	Phosphoric Acid Plant	0	0	0	0	0	2
F.	Decrease from Shut Down	0	2338	82	42	.5	2
G.	Total Net Increases	0	582	28	46	0.5	40
H.	Significant Net Increase	25	40	7	40	100	3

[a]Allowed emissions at design rate of 4,000 tons H_2SO_4 per day for 365 days per year.

[b]EPA estimate using emission factor 2.1 x 10^{-6} pounds of NO_x per dry standard cubic foot determined by tests on a similar unit at New Wales Chemical, Inc. in Polk County, Florida.

[c]Allowed emissions at design rate of 1,400 tons of P_2O_5 product per day for 365 days per year.

[d]EPA estimate using emission factor of 3.22 pounds of fluorides per acre day.

[e]Applicant's estimate of actual 1979 emissions based upon allowed emissions and actual operating time.

control a specific list of hazardous pollutants, none of which are emitted from this source. There are no more restrictive limitations under the General SIP requirements. Table 3 lists the NSPS emissions limits applicable to the proposed modification.

Any new facility which increases emissions of SO_2 or acid mist must apply BACT. BACT is defined as the maximum degree of reduction achievable determined by a casebycase review taking into account energy, environmental, and economic impacts. The applicant has proposed BACT for each applicable case and has presented justification for the choice proposed. The justification is based upon the criteria listed above.

The applicant has proposed double absorption technology to control SO_2 emissions from the sulfuric acid plant and has proposed 4.0 pounds of SO_2 per ton of 100% H_2SO_4 produced as BACT. This is based upon the NSPS requirements (40 CFR 60 subpart H). EPA has recently reviewed available H_2SO_4 plant technology and concluded that double absorption remained the best technology and that no basis for reducing the NSPS limit exists. Similiarly, no justification could be found to require a more stringent emission limit for the proposed construction, and EPA concurs that the applicant's proposal is BACT for SO_2 for the H_2SO_4 plant in this case.

The applicant has proposed high efficiency mist eliminators and a limit of 0.15 pound of acid mist per ton of 100% H_2SO_4 produced as BACT based upon the NSPS requirements. No justification for a more stringent control could be found, and the proposed technology and emissions limit is BACT for acid mist from the sulfuric acid plant.

B. Impact upon National Ambient Air Quality Standards (NAAQS)

PSD review requires a demonstration that the proposed construction does not cause or contribute to a violation of the NAAQS for each applicable pollutant. The ambient air standards for SO_2 and NO_x for various averaging times are shown in Table 4. No NAAQS has been established for acid mist or fluorides, therefore, NAAQS impact analysis is required only for SO_2 and NO_x emissions.

TABLE 3
ALLOWABLE EMISSION LIMITS

Facility	Pounds Per Hour	Standard lbs/Operating Unit	Basis
New Construction			
Sulfuric Acid Plant			
SO_2	733	4[a]	NSPS, BACT
Acid Mist	27.5	0.15[a]	NSPS, BACT
Visible Emissions		<10% opacity	NSPS, BACT
Phosphoric Acid Plant			
Fluorides	1.41	0.02[b]	NSPS

[a]Pounds per ton of 100% H_2SO_4 produced.

[b]Pounds per ton of equivalent P_2O_5 feed.

TABLE 4
IMPACTS UPON THE NAAQS
BY THE PROPOSED CONSTRUCTION

Pollutant	Averaging Time	NAAQS[a,b]	Concentration Increases	Significant Increase[c]
SO_2	Annual	80	<0	1
	24-Hour	365[d]	<1	5
	3-Hour	1,300[d]	4	25
NO_x	Annual	100	<0	1

[a]The lower concentration of either the primary or secondary standard.
[b]Micrograms per cubic meter.
[c]In accordance with significance levels published FR26398 (June 19, 1978).
[d]Not to be exceeded more than once per year.

The applicant submitted an analysis of the impact of the proposed project SO_2 emissions operating at maximum allowed rate. The analysis accounted for the SO_2 emissions reduction from shutting down the existing sulfuric acid plant by modeling negative emissions rates at actual stack conditions. Maximum operating of the existing plant was assumed consistent with actual operating during the preceding 2-year period. The model algorithm subtracted the impact of the existing source (to be shut down) from the impact of the proposed source at each receptor for each hour of meteorological data input to the model. The approach yields the expected net change at each receptor. The analysis was carried out using the EPA approved CRSTER model. The receptors were located on 15 concentric rings ranging from 0.6 kilometers to 50 kilometers from the source. Meteorological data at 1-hour intervals for the entire year of 1972 from Tampa, Florida Airport was used. The maximum hourly SO_2 emissions from the new sulfuric acid plant are 17 percent greater than those from the existing plant, but since the stacks are higher (53.3 meters vs 29 meters) and the emitting temperature is 45°C higher, diffusion is increased resulting in reduced annual ambient concentration throughout the 50-kilometer radius area studied. For the short-term averaging (24-hour and 3-hour) the ambient concentrations were also reduced in close proximity to the source (approximately 1 km). At greater distances the ambient concentrations did increase, but the maximum increases were below the significance levels defined in the Preamble to the 1978 PSD regulations (43FR26398). The results are shown in Table 4. The applicant has determined the stack height which meets the requirements of Good Engineering Practice (GEP) for the new sulfuric acid plant is 54.6 meters, which compares satisfactorily with the actual proposed stack height of 53.3 meters. EPA has reviewed on the basis that emissions impacts are insignificant no refined analysis was required, and it was concluded that the modification does not threaten the NAAQS for SO_2.

The applicant did not submit an analysis of the impacts of the NO_x increased emissions. However, since the NO_x emissions are from the same stacks as the SO_2 emissions, and are only 8 percent of the SO_2 emissions increase, and the SO_2 analysis showed a negative annual impact, it is

determined that the annual NO_x impact also is insignificant and does not threaten the NAAQS for NO_x.

C. PSD Increment Analysis

PSD increments have been established for PM and SO_2. No PSD increments have been established for NO_x. This project is not subject to PSD review for PM; therefore, the only applicable increments are those for SO_2. SO_2 increments are listed as follows:

Averaging Time	PSD Increment (ug/m^3)
Annual	20
24-hour	91
3-hour	512

The increases in ambient concentration due to this project shown in Table 4 are less than 1 percent of the allowable increments and are also below the published significance levels as discussed above. Therefore, no refined increment analysis is required and it is concluded that SO_2 emissions do not threaten allowable increments.

D. Class I Area Impacts

The nearest Class I area is the Chassahowitzka National Wilderness Area located 125 kilometers to the northwest. Because of this distance and the insignificant impact in the near vicinity of the source, it is determined that the proposed project will not adversely effect any Class I area.

E. Growth Impacts

The increased employment due to the proposed project will be about 15 persons. The increased production will be shipped from the area and is not expected to significantly influence local, commercial, or industrial growth. The increased transportation of raw materials and products will be handled with existing facilities with a negligible increase in secondary emissions.

F. Soils, Visibility, and Vegetation Impacts

The applicant has concluded that impacts of SO_2 upon soils, visibility, and vegetation will not be detrimental since the ambient concentrations are

Rita Ford State Cons.

well below secondary NAAQS which have been established considering these welfare related criteria. No NAAQS have been established for acid mist or fluorides, but since point source emissions of these pollutants are controlled to a low level by NSPS requirements (which includes a 10% opacity limit) it is determined that no detrimental effects will occur. The fugitive emissions of fluorides from the cooling pond are emitted at ground level and do not impact a wide area. Fluorides are known to have detrimental effects upon citrus fruit yield; however, the only citrus fruit trees in close proximity (approximately 1.5 miles) are owned by USS Agri-Chemicals.

V. Conclusions

EPA Region IV proposes a preliminary determination of approval with conditions for the construction of the modification to the USS Agri-Chemicals Fort Meade (Florida) Phosphate Chemical Complex proposed in its application submitted May 21, 1980 (application complete on July 16, 1980). The determination is made on the basis of information contained in the application and in additional information dated June 19, July 9, 11, and 28, 1980 received from the applicant. The specific conditions set forth in the permit are as follows:

1. The new and modified facilities shall be constructed in accordance with the capacities and specifications stated in the application and appended materials including maximum capacities of new and modified units as shown in Table 1.

2. Following start-up of the new construction and a maximum 180 day shakedown period, the sulfuric acid and phosphoric acid plants proposed for shut-down will not operate. During the shakedown period the existing facilities may be operated such that the combined capacity utilization of the new and existing facilities do not exceed the maximum capacity for the new units (H_2SO_4 - 183.3 tons/hour and P_2O_5 - 70.5 tons P_2O_5 feed per hour).

3. Emissions of SO_2 and acid mist from the new sulfuric acid plant shall not exceed 733 and 27.5 pounds per hour, respectively,

while operating at the maxiumum allowed operating rate of 183.3 tons per hour of 100% H_2SO_4 produced. At lesser operating rates the emissions shall not exceed 4 pounds of SO_2 and 0.15 pound of acid mist per ton of 100% H_2SO_4 produced. Visible emissions from the new sulfuric acid plant shall not have opacity of 10 percent or greater. Emissions of SO_2 and acid mist from the sulfuric acid plant are the total from two stacks.

4. Emissions of fluorides from the new phosphoric acid plant shall not exceed 1.41 pounds per hour while operating at the maximum allowed operating rate of 70.5 tons per hour of equivalent P_2O_5 feed. At lesser operating rates the emissions shall not exceed 0.020 pounds per ton of equivalent P_2O_5 feed. Emissions of fluorides from the phosphoric acid plant are the total from three stacks.

5. The applicant shall install, calibrate, maintain, and operate continuous monitoring systems for measuring:

   a. The mass flow rate of equivalent P_2O_5 feed and the total pressure drop across the scrubbing systems for the new phosphoric acid plant in accordance with the provisions of 40 CFR 60 Subpart T, Paragraph 60.203 - Standards of Performance for Phosphate Fertilizer Industry (Wet Process Phosphoric Acid Plants).

   b. The emissions of sulfur dioxide from the new sulfuric acid plant in accordance with the provisions of 40 CFR 60 Subpart H, Paragraph 60.84 - Standards of Performance for Sulfuric Acid Plants.

6. In addition to Specific Conditions 3, 4, and 5, the applicant shall comply with all other applicable New Source Performance Standards requirements of (40 CFR 60 Subparts T and H).

7. Compliance with the emission limits (Conditions 3 and 4) shall be

determined by performance tests scheduled in accordance with the General Conditions attached. The performance tests shall be in accordance with the provisions of reference methods in Appendix A of 40 CFR 60, except as provided under 40 CFR 60.8(b) as follows:

a. Method 8 for the concentration of SO_2 and acid mist;

b. Method 1 for sample and velocity traverses;

c. Method 2 for velocity and volumetric flow rate;

d. Method 3 for gas analysis; and

e. Method 13A or 13B for the concentration of total fluorides and the associated moisture content.

All other procedures for these compliance tests shall be in accordance with the applicable requirements of 40 CFR 60 Subpart H Paragraph 60.85 or Subpart T Paragraph 60.204.

Each facility shall operate within 10 percent of the maximum operating rate during sampling. The parameters of operating rate, control equipment variables, and all continuous monitoring results shall be recorded during compliance testing and made a part of the reported results.

8. The source shall comply with the requirements of the attached General Conditions.

GENERAL CONDITIONS

1. The permittee shall notify the permitting authority in writing of the beginning of construction of the permitted source within 30 days of such action and the estimated date of start-up of operation.

2. The permittee shall notify the permitting authority in writing of the actual start-up of the permitted source within 30 days of such action and the estimated date of demonstration of compliance as required in the specific conditions.

3. Each emission point for which an emission test method is established in this permit shall be tested in order to determine compliance with the emission limitations contained herein within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source. The permittee shall notify the permitting authority of the scheduled date of compliance testing at least thirty (30) days in advance of such test. Compliance test results shall be submitted to the permitting authority within forty-five (45) days after the complete testing. The permittee shall provide (1) sampling ports adequate for test methods applicable to such facility, (2) safe sampling platforms, (3) safe access to sampling platforms, and (4) utilities for sampling and testing equipment.

4. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of two (2) years from the date of recording.

5. If, for any reason, the permittee does not comply with or will not be able to comply with the emission limitations specified in this permit, the permittee shall provide the permitting authority with the following information in writing within five (5) days of such conditions:

   (a) description of noncomplying emission(s),

   (b) cause of noncompliance,

   (c) anticipated time the noncompliance is expected to continue or, if corrected, the duration of the period of noncompliance,

   (d) steps taken by the permittee to reduce and eliminate the noncomplying emission,

   and

   (e) steps taken by the permittee to prevent recurrence of the noncomplying emission.

   Failure to provide the above information when appropriate shall constitute a violation of the terms and conditions of this permit. Submittal of this report does not constitute a waiver of the emission limitations contained within this permit.

6. Any change in the information submitted in the application regarding facility emissions or changes in the quantity or quality of materials processed that will result in new or increased emissions must be reported to the permitting authority. If appropriate, modifications to the permit may then be made by the permitting authority to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause violation of the emission limitations specified herein.

7. In the event of any change in control or ownership of the source described in the permit, the permittee shall notify the succeeding owner of the existence of this permit by letter and forward a copy of such letter to the permitting authority.

8. The permittee shall allow representatives of the State environmental control agency and/or representatives of the Environmental Protection Agency, upon the the presentation of credentials:

   (a) to enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of the permit;

   (b) to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit, or the Act;

   (c) to inspect at reasonable times any monitoring equipment or monitoring method required in this permit;

   (d) to sample at reasonable times any emission of pollutants;

   and

   (e) to perform at reasonable times an operation and maintenance inspection of the permitted source.

9. All correspondence required to be submitted by this permit to the permitting agency shall be mailed to the:

   Chief, Air Facilities Branch
   Air and Hazardous Materials Division
   U.S. Environmental Protection Agency
   Region IV
   345 Courtland Street
   Atlanta, Georgia 30365

10. The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

The emission of any pollutant more frequently or at a level in excess of that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

FEB 18 1981

REF: 4AH-AF

Mr. Steve Smallwood, Chief
Bureau of Air Quality Management
Division of Environmental Programs
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

RE: W. R. Grace and Company
PSD-FL-068

Dear Mr. Smallwood:

Enclosed for your review and comment are the Public Notice and Preliminary PSD Determination for the W. R. Grace and Company's proposed modification to their existing diammonium phosphate plant and storage and shipping facilities located near Bartow, Florida. The public notice will appear in a local newspaper, Lakeland Ledger, in the near future.

Please let my office know if you have comments or questions regarding this determination. You may contact Mr. Kent Williams, Chief, New Source Review, at 404/881-4552 or Mr. Jeffrey Shumaker of TRW Inc. at 919/541-9100. TRW Inc. is under contract to EPA, and TRW personnel are acting as authorized representatives of the Agency in providing aid to the Region IV PSD review program.

Sincerely yours,

Tommie A. Gibbs

Tommie A. Gibbs, Chief
Air Facilities Branch

TAG:JLS:clu

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

FEB 18 1981

REF: 4AH-AF

Ms. Carolyn Dekle
State A-95 Coordinator
Florida State Planning and Development Clearinghouse
Office of Planning and Budget
The Capitol
Tallahassee, Florida 32301

RE: W. R. Grace and Company
Modification to Diammonium
Phosphate Plant
PSD-FL-068

Dear Ms. Dekle:

I wish to bring to your attention that W. R. Grace and Company proposes to modify an existing diammonium phosphate plant and storage and shipping facilities near the town of Bartow, Florida, and that emissions of air pollutants will thereby be increased. The U.S. Environmental Protection Agency has reviewed the proposed modification under the authority of Federal Prevention of Significant Deterioration Regulations (40 CFR 52.21) and has reached a preliminary determination of approval with conditions for this construction. This approval applies only to Federal regulatory requirements and has no bearing on State or local functions.

Please also be aware that the attached public notice announcing the Agency's preliminary determination, the availability of pertinent information for public scrutiny and the opportunity for public comment will be published in a local newspaper, Lakeland Ledger. This notice has been mailed to you for your information and in accordance with regulatory requirements. You need take no action unless you wish to comment on the proposed construction.

If you have questions, please feel free to call Mr. Kent Williams, Chief, New Source Review, at 404/881-4552 or Mr. Jeffrey Shumaker of TRW Inc. at 919/541-9100. TRW is under contract to EPA, and its personnel are acting as authorized representatives of the Agency in providing aid to the Region IV PSD review program.

Sincerely yours,

Jimmie A. Gibbs, Chief
Air Facilities Branch

AG:JLS:clu

Attachment

PUBLIC NOTICE

PSD-FL-068

A modification to an existing air pollution source is proposed for construction by W. R. Grace and Company near the town of Bartow, Polk County, Florida. The source is a diammonium phosphate plant with storage and shipping facilities. This plant will be modified to increase production of phosphate fertilizer.

The proposed construction has been reviewed by the U. S. Environmental Protection Agency (EPA) under Federal Prevention of Significant Deterioration (PSD) Regulations (40 CFR 52.21), and EPA has made a preliminary determination that the construction can be approved provided certain conditions are met. A summary of the basis for this determination and the application for a permit submitted by W. R. Grace and Company are available for public review in the Bartow Public Library located at 315 East Parker Street, Bartow, Florida.

The total allowable emissions from the proposed construction are as follows in tons per year:

PM	SO_2	NO_x	F	CO
109	137	15	12	4

Further, the maximum increment consumed by the source is as follows:

	Annual	24-Hour	3-Hour
PM	<1	8	N/A
SO_2	4	34	108

Any person may submit written comments to EPA regarding the proposed modification. All comments, postmarked not later than 30 days from the date of this notice, will be considered by EPA in making a final determination regarding approval for construction of this source. These comments will be made available for public review at the above location. Furthermore, a public hearing can be requested by any person. Such requests should be submitted within 15 days of the date of this notice. Letters should be addresses to:

Mr. Tommie A. Gibbs, Chief
Air Facilities Branch
U.S. Environmental Protection Agency
345 Courtland Street, NE
Atlanta, Georgia 30365

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

FEB 19 1981

REF: 4AH-AF

Mr. A. F. Vondrasek
General Manager
W. R. Grace and Company
Bartow Works Chemical Complex
P. O. Box 471
Bartow, Florida 33830

RE: Modification to Diammonium Phosphate
Plant and Storage and Shipping Facilities
PSD-FL-068

Dear Mr. Vondrasek:

EPA Region IV has reviewed your application to construct the reference source under the provisions of Prevention of Significant Deterioration Regulations (40 CFR 52.21) and has made a preliminary determination of approval with conditions. Please find enclosed two copies of the Preliminary Determination.

A public notice will be run in the near future in a local newspaper, Lakeland Ledger. A copy of the summary and your application will be open to public review and comment for a period of 30 days. The public can also request a public hearing to review and discuss specific issues. At the end of this period, EPA will evaluate the comments received and make a final determination regarding the proposed construction.

Should you have questions regarding this information, please contact Mr. Kent Williams, Chief, New Source Review, at 404/881-4552 or Mr. Jeffrey Shumaker of TRW Inc. at 919/541-9100. TRW is under contract to EPA, and its personnel are acting as authorized representatives of the Agency in providing aid to the Region IV PSD program.

Sincerely yours,

Tommie A. Gibbs, Chief
Air Facilities Branch

TAG:JLS:clu

Enclosure

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

FEB 18 1981

REF: 4AH-AF

Polk County Commissioners
County Commission Building
P. O. Box 60
Bartow, Florida 33830

RE: W. R. Grace and Company
Modification to Diammonium
Phosphate Plant
PSD-FL-068

Ladies and Gentlemen:

I wish to bring to your attention that W. R. Grace and Company proposes to modify an existing diammonium phosphate plant and storage and shipping facilities near the town of Bartow, Florida, and that emissions of air pollutants will thereby be increased. The U.S. Environmental Protection Agency has reviewed the proposed modification under the authority of Federal Prevention of Significant Deterioration Regulations (40 CFR 52.21) and has reached a preliminary determination of approval with conditions for this construction. This approval applies only to Federal regulatory requirements and has no bearing on State or local functions.

Please also be aware that the attached public notice announcing the Agency's preliminary determination, the availability of pertinent information for public scrutiny and the opportunity for public comment will be published in a local newspaper, Lakeland Ledger. This notice has been mailed to you for your information and in accordance with regulatory requirements. You need take no action unless you wish to comment on the proposed construction.

If you have questions, please feel free to call Mr. Kent Williams, Chief, New Source Review, at 404/881-4552 or Mr. Jeffrey Shumaker of TRW Inc. at 919/541-9100. TRW is under contract to EPA, and its personnel are acting as authorized representatives of the Agency in providing aid to the Region IV PSD review program.

Sincerely yours,

Tommie A. Gibbs, Chief
Air Facilities Branch

TAG:JLS:clu

Attachment

W. R. Grace and Company

PSD-FL-068

Notification Letters Sent To:

Polk County Commissioners
County Commission Building
P. O. Box 60
Bartow, Florida 33830

Mr. David Puchaty, District Manager
Florida Department of Environmental Regulation
7601 Highway 301 North
Tampa, Florida 33610

Central Florida Regional Planning Council
P. O. Box 2089
Bartow, Florida 33830

The Honorable Gene Cole
Mayor, City of Bartow
L & M Fruit Company
P. O. Box 1048
Bartow, Florida 33830

Ms. Carolyn Dekle
State A-95 Coordinator
Florida State Planning and
Development Clearinghouse
Office of Planning and Budget
The Capitol
Tallahassee, Florida 32301

PUBLIC NOTICE

PSD-FL-068

A modification to an existing air pollution source is proposed for construction by W. R. Grace and Company near the town of Bartow, Polk County, Florida. The source is a diammonium phosphate plant with storage and shipping facilities. This plant will be modified to increase production of phosphate fertilizer.

The proposed construction has been reviewed by the U. S. Environmental Protection Agency (EPA) under Federal Prevention of Significant Deterioration (PSD) Regulations (40 CFR 52.21), and EPA has made a preliminary determination that the construction can be approved provided certain conditions are met. A summary of the basis for this determination and the application for a permit submitted by W. R. Grace and Company are available for public review in the Bartow Public Library located at 315 East Parker Street, Bartow, Florida.

The total allowable emissions from the proposed construction are as follows in tons per year:

PM	SO_2	NO_x	F	CO
109	137	15	12	4

Further, the maximum increment consumed by the source is as follows:

	Annual	24-Hour	3-Hour
PM	<1	8	N/A
SO_2	4	34	108

Any person may submit written comments to EPA regarding the proposed modification. All comments, postmarked not later than 30 days from the date of this notice, will be considered by EPA in making a final determination regarding approval for construction of this source. These comments will be made available for public review at the above location. Furthermore, a public hearing can be requested by any person. Such requests should be submitted within 15 days of the date of this notice. Letters should be addresses to:

Mr. Tommie A. Gibbs, Chief
Air Facilities Branch
U.S. Environmental Protection Agency
345 Courtland Street, NE
Atlanta, Georgia 30365

Preliminary Determination
W. R. Grace and Company
PSD-FL-068

I. Applicant

W. R. Grace and Company
Bartow Works Chemical Complex
P. O. Box 471
Bartow, Florida 33830

II. Project Location

The proposed modification is located north of State Road 60, 4 miles west of Bartow in Polk County, Florida. The UTM coordinates are Zone 17, 409.29 kilometers east and 3086.96 kilometers north.

III. Project Description

The applicant proposes to increase production of phosphate fertilizer by the construction of a diammonium phosphate (DAP) plant (No. 3) and DAP storage and shipping facilities. The rated capacity of the DAP plant is 115 tons per hour. It is scheduled to operate 7000 hours per year to produce 805,000 tons per year. Some existing fertilizer production capacity will be shut down about 6 months after the proposed construction is completed and in operation. This capacity reduction is not a concurrent reduction in emissions.

IV. Source Impact Analysis

The existing plant has the potential to emit greater than 100 tons per year of particulate matter (PM), sulfur dioxide (SO_2), nitrogen oxides (NO_x), and fluorides (F). The existing source therefore is a major stationary source. The proposed modification significantly increases emissions of pollutants regulated under the Clean Air Act (Act) amended August 7, 1977. Thus, in accordance with Title 40, Code of Federal Regulations, Part 52.21 (40 CFR 52.21) as promulgated August 7, 1980 (45FR52676), the proposed modification is subject to Prevention of Significant Deterioration (PSD) review.

The PSD review applies to each pollutant for which the modification would result in a significant net increase. Table 1 summarizes emission changes of all pollutants regulated under the Act affected by the proposed modification. This shows the proposed net emissions increase of PM, SO_2, and F are significant as defined in the PSD regulations. The emissions increase of NO_x and CO are not significant and therefore are not subject to further PSD review.

The PSD review analyzes the following:

A. Best Available Control Technology (BACT);
B. National Ambient Air Quality Standards (NAAQS) Impacts;
C. PSD Increment Impacts;
D. Class I Area Impacts;
E. Growth Impacts; and
F. Visibility, Soils, and Vegetation Impacts.

A. BACT Analysis

The applicant has submitted an application which was determined to be complete before August 7, 1980. This application shows the modification was subject to 40 CFR 52.21 as in effect on June 19, 1978. Therefore, in accordance with 40 CFR 52.21(i)(9) the requirements for BACT specified in the 1980 PSD regulations, 40 CFR 52.21(j), shall not apply. Instead the requirements of 40 CFR 52.21(j) as in effect on June 19, 1978 shall be applied. The latter does not require a BACT review for facilities emitting fluorides because the controlled emissions increase is less than 50 tons per year. However, all applicable emission limitations under the State Implementation Plant (SIP) and under the standards of performance 40 CFR 60 (NSPS) and 40 CFR 61 (NESHAPS) must be met. Thus, Table 2 shows fluoride emissions limited by NSPS requirements. There are no applicable NESHAPS requirements nor are there any general SIP requirements more restrictive than NSPS. The table contains certain standards set by case-by-case control technology review required bly the State of Florida.

The applicant proposes to control particulates from the DAP plant with three dry cyclones followed by three coaxial venturi wet scrubbers. The scrubber liquid is phosphoric acid which recycles to the DAP reactors. This

Table 1

SUMMARY OF EMISSIONS
(tons per year)

Facility	PM	SO_x	NO_x	F	CO
DAP Plant	98	137	15	12	4
DAP Storage and Shipping	11	0	0	0	0
Total	109	137	15	12	4
Significant[a] Emission Increase	25	40	40	3	100
Subject to PSD Review	Yes	Yes	No	Yes	No

[a]Reference 40 CFR 52.21(b)(23): Promulgated August 7, 1980.

serves to control ammonia losses as well as particulates. The gases are then scrubbed in two packed scrubbers using pond water as scrubbing liquid. The function of the packed scrubbers is primarily to remove gaseous fluorides; however, they are designed with spray chambers preceding the packed section to control silicon oxide gel which is formed by the reaction of silicon-tetrafluoride and water. This gel could hinder the scrubbing of fluorides or yield silicon dioxide particulates if not cleared by the spray chambers. The applicant proposes this combination of control equipment as BACT for control of PM and further proposes an emission limit of 0.5 pounds of PM per ton of equivalent P_2O_5 feed to the DAP plant. This corresponds to a BACT limit determined under the Florida SIP. A PM limit for DAP plants is not included in the NSPS.

The applicant proposes to control PM emissions from the DAP storage and shipping facility with a venturi scrubber or bag collector to a controlled concentration of 0.015 grains per dry standard cubic foot (7.8 pounds per hour).

The applicant proposes to control SO_2 emissions from the DAP plant by restricting the sulfur content of fuel oil used to heat the dryer to less than 2.4 percent sulfur. Further, the free ammonia and DAP product in the dryer is expected to absorb 50 percent of the SO_2 since the dryer combustion gases come in direct contact with DAP product. The applicant proposes this technology and an emission limit of 0.7 pounds of SO_2 per ton of equivalent P_2O_5 feed to the DAP plant as BACT. This corresponds to a BACT limit determined under the Florida SIP.

EPA has reviewed the proposed technology for the control of PM and SO_2 from the DAP plant and the DAP storage and shipping and concurs that this technology and emissions limits constitute BACT for these cases. These limits are listed in Table 2. The proposed use of two packed scrubbers is determined to be adequate technology to meet the NSPS requirements for control of fluoride emissions from the DAP plant (0.06 lb/ton equivalent P_2O_5 feed).

Table 2

ALLOWABLE EMISSION LIMITS

Facility Pollutant	Pounds Per Hour	Standard lbs/Operating Unit	Basis
DAP Plant			
PM	28	0.5[a]	BACT[b]
SO_2	39	0.7[a]	BACT[b]
Fluoride	3.4	0.06[a,c]	NSPS
DAP Storage and Shipping			
PM	7.8	0.015 gr/dscf	BACT[d]
Visible Emissions	—	<5% opacity	BACT[e]

[a]Pounds of pollutant per ton of equivalent P_2O_5 feed.

[b]Proposed by applicant based upon State of Florida BACT determination.

[c]Continuous monitoring of feed rate and scrubber pressure drop.

[d]Proposed by applicant.

[e]Imposed by EPA consistent with mass standard, proposed by applicant; this opacity standard is subject to conditions of 40 CFR 60.11.

B. National Ambient Air Quality Stantards (NAAQS) Impacts

The ambient air standards for PM and SO_2 for various averaging times are listed in Table 3. No NAAQS has been established for fluorides. Paragraph k(1) of the PSD regulations requires an air quality analysis to ensure these standards will not be violated. The applicant has submitted such an analysis.

The applicant's analysis proposed the background PM concentration will be represented by monitor measurements made by the Florida Department of Environmental Regulation (DER) at a site less than 2 kilometers south of the proposed construction. The applicant's analysis used the second highest 24-hour monitored value of 119 ug/m^3 because the standard allows one exceedance per year. The EPA review determines the more conservative use of the highest 24-hour value of 126 ug/m^3 is more appropriate for use in the analysis as discussed below. The use of this monitored data as background is a conservative assumption since it presumably contains a contribution from the existing sources at W. R. Grace, but it is to be used in the analysis without allowance for such a contribution.

Initital screening PM air quality impact modeling was carried out using the CRSTER model and particulate emissions from the proposed DAP plant and DAP storage and shipping. Meteorological data from Tampa for the years 1970 to 1974 were input to these model runs. These runs yield maximum annual concentrations from W. R. Grace facilities. Also from these runs the meteorological data resulting in the highest second-high 24-hour impact were selected for further modeling runs using the PTMTPW model and the emissions from all existing W. R. Grace facilities as well as the proposed new facilities. The model results from PTMTPW runs were collected in a 0.4 X 0.5 km receptor grid with 0.1 km spacing located at the east property line. These runs yield the 24-hour highest second-high PM ambient concentrations due to the proposed construction and the existing W. R. Grace facilities. An analysis of the impact areas of the proposed project and of new facilities at two neighboring sources (New Wales, PSD-FL-034, and Agrico, PSD-FL-061) shows no overlap, therefore interaction between sources was not evaluated.

Table 3

ANALYSIS OF NAAQS IMPACTS

Pollutant	Averaging Time	Modeled Impacts[a,b] New & Proposed	Existing	Background	Total	NAAQS[b,c]
Particulates	Annual	.8[d]	2[d]	53.6[e,f]	56.4	60[e]
	24-Hour	6[g]	13[g]	126[f]	147	150[h]
SO_2	Annual	4[d]	42[d]	20	66	80[i]
	24-Hour	34[g]	128[g]	20	182	365[h]
	3-Hour	108[g]	236[g]	20	364	1300[h]

[a]Modeled maximum ambient concentration increases.

[b]Micrograms per cubic meter, (ug/m^3).

[c]The lower concentration of either the primary or secondary standard.

[d]Highest high.

[e]Geometric mean.

[f]Highest monitored concentration measured within 2 km of site over 20 months (includes contribution from existing sources as well as true background).

[g]Highest second-high.

[h]Not to be exceeded more than once per year.

[i]Arithmetic mean.

Table 3 lists the monitored background concentration, the modeled increase in concentration, due to existing and proposed facilities and the summation of these for comparison with the NAAQS. EPA concurs with the applicant's conclusion that the proposed project shall not threaten any NAAQS for PM.

For analysis of impact on the SO_2 NAAQS, no monitored data for the vicinity of the proposed project was available, therefore, the applicant's analysis first established the area of impact of the proposed project plus two sulfuric acid plants located at the W. R. Grace plant site that have been constructed since January 6, 1975. These impact areas were determined to have a radii of 20, 36, and 40 kilometers for the annual, 24-hour, and 3-hour significance levels of 1, 5, and 25 ug/m^3, respectively (reference 45FR26398). To determine the baseline maximum ambient air concentration of SO_2 in the vicinity of the W. R. Grace plant, an inventory was made of all major SO_2 sources within 50 kilometers, which were constructed prior to January 6, 1975. The allowed SO_2 emissions from these inventoried sources were input to the AQDM model with meteorological data from Tampa representing the 5-year period, 1970 through 1974. The applicant's analysis submitted the maximum concentrations of this run as the baseline maximum annual ambient SO_2 concentration. Background from distant sources or non man-made sources was considered zero, but in the absence of monitored measurements, EPA must assume uninventoried background to be 20 ug/m^3; therefore, the applicant's proposed baseline shall be increased by 20 for all averaging times. The applicant's analysis further modeled all new sources (constructed since January 6, 1975) within 50 kilometers of the W. R. Grace site (including the new and proposed W. R. Grace facilities). The individual components of this analysis and the summation for comparison with the annual SO_2 NAAQS are shown in Table 3.

The short-term analysis to determine the impacts on the 24-hour and 3-hour NAAQS were carried out with the same inventories of new and existing sources. To analyze the interactions between W. R. Grace and the neighboring sources four worst case meteorological conditions were selected with different wind directions. The selections were based upon the results of CRSTER screening runs which had used 5 years of meteorological data. These runs had been made upon the proposed sources and showed that for W. R. Grace sources alone with a

westerly wind direction yielded maximum impact. This was selected as case 1 even though no neighboring sources lay west of W. R. Grace. The nearest major neighboring source (New Wales Chemicals) was southwest, with several sources south and a large utility to the north. Therefore, these wind directions were used to select the meteorological worst days from the previous CRSTER runs. The short term interaction concentrations were estimated with the PTMTPW air quality model. The results of the eight possible interaction cases are summarized in Table 4. The worst-case for each averaging time is shown in Table 3 and summed with a background concentration of 20 ug/m^3 for comparison with the NAAQS. EPA concurs, based on the analysis presented, that this project does not threaten any NAAQS for SO_2.

C. PSD Increment Impact

Paragraph (k)(2) of the PSD regulations requires an analysis to ensure that no PSD increment will be violated. The PM and SO_2 increments applicable to this analysis are shown in Table 5. The SO_2 modeling results developed in the NAAQS analysis which represent maximum concentrations from new and proposed sources include all increment consuming sources within the impact area and major sources within 50 kilometers. EPA concurs based on the analysis presented that this project does not threaten violation of any PSD Class II increments.

D. Class I Area Impacts

The nearest Class I area to this proposed modification is Chassahowitzka National Wildlife Refuge, located approximately 104 kilometers northwest of the W. R. Grace Chemical Complex. The applicant concludes no significant impacts will occur in the Class I area. EPA concurs that since the Class I area is greater than 100 kilometers away, and models cannot reasonably predict impacts beyond 100 kilometers, no further analysis of Class I area impacts is required, and it is determined that the proposed modification will not affect any Class I area.

E. Growth Impacts

The increased employment due to the proposed project will be about six persons. The increased production will be shipped from the area and is not expected to significantly influence local commercial or industrial growth. The increased transportation of raw materials and product will be handled with existing facilities with a negligible increase in secondary emissions.

Table 4

Maximum Short-term SO_2 Impacts (Modeled)

(8 Cases)

Wind Direction		Number and Location of Facilities: New and Proposed	Existing	Total	Maximum Concentration Location	
West		3 - W. R. Grace (no significant new or existing sources west of W. R. Grace)	5 - W. R. Grace			
	Max. 24-hour Concen.	34 ug/m^3	128 ug/m^3	162 ug/m^3	1.7km	East of W. R. Grace
	Max. 3-hour Concen.	78 ug/m^3	138 ug/m^3	216 ug/m^3	1.7km	
South		3 - W. R. Grace 1 - Farmland 2 - CF Industries 2 - Agrico	5 - W. R. Grace 1 - Farmland 4 - CF Industries 4 - Agrico			
	Max. 24-hour Concen.	26 ug/m^3	89 ug/m^3	115 ug/m^3	1.3km	North of W. R. Grace
	Max. 3-hour Concen.	108 ug/m^3	236 ug/m^3	344 ug/m^3	1.2km	

Table 4 (cont.)
Maximum Short-term SO_2 Impacts (Modeled)
(8 Cases)

Wind Direction		Number and Location of Facilities: New and Proposed	Existing	Total	Maximum Concentration Location	
Northwest		3 - W. R. Grace 5 - New Wales	5 - W. R. Grace 6 - New Wales 2 - Conserve 1 - Royster 3 - Mobil			
	Max. 24-hour Concen.	13 ug/m^3	24 ug/m^3	37 ug/m^3	1.6km	Southeast of W. R. Grace
	Max. 3-hour Concen.	63 ug/m^3	106 ug/m^3	169 ug/m^3	1.5km	
North		3 - W. R. Grace 2 - Lakeland Utilities	5 - W. R. Grace 5 - Lakeland Utilities			
	Max. 24-hour Concen.	16 ug/m^3	31 ug/m^3	47 ug/m^3	1.6km	South of W. R. Grace
	Max. 3-hour Concen.	76 ug/m^3	155 ug/m^3	231 ug/m^3	1.5km	

Table 5

CLASS II AREA INCREMENT ANALYSIS

Pollutant/ Averaging Time	Maximum Increment Consumption (ug/m^3)	PSD Allowed Increment (ug/m^3)
SO_2		
3-hour	108	512
24-hour	34	91
Annual	4	20
PM		
24-hour	8	37
Annual	<1	19

F. Soils, Visibility, and Vegetation Impacts

The applicant has concluded that impacts of SO_2 and PM upon soils, visibility, and vegetation will not be detrimental since the ambient concentrations are well below secondary NAAQS which have been established considering these welfare related criteria. No NAAQS have been established for fluorides, but since the emissions of fluorides are controlled to a low level by NSPS requirements, it is concluded that no detrimental effects will occur. EPA concurs with these conclusions.

V. Conclusions

EPA Region IV proposes a preliminary determination of approval with conditions for the construction of the modification to the W. R. Grace and Company Bartow Works Chemical Complex proposed in its application submitted July 21, 1980. The determination is made on the basis of information contained in the application and in additional information dated August 15, 1980 and January 26, 1981 received from the applicant. The specific conditions set forth in the permit are as follows:

1. The new facilities shall be constructed in accordance with the capacities and specifications stated in the application including a DAP plant capacity of 115 tons per hour (56 tons per hour of equivalent P_2O_5 feed), a DAP storage capacity of approximately 15,650 tons, a DAP plant to DAP storage transfer equipment capacity of 115 tons per hour, and a DAP loadout facility capacity of 300 tons per hour.

2. Emissions of PM, SO_2, and fluorides from the DAP plant shall not exceed 28, 39, and 3.4 pounds per hour, respectively, while operating at the maximum operating rate of 56 tons per hour of equivalent P_2O_5 feed. At lesser operating rates the emissions of PM, SO_2, and fluorides shall not exceed 0.5, 0.7, and 0.06 pounds, respectively, per ton of equivalent P_2O_5 feed.

3. The applicant shall install, calibrate, maintain, and operate continuous monitoring systems for measuring in accordance with the provisions of 40 CFR 60 Subpart V, Paragraph 60.223 - Standards of Performance for Phosphate Fertilizer Industry: Diammonium Phosphate Plants:

   a. The mass flow rate of equivalent P_2O_5 feed to the DAP plant; and

   b. The total pressure drop across the scrubbing systems of the DAP plant.

4. In addition to Specific Conditions 2 and 3, the applicant shall comply with all applicable New Source Performance Standards requirements of (40 CFR 60 Subpart V).

5. The oil used to fuel the DAP dryer shall not contain more than 2.4 percent sulfur. The sulfur content of the fuel used during the compliance stack test for SO_2 emissions shall be recorded and that level of fuel oil sulfur content shall not be exceeded without another SO_2 emissions compliance test being performed. A record of all SO_2 test results and sulfur content of all fuel oil received shall be maintained. In lieu of the above evidence of continuing compliance, the source may install continuous SO_2 monitoring/recording equipment subject to the requirements of 40 CFR 60.13 which meets the appropriate Performance Specifications of 40 CFR 60 Appendix B.

6. The PM emissions from the DAP storage and shipping shall not exceed 7.8 pounds per hour or 0.015 grains per dry standard cubic foot while operating at the maximum product handling capacity of 115 tons per hour input and simultaneously 300 tons per hour output. Visible emissions shall not exceed 5 percent opacity.

7. Compliance with the emissions limits (Conditions 2 and 6) shall be determined by performance tests scheduled in accordance with the attached General Conditions and conducted in accordance with the provisions of reference methods in Appendix A of 40 CFR 60, except as provided under 40 CFR 60.8(b) as follows:

a. Method 1 for sample and velocity traverses;
b. Method 2 for velocity and volumetric flow rate;
c. Method 3 for gas analyzing;
d. Method 5 for concentration of PM and associated moisture content;
e. Method 9 for visible emissions; and
f. Method 13A or 18B for the concentration of total fluorides and the associated moisture content.

Each facility shall operate within 10 percent of the maximum operating rate during sampling. The parameters of operating rate, control equipment variables and all continuous monitoring results shall be recorded during compliance testing and made a part of the reported results.

8. The source shall comply with the requirements of the attached General Conditions.

GENERAL CONDITIONS

1. The permittee shall notify the permitting authority in writing of the beginning of construction of the permitted source within 30 days of such action and the estimated date of start-up of operation.

2. The permittee shall notify the permitting authority in writing of the actual start-up of the permitted source within 30 days of such action and the estimated date of demonstration of compliance as required in the specific conditions.

3. Each emission point for which an emission test method is established in this permit shall be tested in order to determine compliance with the emission limitations contained herein within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source. The permittee shall notify the permitting authority of the scheduled date of compliance testing at least thirty (30) days in advance of such test. Compliance test results shall be submitted to the permitting authority within forty-five (45) days after the complete testing. The permittee shall provide (1) sampling ports adequate for test methods applicable to such facility, (2) safe sampling platforms, (3) safe access to sampling platforms, and (4) utilities for sampling and testing equipment.

4. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of two (2) years from the date of recording.

5. If, for any reason, the permittee does not comply with or will not be able to comply with the emission limitations specified in this permit, the permittee shall provide the permitting authority with the following information in writing within five (5) days of such conditions:

   (a) description of noncomplying emission(s),

   (b) cause of noncompliance,

   (c) anticipated time the noncompliance is expected to continue or, if corrected, the duration of the period of noncompliance,

   (d) steps taken by the permittee to reduce and eliminate the noncomplying emission,

   and

   (e) steps taken by the permittee to prevent recurrence of the noncomplying emission.

   Failure to provide the above information when appropriate shall constitute a violation of the terms and conditions of this permit. Submittal of this report does not constitute a waiver of the emission limitations contained within this permit.

6. Any change in the information submitted in the application regarding facility emissions or changes in the quantity or quality of materials processed that will result in new or increased emissions must be reported to the permitting authority. If appropriate, modifications to the permit may then be made by the permitting authority to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause violation of the emission limitations specified herein.

7. In the event of any change in control or ownership of the source described in the permit, the permittee shall notify the succeeding owner of the existence of this permit by letter and forward a copy of such letter to the permitting authority.

8. The permittee shall allow representatives of the State environmental control agency and/or representatives of the Environmental Protection Agency, upon the the presentation of credentials:

   (a) to enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of the permit;

   (b) to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit, or the Act;

   (c) to inspect at reasonable times any monitoring equipment or monitoring method required in this permit;

   (d) to sample at reasonable times any emission of pollutants;

   and

   (e) to perform at reasonable times an operation and maintenance inspection of the permitted source.

9. All correspondence required to be submitted by this permit to the permitting agency shall be mailed to the:

   Chief, Air Facilities Branch
   Air and Hazardous Materials Division
   U.S. Environmental Protection Agency
   Region IV
   345 Courtland Street
   Atlanta, Georgia 30365

10. The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

The emission of any pollutant more frequently or at a level in excess of that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

Il DER PSD-FL-064

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

REF: 4AH-AF

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. G. W. Beck, General Manager
USS Agri-Chemicals
P. O. Box 150
Bartow, Florida 33830

Re: Proposed Modification to Fort Meade
Phosphate Chemical Complex, PSD-FL-064

Dear Mr. Beck:

Review of your May 21, 1980 application to modify your Fort Meade Phosphate Chemical Complex in Polk County, four (4) kilometers west of Fort Meade, Florida, has been completed. The construction is subject to the rules for the Prevention of Significant Air Quality Deterioration (PSD) contained in 40 CFR §52.21.

We have determined that the construction, as described in the application, meets all applicable requirements of the PSD regulations, subject to the conditions in the Conclusions section to the Final Determination (enclosed). EPA has performed the preliminary determination concerning the proposed construction, and published a request for public comment on February 5, 1981. No comments were received. Authority to Construct a Stationary Source is hereby issued for the facility described above, subject to the conditions in the Conclusions section to the Final Determination. This Authority to Construct is based solely on the requirements of 40 CFR §52.21, the Federal regulations governing significant deterioration of air quality. It does not apply to NPDES or other permits issued by this agency or permits issued by other agencies. Information regarding EPA permitting requirements can be provided if you contact Mr. Joe Franzmathes, Director, Office of Program Integration and Operations, at 404/881-3476. Additionally, construction covered by this Authority to Construct must be initiated within 18 months from the date of this letter.

Please be advised that a violation of any condition issued as part of this approval, as well as any construction which proceeds in material variance with information submitted in your application, will be subject to enforcement action.

Authority to Construct will take effect on the date of this letter. The complete analysis which justifies this approval has been fully documented for future reference, if necessary. Any questions concerning this approval may be directed to Dr. Kent Williams, Chief, New Source Review Section (404/881-4552).

Sincerely yours,

Thomas W. Devine
Director
Air and Hazardous Materials Division

Enclosure

cc: FL DER

Final Determination

USS Agri-Chemicals
PSD-FL-064

I. Applicant

USS Agri-Chemicals
Post Office Box 150
Bartow, Florida 33830

II. Project Location

The proposed modification is located at the applicant's Fort Meade Phosphate Chemical Complex in Polk County on High 630 West, approximately 4 kilometers west of Fort Meade, Florida. The UTM coordinates are: Zone 17, 416.0 kilometers east and 3069.0 kilometers north.

III. Project Description

The applicant proposes to increase production of sulfuric acid from 547,500 to 1,355,000 short tons per year and of phosphoric acid from 200,000 to 484,000 short tons per year. The applicant further proposes to construct a wet phosphate rock grinding unit with 1,600,000 short tons per year production capacity. The gypsum disposal area and cooling pond area will be enlarged to accommodate the increased heat and disposal load of the production increase. Table 1 summarizes the capacity levels of the new, modified, and replaced facilities.

IV. Source Impact Analysis

The existing plant is a major source (potential to emit greater than 100 tons per year) of particulate matter (PM), sulfur dioxide (SO_2), nitrogen oxides (NO_x), and fluorides. Moreover, the proposed modification significantly increases emissions of air pollutants regulated under the Clean Air Act (Act) as amended August 7, 1977. Thus, in accordance with Title 40 Code of Federal Regulations, Part 52.21 (40 CFR 52.21) as promulgated August 7, 1980 (45FR52676), the proposed construction will be a major modification and shall be subject to a Prevention of Significant Deterioration (PSD) review.

TABLE 1
SUMMARY OF PROJECT

Facility	Maximum Operating Rate
New	
Sulfuric Acid Plant	183.3[a]
Phosphoric Acid Plant	70.5
Modified	
Cooling Pond - Before	60[c]
Cooling Pond - After	123[c]
Increase	63[c]
To Be Shut Down	
Sulfuric Acid Plant	62.5[a]
Phosphoric Acid Plant	25.5[b]

[a] tons per hour 100% H_2SO_4 produced

[b] tons per hour equivalent P_2O_5 feed

[c] acres of cooling water surface

The PSD review shall be applied to each pollutant regulated under the Act as amended August 7, 1977 for which the modification would result in a significant net emissions increase. Table 2 summarizes emissions of all pollutants regulated under the Act which are affected by the proposed modification. As the table shows, the net emissions increases for SO_2, acid mist, NO_x, and fluorides are significant for the proposed modification. The net increase of PM and carbon monoxide (CO) emissions is not significant, and therefore is not subject to PSD review.

PSD review analyzes the following:

A. Best Available Control Technology (BACT);
B. National Ambient Air Quality Standards (NAAQS) Impacts;
C. PSD Increments Impacts;
D. Class I Area Impacts;
E. Growth Impacts;
F. Soils, Visibility, and Vegetation Impacts.

A. Best Available Control Technology (BACT)

The applicant has submitted an application which has been determined to be complete before August 7, 1980. This application showed the modification was subject to 40 CFR 52.21 as in effect on June 19, 1978. Therefore, in accordance with 40 CFR 52.21(i)(9) the requirements for BACT specified in the 1980 PSD regulations, 40 CFR 52.21(j), shall not apply. Instead the requirements in accordance with 40 CFR 52.21(j) as in effect on June 19, 1978 shall be applied. The latter does not require a BACT review for facilities emitting NO_x or fluorides, because the increase of uncontrolled NO_x emissions is less than 100 tons per year, and the increase of controlled emissions of fluorides is less than 50 tons per year. However, all applicable emission limitations under the State Implementation Plan (SIP) and under the standards of performance under Title 40 Code of Federal Regulations Part 60 (40 CFR 60, NSPS) and Part 61 (40 CFR 61, NESHAPS) must be met.

The new phosphoric acid plant which emits fluorides is subject to NSPS requirements. There are no applicable NESHAPS requirements. NESHAPS

TABLE 2
EMISSIONS SUMMARY
(tons per year)

	Facility	PM	SO_2	Acid Mist	NO_x	CO	Fluorides
A.	New Construction						
	Sulfuric Acid Plant	0	2920[a]	110[a]	88[b]	1	0
	Phosphoric Acid Plant	0	0	0	0	0	5[c]
B.	Modified (After)						
	Cooling Pond	0	0	0	0	0	72[d]
C.	Modified (Before)						
	Cooling Pond	0	0	0	0	0	35[d]
D.	Increase from New and Modified	0	2920	110	88	1	42
E.	To Be Shut Down						
	Sulfuric Acid Plant	0	2338[e]	82[e]	42[b]	.5	0
	Phosphoric Acid Plant	0	0	0	0	0	2
F.	Decrease from Shut Down	0	2338	82	42	.5	2
G.	Total Net Increases	0	582	28	46	0.5	40
H.	Significant Net Increase	25	40	7	40	100	3

[a] Allowed emissions at design rate of 4,000 tons H_2SO_4 per day for 365 days per year.

[b] EPA estimate using emission factor 2.1×10^{-6} pounds of NO_x per dry standard cubic foot determined by tests on a similar unit at New Wales Chemical, Inc. in Polk County, Florida.

[c] Allowed emissions at design rate of 1,400 tons of P_2O_5 product per day for 365 days per year.

[d] EPA estimate using emission factor of 3.22 pounds of fluorides per acre day.

[e] Applicant's estimate of actual 1979 emissions based upon allowed emissions and actual operating time.

control a specific list of hazardous pollutants, none of which are emitted from this source. There are no more restrictive limitations under the General SIP requirements. Table 3 lists the NSPS emissions limits applicable to the proposed modification.

Any new facility which increases emissions of SO_2 or acid mist must apply BACT. BACT is defined as the maximum degree of reduction achievable determined by a casebycase review taking into account energy, environmental, and economic impacts. The applicant has proposed BACT for each applicable case and has presented justification for the choice proposed. The justification is based upon the criteria listed above.

The applicant has proposed double absorption technology to control SO_2 emissions from the sulfuric acid plant and has proposed 4.0 pounds of SO_2 per ton of 100% H_2SO_4 produced as BACT. This is based upon the NSPS requirements (40 CFR 60 subpart H). EPA has recently reviewed available H_2SO_4 plant technology and concluded that double absorption remained the best technology and that no basis for reducing the NSPS limit exists. Similiarly, no justification could be found to require a more stringent emission limit for the proposed construction, and EPA concurs that the applicant's proposal is BACT for SO_2 for the H_2SO_4 plant in this case.

The applicant has proposed high efficiency mist eliminators and a limit of 0.15 pound of acid mist per ton of 100% H_2SO_4 produced as BACT based upon the NSPS requirements. No justification for a more stringent control could be found, and the proposed technology and emissions limit is BACT for acid mist from the sulfuric acid plant.

B. Impact upon National Ambient Air Quality Standards (NAAQS)

PSD review requires a demonstration that the proposed construction does not cause or contribute to a violation of the NAAQS for each applicable pollutant. The ambient air standards for SO_2 and NO_x for various averaging times are shown in Table 4. No NAAQS has been established for acid mist or fluorides, therefore, NAAQS impact analysis is required only for SO_2 and NO_x emissions.

fluorides, therefore, NAAQS impact analysis is required only for SO_2 and NO_x emissions.

TABLE 3
ALLOWABLE EMISSION LIMITS

Facility	Pounds Per Hour	Standard lbs/Operating Unit	Basis
New Construction			
Sulfuric Acid Plant			
SO_2	733	4[a]	NSPS, BACT
Acid Mist	27.5	0.15[a]	NSPS, BACT
Visible Emissions		<10% opacity	NSPS, BACT
Phosphoric Acid Plant			
Fluorides	1.41	0.02[b]	NSPS

[a]Pounds per ton of 100% H_2SO_4 produced.

[b]Pounds per ton of equivalent P_2O_5 feed.

TABLE 4
IMPACTS UPON THE NAAQS
BY THE PROPOSED CONSTRUCTION

Pollutant	Averaging Time	NAAQS[a,b]	Concentration Increases	Significant Increase[c]
SO_2	Annual	80	<0	1
	24-Hour	365[d]	<1	5
	3-Hour	1,300[d]	4	25
NO_x	Annual	100	<0	1

[a]The lower concentration of either the primary or secondary standard.
[b]Micrograms per cubic meter.
[c]In accordance with significance levels published FR26398 (June 19, 1978).
[d]Not to be exceeded more than once per year.

The applicant submitted an analysis of the impact of the proposed project SO_2 emissions operating at maximum allowed rate. The analysis accounted for the SO_2 emissions reduction from shutting down the existing sulfuric acid plant by modeling negative emissions rates at actual stack conditions. Maximum operating of the existing plant was assumed consistent with actual operating during the preceding 2-year period. The model algorithm subtracted the impact of the existing source (to be shut down) from the impact of the proposed source at each receptor for each hour of meteorological data input to the model. The approach yields the expected net change at each receptor. The analysis was carried out using the EPA approved CRSTER model. The receptors were located on 15 concentric rings ranging from 0.6 kilometers to 50 kilometers from the source. Meteorological data at 1-hour intervals for the entire year of 1972 from Tampa, Florida Airport was used. The maximum hourly SO_2 emissions from the new sulfuric acid plant are 17 percent greater than those from the existing plant, but since the stacks are higher (53.3 meters vs 29 meters) and the emitting temperature is 45°C higher, diffusion is increased resulting in reduced annual ambient concentration throughout the 50-kilometer radius area studied. For the short-term averaging (24-hour and 3-hour) the ambient concentrations were also reduced in close proximity to the source (approximately 1 km). At greater distances the ambient concentrations did increase, but the maximum increases were below the significance levels defined in the Preamble to the 1978 PSD regulations (43FR26398). The results are shown in Table 4. The applicant has determined the stack height which meets the requirements of Good Engineering Practice (GEP) for the new sulfuric acid plant is 54.6 meters, which compares satisfactorily with the actual proposed stack height of 53.3 meters. EPA has reviewed on the basis that emissions impacts are insignificant no refined analysis was required, and it was concluded that the modification does not threaten the NAAQS for SO_2.

The applicant did not submit an analysis of the impacts of the NO_x increased emissions. However, since the NO_x emissions are from the same stacks as the SO_2 emissions, and are only 3 percent of the SO_2 emissions increase, and the SO_2 analysis showed a negative annual impact, it is

determined that the annual NO_x impact also is insignificant and does not threaten the NAAQS for NO_x.

C. PSD Increment Analysis

PSD increments have been established for PM and SO_2. No PSD increments have been established for NO_x. This project is not subject to PSD review for PM; therefore, the only applicable increments are those for SO_2. SO_2 increments are listed as follows:

Averaging Time	PSD Increment (ug/m^3)
Annual	20
24-hour	91
3-hour	512

The increases in ambient concentration due to this project shown in Table 4 are less than 1 percent of the allowable increments and are also below the published significance levels as discussed above. Therefore, no refined increment analysis is required and it is concluded that SO_2 emissions do not threaten allowable increments.

D. Class I Area Impacts

The nearest Class I area is the Chassahowitzka National Wilderness Area located 125 kilometers to the northwest. Because of this distance and the insignificant impact in the near vicinity of the source, it is determined that the proposed project will not adversely effect any Class I area.

E. Growth Impacts

The increased employment due to the proposed project will be about 15 persons. The increased production will be shipped from the area and is not expected to significantly influence local, commercial, or industrial growth. The increased transportation of raw materials and products will be handled with existing facilities with a negligible increase in secondary emissions.

F. Soils, Visibility, and Vegetation Impacts

The applicant has concluded that impacts of SO_2 on soils, visibility, and vegetation will not be detrimental since the ambient concentrations are

The applicant has concluded that impact of SO_2 on soils, visibility and vegetation will not be detrimental since the ambient concentrations are

well below secondary NAAQS which have been established considering these welfare related criteria. No NAAQS have been established for acid mist or fluorides, but since point source emissions of these pollutants are controlled to a low level by NSPS requirements (which includes a 10% opacity limit) it is determined that no detrimental effects will occur. The fugitive emissions of fluorides from the cooling pond are emitted at ground level and do not impact a wide area. Fluorides are known to have detrimental effects upon citrus fruit yield; however, the only citrus fruit trees in close proximity (approximately 1.5 miles) are owned by USS Agri-Chemicals.

V. Conclusions

EPA Region IV proposes a preliminary determination of approval with conditions for the construction of the modification to the USS Agri-Chemicals Fort Meade (Florida) Phosphate Chemical Complex proposed in its application submitted May 21, 1980 (application complete on July 16, 1980). The determination is made on the basis of information contained in the application and in additional information dated June 19, July 9, 11, and 28, 1980 received from the applicant. The specific conditions set forth in the permit are as follows:

1. The new and modified facilities shall be constructed in accordance with the capacities and specifications stated in the application and appended materials including maximum capacities of new and modified units as shown in Table 1.

2. Following start-up of the new construction and a maximum 180 day shakedown period, the sulfuric acid and phosphoric acid plants proposed for shut-down will not operate. During the shakedown period the existing facilities may be operated such that the combined capacity utilization of the new and existing facilities do not exceed the maximum capacity for the new units (H_2SO_4 - 183.3 tons/hour and P_2O_5 - 70.5 tons P_2O_5 feed per hour).

3. Emissions of SO_2 and acid mist from the new sulfuric acid plant shall not exceed 733 and 27.5 pounds per hour, respectively.

3. Emissions of SO_2 and acid mist from the new sulfuric acid plant shall not exceed 733 and 27.5 pounds per hour, respectively.

while operating at the maxiumum allowed operating rate of 183.3 tons per hour of 100% H_2SO_4 produced. At lesser operating rates the emissions shall not exceed 4 pounds of SO_2 and 0.15 pound of acid mist per ton of 100% H_2SO_4 produced. Visible emissions from the new sulfuric acid plant shall not have opacity of 10 percent or greater. Emissions of SO_2 and acid mist from the sulfuric acid plant are the total from two stacks.

4. Emissions of fluorides from the new phosphoric acid plant shall not exceed 1.41 pounds per hour while operating at the maxiummu allowed operating rate of 70.5 tons per hour of equivalent P_2O_5 feed. At lesser operating rates the emissions shall not exceed 0.020 pounds per ton of equivalent P_2O_5 feed. Emissions of fluorides from the phosphoric acid plant are the total from three stacks.

5. The applicant shall install, calibrate, maintain, and operate continuous monitoring systems for measuring:

   a. The mass flow rate of equivalent P_2O_5 feed and the total pressure drop across the scrubbing systems for the new phosphoric acid plant in accordance with the provisions of 40 CFR 60 Subpart T, Paragraph 60.203 - Standards of Performance for Phosphate Fertilizer Industry (Wet Process Phosphoric Acid Plants).

   b. The emissions of sulfur dioxide from the new sulfuric acid plant in accordance with the provisions of 40 CFR 60 Subpart H, Paragraph 60.84 - Standards of Performance for Sulfuric Acid Plants.

6. In addition to Specific Conditions 3, 4, and 5, the applicant shall comply with all other applicable New Source Performance Standards requirements of (40 CFR 60 Subparts T and H).

7. Compliance with the emission limits Conditions 3 and 4, shall be

7. Compliance with the emission limits Conditions 3 and 4 shall be

determined by performance tests scheduled in accordance with the General Conditions attached. The performance tests shall be in accordance with the provisions of reference methods in Appendix A of 40 CFR 60, except as provided under 40 CFR 60.8(b) as follows:

a. Method 8 for the concentration of SO_2 and acid mist;

b. Method 1 for sample and velocity traverses;

c. Method 2 for velocity and volumetric flow rate;

d. Method 3 for gas analysis; and

e. Method 13A or 13B for the concentration of total fluorides and the associated moisture content.

All other procedures for these compliance tests shall be in accordance with the applicable requirements of 40 CFR 60 Subpart H Paragraph 60.85 or Subpart T Paragraph 60.204.

Each facility shall operate within 10 percent of the maximum operating rate during sampling. The parameters of operating rate, control equipment variables, and all continuous monitoring results shall be recorded during compliance testing and made a part of the reported results.

8. The source shall comply with the requirements of the attached General Conditions.

GENERAL CONDITIONS

1. The permittee shall notify the permitting authority in writing of the beginning of construction of the permitted source within 30 days of such action and the estimated date of start-up of operation.

2. The permittee shall notify the permitting authority in writing of the actual start-up of the permitted source within 30 days of such action and the estimated date of demonstration of compliance as required in the specific conditions.

3. Each emission point for which an emission test method is established in this permit shall be tested in order to determine compliance with the emission limitations contained herein within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source. The permittee shall notify the permitting authority of the scheduled date of compliance testing at least thirty (30) days in advance of such test. Compliance test results shall be submitted to the permitting authority within forty-five (45) days after the complete testing. The permittee shall provide (1) sampling ports adequate for test methods applicable to such facility, (2) safe sampling platforms, (3) safe access to sampling platforms, and (4) utilities for sampling and testing equipment.

4. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of two (2) years from the date of recording.

5. If, for any reason, the permittee does not comply with or will not be able to comply with the emission limitations specified in this permit, the permittee shall provide the permitting authority with the following information in writing within five (5) days of such conditions:

   (a) description of noncomplying emission(s),

   (b) cause of noncompliance,

   (c) anticipated time the noncompliance is expected to continue or, if corrected, the duration of the period of noncompliance,

   (d) steps taken by the permittee to reduce and eliminate the noncomplying emission,

   and

   (e) steps taken by the permittee to prevent recurrence of the noncomplying emission.

   Failure to provide the above information when appropriate shall constitute a violation of the terms and conditions of this permit. Submittal of this report does not constitute a waiver of the emission limitations contained within this permit.

a violation of the terms and conditions of this permit. Submittal of this report does not constitute a waiver of the emission limitations contained within this permit.

6. Any change in the information submitted in the application regarding facility emissions or changes in the quantity or quality of materials processed that will result in new or increased emissions must be reported to the permitting authority. If appropriate, modifications to the permit may then be made by the permitting authority to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause violation of the emission limitations specified herein.

7. In the event of any change in control or ownership of the source described in the permit, the permittee shall notify the succeeding owner of the existence of this permit by letter and forward a copy of such letter to the permitting authority.

8. The permittee shall allow representatives of the State environmental control agency and/or representatives of the Environmental Protection Agency, upon the the presentation of credentials:

   (a) to enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of the permit;

   (b) to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit, or the Act;

   (c) to inspect at reasonable times any monitoring equipment or monitoring method required in this permit;

   (d) to sample at reasonable times any emission of pollutants;

   and

   (e) to perform at reasonable times an operation and maintenance inspection of the permitted source.

9. All correspondence required to be submitted by this permit to the permitting agency shall be mailed to the:

   Chief, Air Facilities Branch
   Air and Hazardous Materials Division
   U.S. Environmental Protection Agency
   Region IV
   345 Courtland Street
   Atlanta, Georgia 30365

10. The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

The emission of any pollutant more frequently or at a level in excess of that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

APR 1 1981

REF: 4AH-AF

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. A. F. Vondrasek, General Manager
W. R. Grace and Company
Bartow Works Chemical Complex
P. O. Box 471
Bartow, Florida 33830

Re: Modification to Diammonium Phosphate Plant
and Storage and Shipping Facilities
PSD-FL-068

Dear Mr. Vondrasek:

Review of your July 21, 1980 application to modify your phosphate chemical complex located 4 miles west of Bartow in Polk County, Florida has been completed. The construction is subject to the rules for the Prevention of Significant Air Quality Deterioration (PSD), contained in 40 CFR §52.21.

We have determined that the construction, as described in the application, meets all applicable requirements of the PSD regulations, subject to the conditions in the Conclusions section to the Final Determination (enclosed). EPA has performed the preliminary determination concerning the proposed construction, and published a request for public comment on February 25, 1981. No comments were received. Authority to Construct a Stationary Source is hereby issued for the facility described above, subject to the conditions in the Conclusions section to the Final Determination. This Authority to Construct is based solely on the requirements of 40 CFR §52.21, the Federal regulations governing significant deterioration of air quality. It does not apply to NPDES or other permits issued by this agency or permits issued by other agencies. Information regarding EPA permitting requirements can be provided if you contact Mr. Joe Franzmathes, Director, Office of Program Integration and Operations, at 404/881-3476. Additionally, construction covered by this Authority to Construct must be initiated within 18 months from the date of this letter.

Please be advised that a violation of any condition issued as part of this approval, as well as any construction which proceeds in material variance with information submitted in your application, will be subject to enforcement action.

Authority to Construct will take effect on the date of this letter. The complete analysis which justifies this approval has been fully documented for future reference, if necessary. Any questions concerning this approval may be directed to Dr. Kent Williams, Chief, New Source Review Section.

Sincerely yours,

Thomas W. Devine
Director
Air and Hazardous Materials Division

Enclosure

cc: FL DER

Final Determination
W. R. Grace and Company
PSD-FL-068

I. Applicant

W. R. Grace and Company
Bartow Works Chemical Complex
P. O. Box 471
Bartow, Florida 33830

II. Project Location

The proposed modification is located north of State Road 60, 4 miles west of Bartow in Polk County, Florida. The UTM coordinates are Zone 17, 409.29 kilometers east and 3086.96 kilometers north.

III. Project Description

The applicant proposes to increase production of phosphate fertilizer by the construction of a diammonium phosphate (DAP) plant (No. 3) and DAP storage and shipping facilities. The rated capacity of the DAP plant is 115 tons per hour. It is scheduled to operate 7000 hours per year to produce 805,000 tons per year. Some existing fertilizer production capacity will be shut down about 6 months after the proposed construction is completed and in operation. This capacity reduction is not a concurrent reduction in emissions.

IV. Source Impact Analysis

The existing plant has the potential to emit greater than 100 tons per year of particulate matter (PM), sulfur dioxide (SO_2), nitrogen oxides (NO_x), and fluorides (F). The existing source therefore is a major stationary source. The proposed modification significantly increases emissions of pollutants regulated under the Clean Air Act (Act) amended August 7, 1977. Thus, in accordance with Title 40, Code of Federal Regulations, Part 52.21 (40 CFR 52.21) as promulgated August 7, 1980 (45FR52676), the proposed modification is subject to Prevention of Significant Deterioration (PSD) review.

The PSD review applies to each pollutant for which the modification would result in a significant net increase. Table 1 summarizes emission changes of all pollutants regulated under the Act affected by the proposed modification. This shows the proposed net emissions increase of PM, SO_2, and F are significant as defined in the PSD regulations. The emissions increase of NO_x and CO are not significant and therefore are not subject to further PSD review.

The PSD review analyzes the following:

A. Best Available Control Technology (BACT);
B. National Ambient Air Quality Standards (NAAQS) Impacts;
C. PSD Increment Impacts;
D. Class I Area Impacts;
E. Growth Impacts; and
F. Visibility, Soils, and Vegetation Impacts.

A. BACT Analysis

The applicant has submitted an application which was determined to be complete before August 7, 1980. This application shows the modification was subject to 40 CFR 52.21 as in effect on June 19, 1978. Therefore, in accordance with 40 CFR 52.21(i)(9) the requirements for BACT specified in the 1980 PSD regulations, 40 CFR 52.21(j), shall not apply. Instead the requirements of 40 CFR 52.21(j) as in effect on June 19, 1978 shall be applied. The latter does not require a BACT review for facilities emitting fluorides because the controlled emissions increase is less than 50 tons per year. However, all applicable emission limitations under the State Implementation Plant (SIP) and under the standards of performance 40 CFR 60 (NSPS) and 40 CFR 61 (NESHAPS) must be met. Thus, Table 2 shows fluoride emissions limited by NSPS requirements. There are no applicable NESHAPS requirements nor are there any general SIP requirements more restrictive than NSPS. The table contains certain standards set by case-by-case control technology review required bly the State of Florida.

The applicant proposes to control particulates from the DAP plant with three dry cyclones followed by three coaxial venturi wet scrubbers. The scrubber liquid is phosphoric acid which recycles to the DAP reactors. This

Table 1

SUMMARY OF EMISSIONS
(tons per year)

Facility	PM	SO_x	NO_x	F	CO
DAP Plant	98	137	15	12	4
DAP Storage and Shipping	11	0	0	0	0
Total	109	137	15	12	4
Significant[a] Emission Increase	25	40	40	3	100
Subject to PSD Review	Yes	Yes	No	Yes	No

[a]Reference 40 CFR 52.21(b)(23): Promulgated August 7, 1980.

serves to control ammonia losses as well as particulates. The gases are then scrubbed in two packed scrubbers using pond water as scrubbing liquid. The function of the packed scrubbers is primarily to remove gaseous fluorides; however, they are designed with spray chambers preceding the packed section to control silicon oxide gel which is formed by the reaction of silicon-tetrafluoride and water. This gel could hinder the scrubbing of fluorides or yield silicon dioxide particulates if not cleared by the spray chambers. The applicant proposes this combination of control equipment as BACT for control of PM and further proposes an emission limit of 0.5 pounds of PM per ton of equivalent P_2O_5 feed to the DAP plant. This corresponds to a BACT limit determined under the Florida SIP. A PM limit for DAP plants is not included in the NSPS.

The applicant proposes to control PM emissions from the DAP storage and shipping facility with a venturi scrubber or bag collector to a controlled concentration of 0.015 grains per dry standard cubic foot (7.8 pounds per hour).

The applicant proposes to control SO_2 emissions from the DAP plant by restricting the sulfur content of fuel oil used to heat the dryer to less than 2.4 percent sulfur. Further, the free ammonia and DAP product in the dryer is expected to absorb 50 percent of the SO_2 since the dryer combustion gases come in direct contact with DAP product. The applicant proposes this technology and an emission limit of 0.7 pounds of SO_2 per ton of equivalent P_2O_5 feed to the DAP plant as BACT. This corresponds to a BACT limit determined under the Florida SIP.

EPA has reviewed the proposed technology for the control of PM and SO_2 from the DAP plant and the DAP storage and shipping and concurs that this technology and emissions limits constitute BACT for these cases. These limits are listed in Table 2. The proposed use of two packed scrubbers is determined to be adequate technology to meet the NSPS requirements for control of fluoride emissions from the DAP plant (0.06 lb/ton equivalent P_2O_5 feed).

Table 2

ALLOWABLE EMISSION LIMITS

Facility Pollutant	Pounds Per Hour	Standard lbs/Operating Unit	Basis
DAP Plant			
PM	28	0.5[a]	BACT[b]
SO_2	39	0.7[a]	BACT[b]
Fluoride	3.4	0.06[a,c]	NSPS
DAP Storage and Shipping			
PM	7.8	0.015 gr/dscf	BACT[d]
Visible Emissions	—	<5% opacity	BACT[e]

[a]Pounds of pollutant per ton of equivalent P_2O_5 feed.

[b]Proposed by applicant based upon State of Florida BACT determination.

[c]Continuous monitoring of feed rate and scrubber pressure drop.

[d]Proposed by applicant.

[e]Imposed by EPA consistent with mass standard, proposed by applicant; this opacity standard is subject to conditions of 40 CFR 60.11.

B. National Ambient Air Quality Stantards (NAAQS) Impacts

The ambient air standards for PM and SO_2 for various averaging times are listed in Table 3. No NAAQS has been established for fluorides. Paragraph k(1) of the PSD regulations requires an air quality analysis to ensure these standards will not be violated. The applicant has submitted such an analysis.

The applicant's analysis proposed the background PM concentration will be represented by monitor measurements made by the Florida Department of Environmental Regulation (DER) at a site less than 2 kilometers south of the proposed construction. The applicant's analysis used the second highest 24-hour monitored value of 119 ug/m^3 because the standard allows one exceedance per year. The EPA review determines the more conservative use of the highest 24-hour value of 126 ug/m^3 is more appropriate for use in the analysis as discussed below. The use of this monitored data as background is a conservative assumption since it presumably contains a contribution from the existing sources at W. R. Grace, but it is to be used in the analysis without allowance for such a contribution.

Initital screening PM air quality impact modeling was carried out using the CRSTER model and particulate emissions from the proposed DAP plant and DAP storage and shipping. Meteorological data from Tampa for the years 1970 to 1974 were input to these model runs. These runs yield maximum annual concentrations from W. R. Grace facilities. Also from these runs the meteorological data resulting in the highest second-high 24-hour impact were selected for further modeling runs using the PTMTPW model and the emissions from all existing W. R. Grace facilities as well as the proposed new facilities. The model results from PTMTPW runs were collected in a 0.4 X 0.5 km receptor grid with 0.1 km spacing located at the east property line. These runs yield the 24-hour highest second-high PM ambient concentrations due to the proposed construction and the existing W. R. Grace facilities. An analysis of the impact areas of the proposed project and of new facilities at two neighboring sources (New Wales, PSD-FL-034, and Agrico, PSD-FL-061) shows no overlap, therefore interaction between sources was not evaluated.

Table 3

ANALYSIS OF NAAQS IMPACTS

Pollutant	Averaging Time	Modeled Impacts[a,b] New & Proposed	Existing	Background	Total	NAAQS[b,c]
Particulates	Annual	.8[d]	2[d]	53.6[e,f]	56.4	60[e]
	24-Hour	6[g]	13[g]	126[f]	147	150[h]
SO_2	Annual	4[d]	42[d]	20	66	80[i]
	24-Hour	34[g]	128[g]	20	182	365[h]
	3-Hour	108[g]	236[g]	20	364	1300[h]

[a]Modeled maximum ambient concentration increases.

[b]Micrograms per cubic meter, (ug/m^3).

[c]The lower concentration of either the primary or secondary standard.

[d]Highest high.

[e]Geometric mean.

[f]Highest monitored concentration measured within 2 km of site over 20 months (includes contribution from existing sources as well as true background).

[g]Highest second-high.

[h]Not to be exceeded more than once per year.

[i]Arithmetic mean.

Table 3 lists the monitored background concentration, the modeled increase in concentration, due to existing and proposed facilities and the summation of these for comparison with the NAAQS. EPA concurs with the applicant's conclusion that the proposed project shall not threaten any NAAQS for PM.

For analysis of impact on the SO_2 NAAQS, no monitored data for the vicinity of the proposed project was available, therefore, the applicant's analysis first established the area of impact of the proposed project plus two sulfuric acid plants located at the W. R. Grace plant site that have been constructed since January 6, 1975. These impact areas were determined to have a radii of 20, 36, and 40 kilometers for the annual, 24-hour, and 3-hour significance levels of 1, 5, and 25 ug/m^3, respectively (reference 45FR26398). To determine the baseline maximum ambient air concentration of SO_2 in the vicinity of the W. R. Grace plant, an inventory was made of all major SO_2 sources within 50 kilometers, which were constructed prior to January 6, 1975. The allowed SO_2 emissions from these inventoried sources were input to the AQDM model with meteorological data from Tampa representing the 5-year period, 1970 through 1974. The applicant's analysis submitted the maximum concentrations of this run as the baseline maximum annual ambient SO_2 concentration. Background from distant sources or non man-made sources was considered zero, but in the absence of monitored measurements, EPA must assume uninventoried background to be 20 ug/m^3; therefore, the applicant's proposed baseline shall be increased by 20 for all averaging times. The applicant's analysis further modeled all new sources (constructed since January 6, 1975) within 50 kilometers of the W. R. Grace site (including the new and proposed W. R. Grace facilities). The individual components of this analysis and the summation for comparison with the annual SO_2 NAAQS are shown in Table 3.

The short-term analysis to determine the impacts on the 24-hour and 3-hour NAAQS were carried out with the same inventories of new and existing sources. To analyze the interactions between W. R. Grace and the neighboring sources four worst case meteorological conditions were selected with different wind directions. The selections were based upon the results of CRSTER screening runs which had used 5 years of meteorological data. These runs had been made upon the proposed sources and showed that for W. R. Grace sources alone with a

westerly wind direction yielded maximum impact. This was selected as case 1 even though no neighboring sources lay west of W. R. Grace. The nearest major neighboring source (New Wales Chemicals) was southwest, with several sources south and a large utility to the north. Therefore, these wind directions were used to select the meteorological worst days from the previous CRSTER runs. The short term interaction concentrations were estimated with the PTMTPW air quality model. The results of the eight possible interaction cases are summarized in Table 4. The worst-case for each averaging time is shown in Table 3 and summed with a background concentration of 20 ug/m^3 for comparison with the NAAQS. EPA concurs, based on the analysis presented, that this project does not threaten any NAAQS for SO_2.

C. PSD Increment Impact

Paragraph (k)(2) of the PSD regulations requires an analysis to ensure that no PSD increment will be violated. The PM and SO_2 increments applicable to this analysis are shown in Table 5. The SO_2 modeling results developed in the NAAQS analysis which represent maximum concentrations from new and proposed sources include all increment consuming sources within the impact area and major sources within 50 kilometers. EPA concurs based on the analysis presented that this project does not threaten violation of any PSD Class II increments.

D. Class I Area Impacts

The nearest Class I area to this proposed modification is Chassahowitzka National Wildlife Refuge, located approximately 104 kilometers northwest of the W. R. Grace Chemical Complex. The applicant concludes no significant impacts will occur in the Class I area. EPA concurs that since the Class I area is greater than 100 kilometers away, and models cannot reasonably predict impacts beyond 100 kilometers, no further analysis of Class I area impacts is required, and it is determined that the proposed modification will not affect any Class I area.

E. Growth Impacts

The increased employment due to the proposed project will be about six persons. The increased production will be shipped from the area and is not expected to significantly influence local commercial or industrial growth. The increased transportation of raw materials and product will be handled with existing facilities with a negligible increase in secondary emissions.

Table 4

Maximum Short-term SO_2 Impacts (Modeled)

(8 Cases)

Wind Direction		Number and Location of Facilities: New and Proposed	Existing	Total	Maximum Concentration Location	
West		3 - W. R. Grace (no significant new or existing sources west of W. R. Grace)	5 - W. R. Grace			
	Max. 24-hour Concen.	34 ug/m^3	128 ug/m^3	162 ug/m^3	1.7km	East of W. R. Grace
	Max. 3-hour Concen.	78 ug/m^3	138 ug/m^3	216 ug/m^3	1.7km	
South		3 - W. R. Grace 1 - Farmland 2 - CF Industries 2 - Agrico	5 - W. R. Grace 1 - Farmland 4 - CF Industries 4 - Agrico			
	Max. 24-hour Concen.	26 ug/m^3	89 ug/m^3	115 ug/m^3	1.3km	North of W. R. Grace
	Max. 3-hour Concen.	108 ug/m^3	236 ug/m^3	344 ug/m^3	1.2km	

Table 4 (cont.)
Maximum Short-term SO_2 Impacts (Modeled)
(8 Cases)

Wind Direction		Number and Location of Facilities: New and Proposed	Existing	Total	Maximum Concentration Location	
Northwest		3 - W. R. Grace 5 - New Wales	5 - W. R. Grace 6 - New Wales 2 - Conserve 1 - Royster 3 - Mobil			
	Max. 24-hour Concen.	13 ug/m^3	24 ug/m^3	37 ug/m^3	1.6km	Southeast of W. R. Grace
	Max. 3-hour Concen.	63 ug/m^3	106 ug/m^3	169 ug/m^3	1.5km	
North		3 - W. R. Grace 2 - Lakeland Utilities	5 - W. R. Grace 5 - Lakeland Utilities			
	Max. 24-hour Concen.	16 ug/m^3	31 ug/m^3	47 ug/m^3	1.6km	South of W. R. Grace
	Max. 3-hour Concen.	76 ug/m^3	155 ug/m^3	231 ug/m^3	1.5km	

Table 5

CLASS II AREA INCREMENT ANALYSIS

Pollutant/ Averaging Time	Maximum Increment Consumption (ug/m^3)	PSD Allowed Increment (ug/m^3)
SO_2		
3-hour	108	512
24-hour	34	91
Annual	4	20
PM		
24-hour	8	37
Annual	<1	19

F. Soils, Visibility, and Vegetation Impacts

The applicant has concluded that impacts of SO_2 and PM upon soils, visibility, and vegetation will not be detrimental since the ambient concentrations are well below secondary NAAQS which have been established considering these welfare related criteria. No NAAQS have been established for fluorides, but since the emissions of fluorides are controlled to a low level by NSPS requirements, it is concluded that no detrimental effects will occur. EPA concurs with these conclusions.

V. Conclusions

EPA Region IV proposes a preliminary determination of approval with conditions for the construction of the modification to the W. R. Grace and Company Bartow Works Chemical Complex proposed in its application submitted July 21, 1980. The determination is made on the basis of information contained in the application and in additional information dated August 15, 1980 and January 26, 1981 received from the applicant. The specific conditions set forth in the permit are as follows:

1. The new facilities shall be constructed in accordance with the capacities and specifications stated in the application including a DAP plant capacity of 115 tons per hour (56 tons per hour of equivalent P_2O_5 feed), a DAP storage capacity of approximately 15,650 tons, a DAP plant to DAP storage transfer equipment capacity of 115 tons per hour, and a DAP loadout facility capacity of 300 tons per hour.

2. Emissions of PM, SO_2, and fluorides from the DAP plant shall not exceed 28, 39, and 3.4 pounds per hour, respectively, while operating at the maximum operating rate of 56 tons per hour of equivalent P_2O_5 feed. At lesser operating rates the emissions of PM, SO_2, and fluorides shall not exceed 0.5, 0.7, and 0.06 pounds, respectively, per ton of equivalent P_2O_5 feed.

3. The applicant shall install, calibrate, maintain, and operate continuous monitoring systems for measuring in accordance with the provisions of 40 CFR 60 Subpart V, Paragraph 60.223 - Standards of Performance for Phosphate Fertilizer Industry: Diammonium Phosphate Plants:

   a. The mass flow rate of equivalent P_2O_5 feed to the DAP plant; and

   b. The total pressure drop across the scrubbing systems of the DAP plant.

4. In addition to Specific Conditions 2 and 3, the applicant shall comply with all applicable New Source Performance Standards requirements of (40 CFR 60 Subpart V).

5. The oil used to fuel the DAP dryer shall not contain more than 2.4 percent sulfur. The sulfur content of the fuel used during the compliance stack test for SO_2 emissions shall be recorded and that level of fuel oil sulfur content shall not be exceeded without another SO_2 emissions compliance test being performed. A record of all SO_2 test results and sulfur content of all fuel oil received shall be maintained. In lieu of the above evidence of continuing compliance, the source may install continuous SO_2 monitoring/recording equipment subject to the requirements of 40 CFR 60.13 which meets the appropriate Performance Specifications of 40 CFR 60 Appendix B.

6. The PM emissions from the DAP storage and shipping shall not exceed 7.8 pounds per hour or 0.015 grains per dry standard cubic foot while operating at the maximum product handling capacity of 115 tons per hour input and simultaneously 300 tons per hour output. Visible emissions shall not exceed 5 percent opacity.

7. Compliance with the emissions limits (Conditions 2 and 6) shall be determined by performance tests scheduled in accordance with the attached General Conditions and conducted in accordance with the provisions of reference methods in Appendix A of 40 CFR 60, except as provided under 40 CFR 60.8(b) as follows:

a. Method 1 for sample and velocity traverses;
b. Method 2 for velocity and volumetric flow rate;
c. Method 3 for gas analyzing;
d. Method 5 for concentration of PM and associated moisture content;
e. Method 9 for visible emissions; and
f. Method 13A or 18B for the concentration of total fluorides and the associated moisture content.

Each facility shall operate within 10 percent of the maximum operating rate during sampling. The parameters of operating rate, control equipment variables and all continuous monitoring results shall be recorded during compliance testing and made a part of the reported results.

8. The source shall comply with the requirements of the attached General Conditions.

GENERAL CONDITIONS

1. The permittee shall notify the permitting authority in writing of the beginning of construction of the permitted source within 30 days of such action and the estimated date of start-up of operation.

2. The permittee shall notify the permitting authority in writing of the actual start-up of the permitted source within 30 days of such action and the estimated date of demonstration of compliance as required in the specific conditions.

3. Each emission point for which an emission test method is established in this permit shall be tested in order to determine compliance with the emission limitations contained herein within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source. The permittee shall notify the permitting authority of the scheduled date of compliance testing at least thirty (30) days in advance of such test. Compliance test results shall be submitted to the permitting authority within forty-five (45) days after the complete testing. The permittee shall provide (1) sampling ports adequate for test methods applicable to such facility, (2) safe sampling platforms, (3) safe access to sampling platforms, and (4) utilities for sampling and testing equipment.

4. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of two (2) years from the date of recording.

5. If, for any reason, the permittee does not comply with or will not be able to comply with the emission limitations specified in this permit, the permittee shall provide the permitting authority with the following information in writing within five (5) days of such conditions:

   (a) description of noncomplying emission(s),

   (b) cause of noncompliance,

   (c) anticipated time the noncompliance is expected to continue or, if corrected, the duration of the period of noncompliance,

   (d) steps taken by the permittee to reduce and eliminate the noncomplying emission,

   and

   (e) steps taken by the permittee to prevent recurrence of the noncomplying emission.

   Failure to provide the above information when appropriate shall constitute a violation of the terms and conditions of this permit. Submittal of this report does not constitute a waiver of the emission limitations contained within this permit.

6. Any change in the information submitted in the application regarding facility emissions or changes in the quantity or quality of materials processed that will result in new or increased emissions must be reported to the permitting authority. If appropriate, modifications to the permit may then be made by the permitting authority to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause violation of the emission limitations specified herein.

7. In the event of any change in control or ownership of the source described in the permit, the permittee shall notify the succeeding owner of the existence of this permit by letter and forward a copy of such letter to the permitting authority.

8. The permittee shall allow representatives of the State environmental control agency and/or representatives of the Environmental Protection Agency, upon the the presentation of credentials:

   (a) to enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of the permit;

   (b) to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit, or the Act;

   (c) to inspect at reasonable times any monitoring equipment or monitoring method required in this permit;

   (d) to sample at reasonable times any emission of pollutants;

   and

   (e) to perform at reasonable times an operation and maintenance inspection of the permitted source.

9. All correspondence required to be submitted by this permit to the permitting agency shall be mailed to the:

   Chief, Air Facilities Branch
   Air and Hazardous Materials Division
   U.S. Environmental Protection Agency
   Region IV
   345 Courtland Street
   Atlanta, Georgia 30365

10. The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

The emission of any pollutant more frequently or at a level in excess of that authorized by this permit shall constitute a violation of the terms and conditions of this permit.