

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

File Copy

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



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

December 13, 1984

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Rudy J. Cabina, Vice President
Gardinier, Inc.
P.O. Box 3269
Tampa, Florida 33601

Dear Mr. Cabina:

Attached is one copy of the Technical Evaluation and Preliminary Determination for the proposed modifications to the No. 7 and No. 8 sulfuric acid plants at your phosphate fertilizer chemical complex located at the intersection of U.S. Highway 41 South and Riverview Drive near Gibsonton, Hillsborough County, Florida.

Before final action can be taken on our recommendations, you are required by Florida Administrative Code Rule 17-103.150 to publish the attached Notice of Proposed Agency Action in the legal advertising section of a newspaper of general circulation in Hillsborough County no later than fourteen days after receipt of this letter. The department must be provided with proof of publication within seven days of the date the notice is published. Failure to publish the notice may be grounds for denial of the permit.

Please submit, in writing, any comments which you wish to have considered concerning the department's proposed action to Mr. Clair Fancy of the Bureau of Air Quality Management.

Sincerely,

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

CHF/WH/rw

cc: James T. Wilburn ✓
Bill Thomas ✓
Steve Gyrog ✓
Al Morrison ✓
Paul Swartz ✓
Attachments
Reading File ✓
William Hanks ✓

No. 0155791

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

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Rudy J. Cabina		
STREET AND NO.		
P.O. Box 3269		
P.O., STATE AND ZIP CODE		
Tampa, FL 33601		
POSTAGE	\$	
CONSULT POSTMASTER FOR FEES		
CERTIFIED FEE	¢	
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OPTIONAL SERVICES	RETURN RECEIPT SERVICE	
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PS Form 3800, Apr. 1976

PS Form 3811, Jan 1979

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

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Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)

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2. ARTICLE ADDRESSED TO:
Rudy J. Cabina
P.O. Box 3269
Tampa, FL 33601

3. ARTICLE DESCRIPTION:

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(Always obtain signature of addressee or agent)

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SIGNATURE Addressee Authorized agent

DATE OF DELIVERY
DEC 17 1984

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TAMPA FL 33601
DEC 17 1984
CLERK 8390

☆GPO : 1979-300-459

State of Florida Department of Environmental Regulation

Notice of Proposed Agency Action
on Permit Applications

The Department of Environmental Regulation gives notice of its intent to issue permits to modify Gardinier, Inc.'s No. 7 and No. 8 sulfuric acid plants which are located near Gibsonton, Hillsborough County, Florida.

The Company has requested permission to make modifications to increase production of two existing sulfuric acid plants to 2,200 TPD. A Best Available Control Technology determination was required for each plant. The allowable emissions for each plant, after modifications, will be 4.0 lb sulfur dioxide and 0.15 lb acid mist per ton of acid produced, and visible emissions of 5 percent opacity. These emissions will not cause or contribute to an ambient air quality standard violation or violate any federal, state or county regulation. No increment consumption will result from the changes in emissions at this plant after this modification.

Persons whose substantial interests are affected by the department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within fourteen (14) days of publication of this notice. Failure to file a request for hearing within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this preliminary statement. Therefore, persons who may not object to the proposed agency action may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Model Rule 28-5.207 at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009 Apalachee Parkway, Tallahassee, Florida 32301. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32301. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

The application, technical evaluation, and Department's intent for the proposed project are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the following locations:

Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301

Hillsborough County
Environmental Protection
Commission
1900 9th Avenue
Tampa, Florida 33605

Dept. of Environmental Regulation
Southwest District
7601 Highway 301 North
Tampa, Florida 33610

Any person may send written comments on the proposed action to Mr. Clair Fancy at the Department's Tallahassee address. All comments mailed within 30 days of the publication of this notice will be considered in the Department's final determination.

RULES OF THE ADMINISTRATIVE COMMISSION
MODEL RULES OF PROCEDURE
CHAPTER 28-5
DECISIONS DETERMINING SUBSTANTIAL INTERESTS

28-5.15 Requests for Formal and Informal Proceedings

- (1) Requests for proceedings shall be made by petition to the agency involved. Each petition shall be printed typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double spaced and indented.
- (2) All petitions filed under these rules should contain:
 - (a) The name and address of each agency affected and each agency's file or identification number, if known;
 - (b) The name and address of the petitioner or petitioners;
 - (c) All disputed issues of material fact. If there are none, the petition must so indicate;
 - (d) A concise statement of the ultimate facts alleged, and the rules, regulations and constitutional provisions which entitle the petitioner to relief;
 - (e) A statement summarizing any informal action taken to resolve the issues, and the results of that action;
 - (f) A demand for the relief to which the petitioner deems himself entitled; and
 - (g) Such other information which the petitioner contends is material.

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of an)
Application for Permits by:)
)
Gardinier, Inc.) DER File No. AC 29-089697
P. O. Box 3269) AC 29-089696
Tampa, Florida 32575)
)

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its Intent to Issue, and proposed order of issuance for, permits pursuant to Chapter 403, Florida Statutes, for the proposed project as detailed in the applications specified above. The Department is issuing this Intent to Issue for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, Gardinier, Inc, applied on July 6, 1984, to the Department of Environmental Regulation for permits to make those modifications necessary to increase production of the existing No. 7 and No. 8 sulfuric acid plants at their phosphate fertilizer chemical complex near Gibsonton, Hillsborough County, Florida. The information submitted in the October 15, 1984, letter from the company completed the applications so that they could be processed by the department. Information submitted by the company shows the modified acid plants will comply with all federal, state, and county air pollution control regulations.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 and 17-4. The project is not exempt from permitting procedures. The applicant was officially notified by the Department that an air construction permit was required for the proposed work.

This intent to issue shall be placed before the Secretary for final action unless an appropriate petition for a hearing pursuant to the provisions of Section 120.57, Florida Statutes, is filed within fourteen (14) days from receipt of this letter or

publication of the public notice (copy attached) required pursuant to Rule 17-103.150, Florida Administrative Code, whichever occurs first. The petition must comply with the requirements of Section 17-103.155 and Rule 28-5.201, Florida Administrative Code (copy attached) and be filed pursuant to Rule 17-103.155(1) in the Office of General Counsel of the Department of Environmental Regulation at 2600 Blair Stone Road, Tallahassee, Florida 32301.

Petitions which are not filed in accordance with the above provisions are subject to dismissal by the Department. In the event a formal hearing is conducted pursuant to Section 120.57(1), all parties shall have opportunity to respond, to present evidence and argument on all issues involved, to conduct cross-examination of witness and submit rebuttal evidence, to submit proposed findings of facts and orders, to file exception to any order or hearing officer's recommended order, and to be represented by counsel. If an informal hearing is requested, the agency, in accordance with its rules of procedure, will provide affected persons or parties or their counsel an opportunity, at a convenient time and place, to present to the agency or hearing officer, written or oral evidence in opposition to the agency's action or refusal to act, or a written statement challenging the grounds upon which the agency has chosen to justify its action or inaction, pursuant to Section 120.57(2), Florida Statutes.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the proposed agency action. Therefore, persons who may not wish to file a petition, may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Model Rule 28-5.207 at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of

Administrative Hearings, 2009 Apalachee Parkway, Tallahassee, Florida 32301. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32301. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

Executed the 13 day of DECEMBER, 1984, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



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

Copies furnished to:

James T. Wilburn
Rudy Cabina
Bill Thomas
Steve Gyorog
Al Morrison

Technical Evaluation
and
Preliminary Determination

Gardinier, Inc.
Gibsonton, Florida
Hillsborough County

Modifications to Sulfuric Acid Plants
Proposed State Construction Permit Numbers
No. 7 Sulfuric Acid Plant - AC 29-089697
No. 8 Sulfuric Acid Plant - AC 29-089696

Florida Department of Environmental Regulation
Bureau of Air Quality Management
Central Air Permitting

December 4, 1984

DER
APR 29 1985
BAQM

I. Project Description

A. Applicant

Gardinier, Inc.
P. O. Box 3269
Tampa, Florida 33601

B. Project and Location

Two of the sulfuric acid plants operated by Gardinier Inc., No. 7 and 8, are presently permitted to produce 1,750 and 1,770 TPD of 100 percent acid, respectively. The Company has applied for permits to modify both plants and increase production in each to 2,200 TPD acid.

The modifications to the No. 7 acid plant involve changing the acid cross-circulating system between the interpass tower acid coolers and pump tanks, adding mixing vanes to the gas duct at the second catalyst mass, and installing a separate pump to transfer water from the cooling tower to the final absorbing tower. The emissions from the No. 7 plant, after modifications, will increase but continue to meet the new source performance standards (NSPS) of 4 lb SO₂/ton acid and 0.15 lb mist/ton acid (40 CFR 60, Subpart H).

The initial modifications to the No. 8 acid plant involve installing parallel gas ducting to the last two catalyst masses and larger steam piping in the plant. If the plant is unable to meet the production or emission limits after these modifications, then the Company shall install a superheater parallel with the boiler, install a new superheater/economizer in the exit of the 3A pass in parallel with the existing one, increase the catalyst in the main converter, and replace the acid cooling coils. If the plant is still unable to meet its production and emissions limits, more extensive modifications to the plant will be made. The permitted emissions from the No. 8 plant will change from 10 lb SO₂ and 0.15 lb acid mist per ton of acid produced to 4 lb SO₂ and 0.15 lb acid mist per ton of acid produced.

The following table summarizes the production and emissions from the plants before and after the modifications.

		Permitted SO ₂ Emiss.			Permitted mist Emiss.		
No. 7 Plt	Prod. (TPD)	lb/ton	lb/hr	TPY	lb/ton	lb/hr	TPY
Before	1750	4	291.7	1277.5	0.15	10.9	47.9
After	2200	4	366.7	1606	0.15	13.8	60.2
Change	+450	0	+75.0	+328.5	0	+2.9	+12.3
<u>No. 8 Plt</u>							
Before	1770	10	737.5	3230.3	0.15	11.1	48.5
After	2200	4	366.7	1606	0.15	13.8	60.2
Change	+430	-6	-370.8	-1523.3	0	+2.7	+11.7

The market for phosphate fertilizer products has been depressed. Actual emissions over the past several years from these acid plants have been much lower than permitted emissions. The potential increases in emissions resulting from these modifications are shown in the following table.

	Sulfur Dioxide Emissions TPY	Acid Mist Emissions TPY
Proposed (After Modif.)	3212	120.5
Actual (before Modif.)	885	28.3
Increase	2327	92.2

II. Rule Applicability

The proposed project, modifications to sulfuric acid plants to increase production, is subject to preconstruction review under the provisions of Chapter 403, FS, and Chapter 17-2, FAC.

The sulfuric acid plants are in an area designated nonattainment for particulate matter and ozone (17-2.410), unclassifiable for sulfur dioxide (17-2.430), and attainment for the other criteria pollutants (17-2.420).

The proposed modifications are not subject to New Source Review for Nonattainment Areas (17-2.510) because the sulfuric acid plants are not sources of particulate matter or volatile organic compounds.

The facility is a major source of sulfur dioxide (17-2.100(99)) because total emissions exceed 100 TPY. The modifications will cause significant net emission increases of sulfur dioxide and acid mist. Therefore, the modifications are subject to the Prevention of Significant Deterioration regulations (17-2.500(2)(d)4.) and the preconstruction review requirements outlined in 17-2.500(5). Emission standards for the modified plants will be established by Best Available Control Technology determinations (17-2.500(5)(c)). In addition, the modified plants will have to comply with the applicable Standards of Performance for New Stationary Sources (17-2.660).

The plants must also comply with the regulations of the Hillsborough County Environmental Protection Commission.

III. Technical Evaluation

The department has established the new source performance standards for sulfuric acid plants of 4 lb SO₂/ton acid and 0.15 lb acid mist/ton acid as BACT for both plants. See the Appendix for more details on this determination.

The plants must also comply with the regulations of the Hillsborough County Environmental Protection Commission which limit the visible emission to 5 percent opacity. This is more strict than the applicable state and federal regulations for sulfuric acid plants. Any permit to construct issued for the sulfuric acid plants will limit emissions to 5 percent opacity.

A. No. 7 Sulfuric Acid Plant

The physical modifications proposed for this plant should improve conversion of sulfur dioxide to sulfur trioxide and absorption of the sulfur trioxide in the absorbing tower. Source test data on the existing plant shows the emissions at a lower production rate have been below the new source performance standard of 4 lb SO₂/ton acid and 0.15 acid mist/ton acid. Other data supplied by the company shows the absorbing towers are oversized and should be able to handle the increased production.

B. No. 8 Sulfuric Acid Plant

The initial modifications proposed for the No. 8 sulfuric acid plant will increase the production of sulfuric acid and steam at the plant. Data supplied by the company shows the absorbing towers can handle the additional production. Source test data on this plant shows it can meet the new source performance standards.

If the production and emission standards are not met after the initial modifications to the No. 8 plant, the company will install additional catalyst in the converter to increase

production and heat exchanges to lower the temperature of the gas and absorbing acid streams. The lower temperature should improve the removal of sulfur oxides from the gas stream.

If, after these modifications, the plant is still unable to meet its production and emission standards, more extensive modifications to the plant will be needed. The company will be required to obtain prior approval from the department and Hillsborough County Environmental Protection Commission before proceeding with any major modifications.

IV. Air Quality Impact

Gardinier, Inc. is designated a major facility for air pollution, emitting greater than 100 tons per year of a regulated pollutant. The company is currently proposing to expand the production capacities of its numbers 7 and 8 sulfuric acid (H_2SO_4) plants. This modification will result in a significant increase in emissions of sulfur dioxide (SO_2) and sulfuric acid mist. Both of these pollutants are thus subject to review under the prevention of significant deterioration (PSD) regulations. The air quality analysis required for these pollutants includes:

- o An analysis of existing air quality;
- o A PSD increment analysis (for SO_2 only);
- o An ambient air quality standards (AAQS) analysis;
- o An analysis of impacts on soils, vegetation and visibility, and growth-related air quality impacts, and;
- o A "Good Engineering Practice" (GEP) stack height determination.

The analysis of existing air quality generally relies on preconstruction monitoring data collected in accordance with EPA-approved methods. The PSD increment and AAQS analyses depend on air quality dispersion modeling carried out in accordance with EPA guidelines.

Based on these required analyses, the department has reasonable assurance that the proposed modification at the Gardinier facility, as described in this report and subject to the conditions of approval proposed herein, will not cause or contribute to a violation of any PSD increment or ambient air quality standards. A discussion of the modeling methodology and required analyses follows.

Modeling Methodology

The EPA-approved Industrial Source Complex Short-Term (ISCST) dispersion model was used in the air quality impact analysis. This model predicts ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, area, and volume sources. The model allows for the

separation of sources, user-determined location of receptors, and several other features such as building wake downwash. The model is generally applicable to level or gently rolling terrain.

A five-year record of sequential hourly meteorological data was used in the modeling analysis. The surface data were National Weather surface data collected at the Tampa International Airport during the years 1973, 74, 75, 78, and 79. The upper air data were also National Weather Service data collected at their office in Ruskin, Florida during the same years. The twice-daily radiosonde soundings taken at Ruskin are processed into hourly mixing depths which are directly used in the model.

The applicant divided the modeling analysis into screening and refined phases. In the screening phase a coarser network of receptor points was used and the emissions were limited to major sources (i.e., sources with SO₂ emissions of more than 250 tons per year). The five-year meteorological record was used and the highest, second-highest short-term concentrations were predicted along with the maximum annual averages. The refined phase then remodeled the highest, second-highest short term concentrations developed in the screening phase using a refined receptor grid (100 meter receptor spacing) and a more detailed emission inventory which included all sources upwind of the receptor. Total ambient air quality impacts were based on the modeled impacts plus a background concentration.

Pollutant concentrations were predicted both on and off plant property. The Gardinier property is irregularly shaped but extends approximately 2.3 kilometers in the north-south and 1.5 kilometers in the east-west. The public is generally precluded access from this area.

The stack parameters and emissions rates for the Gardinier facility used in the modeling analysis are listed in Table I.

Analysis of Existing Air Quality

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review. In general, one year of quality assured data using an EPA-reference, or the equivalent, monitor must be submitted. Sometimes less than one year of data, but no less than four months, may be accepted when department approval is given.

An exemption to the monitoring requirement can be obtained if the maximum air quality impact, as determined through air quality modeling, is less than a pollutant-specific de minimus concentration. In addition, if current monitoring data already exist and these data are representative of the proposed source area, then at the discretion of the department, these data may be used.

For the proposed modification monitoring data is required for SO₂ only. Sulfuric acid mist is not regulated by an ambient air quality standard and no approved method of monitoring this pollutant is available; therefore, no further impact analysis is required.

The applicant has proposed the use of existing SO₂ monitoring data to satisfy the monitoring requirement. The Hillsborough County Environmental Protection Commission runs several continuous SO₂ monitors within ten kilometers of the Gardinier facility. These monitors are currently in operation and are run within the quality assurance guidelines of the state. The department accepts these data as representative of the area and suitable for PSD requirements. Table II summarizes the SO₂ monitoring data in the area of the Gardinier facility.

PSD Increment Analysis

The Gardinier facility is located in an area designated as a Class II attainment area for the pollutant SO₂. Within this area, maximum allowable increases (PSD increments) represent the amount that new sources, or increases from modified sources, may increase ambient ground-level concentrations of SO₂. At no time, however, can the increased loading cause or contribute to a violation of the ambient air quality standards.

All SO₂ emission increases from sources constructed or modified after December 27, 1977 will consume PSD increment. In addition, all SO₂ emission increases associated with the construction or modification of major sources which occur after January 6, 1975, will consume increment. Decreases in emissions can expand increment.

The proposed production increases for the number 7 and 8 sulfuric acid plants result in actual increases in SO₂ emissions and consumption of PSD increment. However, three other sulfuric acid plants at the Gardinier facility were shut down in October 1976. As such these units can expand the maximum allowable increase in the area.

Table III quantifies the actual emission changes subject to PSD increment consumption or expansion. The numbers 4, 5, and 6 sulfuric acid plants account for a larger emission reduction than the numbers 7 and 8 units do an emission increase. In addition, units 4, 5, and 6 emitted through stacks which were about half the height of the stacks for units 7 and 8. As such, the net impact of this facility is to expand the PSD increment, therefore, no further increment analysis is necessary.

Ambient Air Quality Standards Analysis

Given existing air quality in the area of the Gardinier facility, emissions from the proposed production increase are not expected to cause or contribute to a violation of ambient air quality standards. The results of the ambient air quality standards analysis are contained in Table IV.

Of the pollutants subject to PSD review (SO₂ and sulfuric acid mist), only the criteria pollutant SO₂ has an ambient standard to compare with. All Gardinier's sources listed in Table I were modeled along with other interacting sources to determine the maximum ground-level impacts for SO₂. In the modeling performed by the applicant the number 8 sulfuric acid plant was modeled assuming an emission of 10 lb SO₂ per ton of acid produced. This source is being permitted to emit only 4 lb SO₂ per ton of acid produced. Thus, the modeling overestimated the ambient impacts due to this source. The department has remodeled the days of maximum impact to estimate the concentrations with the number 8 unit emitting at the lower level.

The total impact on ambient air is obtained by adding a background concentration to the maximum modeled concentration. This background concentration takes into account all sources that were not explicitly modeled. An estimate of this background level for SO₂ is given by the maximum annual concentration measured at any of the surrounding monitors in the most recent year, 1983, as given in Table II. The background level added to all maximum concentrations is 21 ug/m³.

Additional Impacts Analysis

Soils and Vegetation

The maximum ground-level concentrations predicted to occur for the criteria pollutants as a result of the proposed modification in conjunction with all other sources, including a background concentration, will be below all applicable ambient air quality standards including the secondary standards designed to protect public welfare-related values. As such these pollutants are not expected to have a harmful impact on soils and vegetation.

Visibility

A level-1 visibility screening analysis was performed by the applicant to assess the impact to visibility on the nearest PSD Class I area. This area is the Chassahowitzka National Wilderness Area located approximately 85 kilometers from the Gardinier facility. The analysis showed that there was no

potential for an adverse impact due to emissions from the proposed modification.

Growth Related Impacts

The production increase at the Gardinier facility is not expected to significantly change employment, population, housing, or commercial-industrial development in the area to the extent that an air quality impact will result.

GEP Stack Height

Good engineering practice (GEP) stack height means the greater of: (1) 65 meters; or (2) the maximum nearby building height plus 1.5 times the building height or width, whichever is less. The existing stacks for the numbers 7 and 8 sulfuric acid plants are 45.6 meters in height. This is less than the allowed 65 meter height.

V. Conclusion

Based on the information submitted by Gardinier, Inc., the department has concluded that the Nos. 7 and 8 sulfuric acid plants can be modified to produce 2,200 TPD of sulfuric acid and be operated in compliance with all applicable air pollution control regulations. The department proposes to issue construction permits that authorize modifications to both plants. The General and Specific Conditions listed in the proposed permits (attached) will assure compliance of the sources with the air pollution control regulations.

Table I

Source Emissions and Stack Parameters

Facility/Source	SO ₂ Emission Rate (g/s)	Stack Height (m)	Stack Diameter (m)	Exit Gas Temp. (K)	Exit Gas Velocity (m/s)	UTM-E (km)	UTM-N (km)
<u>Gardinier</u>							
H ₂ SO ₄ 7	46.2	45.6	2.29	339	13.1	363.20	3082.30
H ₂ SO ₄ 8	46.2	45.6	2.44	339	11.5	263.30	3082.40
H ₂ SO ₄ 9	55.3	45.6	2.74	347	10.0	363.20	3082.45
KVS 12	0.16	21.6	0.49	333	21.5	362.90	3082.60
RM 5	0.01	20.1	0.61	336	14.9	362.65	3082.60
RM 6-10	0.049	29.0	0.61	339	29.1	362.90	3082.60
CON 7	10.75	23.8	1.83	347	5.8	362.80	3082.70
CON 8	10.75	23.8	1.83	344	5.8	362.80	3082.70
CTMD 3	4.84	20.7	1.07	316	10.7	362.65	3082.60
CTMD 4	4.84	20.7	1.07	316	12.2	362.65	3082.60
GTSP	14.3	38.4	2.44	327	11.0	362.60	3082.45
DM 1,2	0.19	27.4	1.22	336	16.8	362.60	3082.40
DM 3,4	0.19	27.4	1.07	336	20.4	362.60	3082.30
DM 5	3.05	40.4	2.13	314	16.0	362.60	3082.25
SSF	0.069	12.2	0.51	322	9.1	362.75	3082.45

Table II

SO₂ Monitoring Data Within 10 km of Gardinier, Inc.

Site	Distance from Gardinier (km)	Monitoring Method	Year	No. of Observations	SO ₂ Concentration (ug/m ³)				Annual Average
					3-hour		24-hour		
					Max	2nd Max	Max	2nd Max	
1800-021	8.2	Continuous	1981	8,181	897	652	123	116	15
			1982	7,714	693	629	160	125	15
			1983	8,506	751	729	124	114	14
1800-066	3.9	Gas Bubbler	1981	52	--	--	63	58	14
			1982	51	--	--	39	24	8
			1983	50	--	--	45	29	7
1800-083	0.6	Gas Bubbler	1981	52	--	--	110	47	14
			1982	51	--	--	52	31	8
			1983	57	--	--	76	31	8
4360-035	9.8	Continuous	1981	7,655	293	291	116	116	28
			1982	8,481	376	334	103	88	25
			1983	8,241	327	291	85	77	21
4360-052	8.6	Continuous	1981	7,459	271	266	118	102	18
			1982	8,615	452	327	117	97	24
			1983	8,550	527	493	108	86	16
4360-053	9.5	Continuous	1981	7,754	219	217	64	60	14
			1982	8,467	375	292	90	84	19
			1983	8,062	225	222	69	68	16

Table III

SO₂ Emission Changes at Gardinier
Which Affect PSD Increment Consumption

Unit	Date	Change	Actual SO ₂ Emissions (tons/yr)
No. 7 H ₂ SO ₄ Plant	9/79	Increase of capacity from 1380 TPD to 1750 TPD, based on 4 lb SO ₂ /ton.	+270
No. 7 H ₂ SO ₄	current proposed	Increase capacity from 1750 TPD to 2200 TPD, based on 4 lb SO ₂ /ton.	+329
No. 8 H ₂ SO ₄ Plant	current proposed	Increase capacity from 1770 TPD to 2200 TPD, based on 4 lb SO ₂ /ton.	+312
No. 4 H ₂ SO ₄ Plant	10/76	Unit Shutdown, average of previous 2 years.	-892
No. 5 H ₂ SO ₄ Plant	10/76	Unit Shutdown, average of previous 2 years.	-1773
No. 6 H ₂ SO ₄ Plant	10/76	Unit Shutdown, average of previous 2 years.	<u>-2469</u>
Net Change			-4223

Table IV

Comparison of Total Impacts with
Ambient Air Quality Standards

Pollutant and Averaging Time	Maximum Impact Gardinier (ug/m ³)	Maximum Impact All Sources (ug/m ³)	Existing Background (ug/m ³)	Maximum Total Impact (ug/m ³)	Florida AAQS (ug/m ³)
SO ₂					
3-hour	509	766	21	787	1300
24-hour	189	204	21	225	260
Annual	20	34	21	55	60

Best Available Control Technology (BACT) Determination
Gardinier Inc.
Hillsborough County

The applicant plans to increase the product rate from their number 7 and number 8 sulfuric acid plants that are located at their Tampa phosphate fertilizer complex. The production of sulfuric acid from the No. 7 plant will be increased from 1750 tons per day (TPD) to 2200 TPD, and the No. 8 plant from 1770 TPD also to 2200 TPD. No restrictions to limit the hours of operation of either plant has been requested.

Increasing the product output from the two sulfuric acid plants will also result in more air pollutants being emitted to the atmosphere. The air pollutants emitted from a sulfuric acid plant are sulfur dioxide (SO₂) and acid mist. The amount of SO₂ emitted to the atmosphere is an inverse function of sulfur conversion efficiency. When sulfur trioxide combines with water vapor at a temperature below the dew point of sulfur trioxide acid mist is formed. The amount of acid mist is usually dependent upon the type of sulfur feedstock, the strength of acid produced, and the operational parameters in the absorber. Based upon the applicant's data the net increase in air pollutant emissions would be 2327 tons SO₂ and 92 tons acid mist per year.

Under the regulations prescribed in Chapter 17-2, Florida Administrative Code, the increase in SO₂ and acid mist emissions exceed the significant emission rates as listed in Table 500-2. A BACT determination, therefore, is required for the regulated air pollutants sulfur dioxide and acid mist.

BACT Determination Requested by the Applicant:

The air pollutant emissions from No. 7 sulfuric acid plant would be limited to 4 pounds SO₂ and 0.15 pound acid mist per ton of 100% acid produced.

The air pollutant emissions from No. 8 sulfuric acid plant would be limited to 10 pounds SO₂ and 0.30 pound acid mist per ton of 100% acid produced.

Date Receipt of a BACT application:

July 6, 1984

Date of Publication in the Florida Administrative Weekly:

July 27, 1984

Review Group Members:

The determination was based upon comments received from the Stationary Source Control Section, Air Modeling and Data Analysis Section, the Southwest District Office, and the Hillsborough County Environmental Protection Commission.

BACT Determined by DER:

Sulfur Acid Plants No. 7 and No. 8

Pollutant	Emission Limit
Sulfur Dioxide (SO ₂)	Not to exceed 4 pounds per ton of 100% acid produced
Acid Mist ^[1]	Not to exceed 0.15 pounds per ton of 100% acid produced
Visible Emissions	5% opacity maximum

[¹] Acid mist means sulfuric acid mist, as measured by Method 8 of 40 CFR 60, Appendix A.

Compliance with the emission limits will be in accordance with the test methods and procedures prescribed in subsection 60.85, Subpart H, New Source Performance Standards.

DER Method 9 (17-2.700(6)(a)9, FAC) will be used to determine compliance with the visible emission limit.

BACT Determination Rationale:

Florida Administrative Code Rule 17-2.100(105) defines "modification" as any physical change in, or addition to a stationary facility which increase the actual emissions of any air pollutant, regulated under this Chapter, including any not previously emitted, from any source within such facility.

If the increase in emissions as a result of the major source modification are equal to or greater than the significant emission rates listed in Table 500-2, Regulated Air Pollutants - Significant Emission Rates; a Best Available Control Technology (BACT) determination is required, Rule 17-2.500(5)(c). In no event shall application of BACT result in emissions of any pollutant which would exceed the emissions allowed under 40 CFR Part 60 - New Source Performance Standards (NSPS), Rule 17-2.630(1)(a).

Sulfuric Acid plants are subject to the provisions of the New Source Performance Standards, 40 CFR 60.80, Subpart H. The standards under Subpart H are; 4.0 pounds SO₂ per ton of acid produced and 0.15 pound acid mist per ton of acid produced, expressed as 100 percent sulfuric acid. The visible emissions limit is less than 10 percent opacity.

The NSPS standards, Subpart H, were reviewed by EPA in 1979 and EPA concluded that from the standpoint of technology, and considering costs, and the small quantity of emissions in question, that it did not appear necessary to revise the standards. The department has reviewed the test results obtained from several different sulfuric acid plants and concurs with EPA's conclusion. The provisions of Subpart H are judged to be BACT.

The visible emissions opacity limitation determined as BACT is equal to Hillsborough Counties requirement as per Chapter 1-3.03 Vl.C - visible emissions shall not exceed 5% opacity except for 30 minute periods during plant startups when opacity shall be no greater than 40%.

The air quality impact of the proposed emissions has been analyzed. Atmospheric dispersion modeling has been completed and used in conjunction with an analysis of existing air quality to determine maximum ground-level ambient concentrations of the pollutants subject to BACT. Based on these analyses, the department has reasonable assurance that the proposed sulfuric acid plant modifications, subject to the these BACT emission limitations, will not cause or contribute to a violation of an PSD increment or ambient air quality standard.

Details of the Analysis may be Obtained by Contacting:

Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301

Recommended by:

C. H. Fancy, Deputy Bureau Chief

Date:_____

Approved by:_____

Victoria J. Tschinkel, Secretary

Date:_____

DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

PERMITTEE:
Gardinier, Inc.
P. O. Box 3269
Tampa, Florida 33601

Permit Number: AC 29-089696
Expiration Date: October 1, 1987
County: Hillsborough
Latitude/Longitude: 27° 51' 28"N
82° 23' 15"W/
Project: No. 8 Sulfuric Acid
Plant

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4, and 40 CFR 52.21. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

Modifications to the No. 8 sulfuric acid plant that will increase production from 1770 to 2200 TPD. The modifications involve installing parallel gas ducting to the last two catalyst masses, installing larger steam piping from the plant, installing a superheater parallel with the No. 1 boiler, installing a superheater/economizer in the exit of the 3A pass, installing additional catalyst in the main converter, replacing the existing acid cast iron cooling coils with stainless steel heat exchanges, and other major modification that have prior approval of the department and the Hillsborough County Environmental Protection Commission.

The UTM coordinates of the site are 17-363.3E and 3082.4N.

Construction shall be in accordance with the application for a permit to construct the No. 8 Sulfuric Acid Plant that was signed by Mr. Rudy J. Cabina on July 3, 1984, and the additional information supplied in Gardinier, Inc.'s September 11, 1984, and October 15, 1984, letters except for the changes mentioned in the Technical Evaluation and Preliminary Determination and listed as specific conditions in the permit to construct.

PERMITTEE:
Gardinier, Inc.

Permit Number: AC 29-089696
Expiration Date: October 1, 1987

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

PERMITTEE:
Gardinier, Inc.

Permit Number: AC 29-089696
Expiration Date: October 1, 1987

GENERAL CONDITIONS:

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

- a. Having access to and copying any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

- a. a description of and cause of non-compliance; and
- b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

PERMITTEE:
Gardinier, Inc.

Permit Number: AC 29-089696
Expiration Date: October 1, 1987

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

- (x) Determination of Best Available Control Technology (BACT)
- (x) Determination of Prevention of Significant Deterioration (PSD)
- (X) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

- a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.

PERMITTEE:
Gardinier, Inc.

Permit Number: AC 29-089696
Expiration Date: October 1, 1987

GENERAL CONDITIONS:

- b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.
- c. Records of monitoring information shall include:
 - the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the date(s) analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.

15. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. Sulfuric acid production, measured as 100 percent H₂SO₄, shall not exceed 2,200 TPD.
2. Sulfur dioxide emissions shall not exceed 4.0 lb/ton acid and 8,800 lb/day.
3. Acid mist emissions shall not exceed 0.15 lb/ton acid and 330 lb/day.
4. Visible emissions shall not exceed 5 percent opacity, average for any consecutive 6 minute period.

PERMITTEE:
Gardinier, Inc.

Permit Number: AC 29-089696
Expiration Date: October 1, 1987

SPECIFIC CONDITIONS:

5. The test methods and procedures described in 40 CFR 60.85 shall be used to determine the compliance status of the source with the sulfur dioxide and acid mist standards. Method 9, as described in 40 CFR 60, Appendix A, shall be used to determine the compliance status of the source with the visible emission standard.
6. A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained, and operated on this plant as specified in 40 CFR 60.84. Excess emissions shall be reported to the Hillsborough County Environmental Protection Commission.
7. The applicant shall comply with all requirements of 40 CFR 60, Subpart H, Standards of Performance for Sulfuric Acid Plants.
8. The plant may operated continuously, 8760 hours per year.
9. This construction permit replaces the current operating permit for this sulfuric acid plant. During the modifications of this plant, the emissions shall not exceed 10 lb SO₂ per ton of acid and 0.15 lb acid mist per ton of acid while the plant is operating commercially.
10. Construction shall reasonably conform to the plans and schedule in the application and October 15, 1984 letter. Bi-annual reports describing the status of the modifications shall be submitted to the state and county regulatory agencies. Gardinier, Inc. shall obtain prior approval from the department and county before proceeding with any construction referred to as "Third Modification" in the October 15, 1984 letter.
11. Gardinier Inc. shall take precautionary measures to prevent emissions from leaks at the plant.
12. Gardinier, Inc. shall submit a complete application for permit to operate the sulfuric acid plant, which include an emissions test report, to the Hillsborough County Environmental Protection Commission at least 90 days prior to the expiration date of this construction permit. Gardinier, Inc. may continue to operate this sulfuric acid plant, if the source is in compliance with the conditions in this permit, until the expiration date of this construction permit or until the expiration date of any permit to operate that is issued for this source.

PERMITTEE:
Gardinier, Inc.

Permit Number: AC 29-089696
Expiration Date: October 1, 1987

SPECIFIC CONDITIONS:

13. Upon obtaining a permit to operate, the applicant will be required to submit annual operation reports which shall include, as a minimum, the annual production of the plant and a recent emissions test report.

Issued this ____ day of ____, 19__

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION

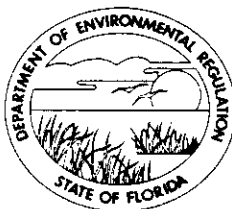
VICTORIA J. TSCHINKEL, Secretary

____ pages attached.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

PERMITTEE:
Gardinier, Inc.
P. O. Box 3269
Tampa, Florida 33601

Permit Number: AC 29-089697
Expiration Date: July 1, 1985
County: Hillsborough
Latitude/Longitude: 27° 51' 28"N
82° 23' 15"W/
Project: No. 7 Sulfuric Acid
Plant

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4, and 40 CFR 52.21. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

Modifications to the No. 7 sulfuric acid plant that will increase production from 1750 to 2200 TPD. The modifications involve changing the acid cross-circulating system between the interpass tower acid coolers and pump tanks to a hot cross flow system, adding new mixing vanes in the gas duct to the second catalyst mass, and installing a separate pump to transfer water from the existing cooling water tower to the final absorbing tower.

The UTM coordinates of the site are 17-363.2E and 3082.3N.

Construction shall be in accordance with the application for a permit to construct the No. 7 Sulfuric Acid Plant that was signed by Mr. Rudy J. Cabina on July 3, 1984, and the additional information supplied in Gardinier, Inc.'s September 11, 1984, and October 15, 1984, letters except for the changes mentioned in the Technical Evaluation and Preliminary Determination and listed as specific conditions in the permit to construct.

PERMITTEE:
Gardinier, Inc.

Permit Number: AC 29-089697
Expiration Date: July 1, 1985

GENERAL CONDITIONS:

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2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

PERMITTEE:
Gardinier, Inc.

Permit Number: AC 29-089697
Expiration Date: July 1, 1985

GENERAL CONDITIONS:

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7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

- a. Having access to and copying any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

- a. a description of and cause of non-compliance; and
- b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

PERMITTEE:
Gardinier, Inc.

Permit Number: AC 29-089697
Expiration Date: July 1, 1985

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

- (x) Determination of Best Available Control Technology (BACT)
- (x) Determination of Prevention of Significant Deterioration (PSD)
- (X) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

- a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.

PERMITTEE:
Gardinier, Inc.

Permit Number: AC 29-089697
Expiration Date: July 1, 1985

GENERAL CONDITIONS:

- b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.
- c. Records of monitoring information shall include:
- the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the date(s) analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.

15. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. Sulfuric acid production, measured as 100 percent H₂SO₄, shall not exceed 2,200 TPD.
2. Sulfur dioxide emissions shall not exceed 4.0 lb/ton acid and 8,800 lb/day.
3. Acid mist emissions shall not exceed 0.15 lb/ton acid and 330 lb/day.
4. Visible emissions shall not exceed 5 percent opacity, average for any consecutive 6 minute period.

PERMITTEE:
Gardinier, Inc.

Permit Number: AC 29-089697
Expiration Date: July 1, 1985

SPECIFIC CONDITIONS:

5. The test methods and procedures described in 40 CFR 60.85 shall be used to determine the compliance status of the source with the sulfur dioxide and acid mist standards. Method 9, as described in 40 CFR 60, Appendix A, shall be used to determine the compliance status of the source with the visible emission standard.

6. A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained, and operated on this plant as specified in 40 CFR 60.84. Excess emissions shall be reported to the Hillsborough County Environmental Protection Commission.

7. The applicant shall comply with all requirements of 40 CFR 60, Subpart H, Standards of Performance for Sulfuric Acid Plants.

8. The plant may operate continuously, 8760 hours per year.

9. This construction permit replaces the current operating permit for this sulfuric acid plant. During the modifications to this plant, the emissions shall not exceed 4.0 lb SO₂ per ton acid and 0.15 lb acid mist per ton of acid while the plant is operating commercially.

10. Construction shall reasonably conform to the plan and schedule in the application. Any delays encountered during construction will be reported to the Hillsborough County Environmental Protection Commission.

11. Gardinier Inc. shall take precautionary measures to prevent emissions from leaks at the plant.

12. Gardinier, Inc. shall submit a complete application for permit to operate the sulfuric acid plant, which include an emissions test report, to the Hillsborough County Environmental Protection Commission at least 90 days prior to the expiration date of this construction permit. Gardinier, Inc. may continue to operate this sulfuric acid plant, if the source is in compliance with the conditions in this permit, until the expiration date of this construction permit or until the expiration date of any permit to operate that is issued for this source.

PERMITTEE:
Gardinier, Inc.

Permit Number: AC 29-089697
Expiration Date: July 1, 1985

SPECIFIC CONDITIONS:

13. Upon obtaining a permit to operate, the applicant will be required to submit annual operation reports which shall include, as a minimum, the annual production of the plant and a recent emissions test report.

Issued this _____ day of _____, 19__

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION

VICTORIA J. TSCHINKEL, Secretary

_____ pages attached.