



# Florida Department of Environmental Protection

Lawton Chiles  
Governor

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Virginia B. Wetherell  
Secretary

December 16, 1993

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

Mr. Ivan Nance  
Piney Point Phosphate, Inc.  
13300 US Highway 41 North  
Palmetto, Florida 34221-8662

Dear Mr. Nance:

Attached is one copy of the Technical Evaluation and Preliminary Determination, proposed Best Available Control Technology (BACT) Determination and proposed permit for a modification of the Piney Point Phosphate, Inc. facility. The facility is located at the above address in Palmetto, Florida, Manatee County.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. Preston Lewis at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

Sincerely,

*for John Brown Jr.*  
C. H. Fancy, P.E.  
Chief  
Bureau of Air Regulation

CHF/CSL

Attachments

cc: Bill Thomas, SWD  
Rob Baum, Manatee Co.  
John Bunyak, NPS  
Jewell Harper, U.S. EPA  
Doug Beason, OGC  
John Koogler, K&A

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CERTIFIED MAIL

In the Matter of an  
Application for Permit by:

DEP File No. AC 41-232096  
PSD-FL-205  
Manatee County

Mr. Ivan Nance  
Piney Point Phosphate, Inc.  
13300 US Highway 41 North  
Palmetto, FL 34221-8662

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INTENT TO ISSUE

The Department of Environmental Protection gives notice of its intent to issue an air construction permit (copy attached) for the proposed project as detailed in the application specified above, for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, Piney Point Phosphate, Inc., applied on May 28, 1993, to the Department of Environmental Protection for a permit to modify the construction permit (AC 41-211848) for a proposed 190 MMBtu/hr process boiler by increasing the hours of operation from 876 hours to 8760 hours per year. The facility is located at 13300 US Highway 41 North, Palmetto, Florida.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes and Florida Administrative Code (F.A.C.) Chapters 17-212 and 17-4. The project is not exempt from permitting procedures. The Department has determined that a construction permit is required for the proposed work.

Pursuant to Section 403.815, Florida Statutes and Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit. The notice shall be published one time only within 30 days in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.

A person 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 contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of their receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition 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.

The Petition shall contain the following information;

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by Petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
- (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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 intent. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this intent in the

Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION

*for John C. Brown*  
\_\_\_\_\_  
C. H. Fancy, P.E., Chief  
Bureau of Air Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32399  
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this INTENT TO ISSUE and all copies were mailed by certified mail before the close of business on 12/16/93 to the listed persons:

Clerk Stamp

**FILING AND ACKNOWLEDGMENT**

FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

*Barbara J. Boutwell* 12/16/93  
Clerk Date

Copies furnished to:

B. Thomas, SWD  
R. Baum, Manatee Co.  
J. Bunyak, NPS  
J. Harper, U.S. EPA  
D. Beason, OGC  
J. Koogler, K&A

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
NOTICE OF INTENT TO ISSUE PERMIT

The Department of Environmental Protection gives notice of its intent to issue an air construction permit (AC 41-232096) to Piney Point Phosphates, Inc., 13300 US Highway 41 North, Palmetto, Florida 34221-8662 to increase the operating hours of a proposed 190 MMBtu/hr process steam boiler from 876 hours to 8760 hours per year. A determination of the Best Available Control Technology (BACT) was required for nitrogen oxides (NO<sub>x</sub>), particulate matter (PM) and sulfur dioxide (SO<sub>2</sub>). No PSD Class I or II increments are consumed by this project. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person 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 contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition 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.

The Petition shall contain the following information; (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by Petitioner, if any; (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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 Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

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

Department of Environmental Protection  
Bureau of Air Regulation  
111 S. Magnolia Drive, Suite 4  
Tallahassee, Florida 32301

Department of Environmental Protection  
Southwest District  
3804 Coconut Palm Drive  
Tampa, Florida 33619-8218

Manatee County Air Quality Division  
202 6th Avenue East  
Bradenton, Florida 34208

Any person may send written comments on the proposed action to Mr. Preston Lewis at the Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida, 32399-2400. All comments received within 30 days of the publication of this notice will be considered in the Department's final determination.

Further, a public hearing can be requested by any person(s). Such requests must be submitted within 30 days of this notice.

Technical Evaluation  
and  
Preliminary Determination

Piney Point Phosphate, Inc.  
Palmetto, Florida  
Manatee County

Construction Permit Modification  
Permit No. AC 41-232096  
PSD-FL-205

Department of Environmental Protection  
Division of Air Resources Management  
Bureau of Air Regulation

December 16, 1993

## I. Application

### A. Applicant

Piney Point Phosphate, Inc.  
13300 US Highway 41 North  
Palmetto, Florida 34221-8662

### B. Project Description/Location/Classification

The Department received an application on May 28, 1993 to modify an existing permit by increasing the operating hours from 876 hours to 8760 hours per year for the proposed 190 MMBtu/hr process boiler at the applicant's facility in Palmetto, Manatee County, Florida. The operating hours will be increased while firing new low sulfur No. 2 fuel oil. The existing 96 MMBtu/hr boiler will be replaced by a new 190 MMBtu/hr boiler. Subsequent to construction of the proposed 190 MMBtu/hr boiler it will be utilized as the primary source of steam at the facility. UTM coordinates of the site are Zone 17, 348.5 km E and 3057.3 km N. The latitude and longitude for the site are 27°37'58" and 82°32'08". This project is considered a major modification since the significant emission rate for nitrogen oxides (NO<sub>x</sub>) will be exceeded. Since a significant emission rate will be exceeded, the project is subject to Prevention of Significant Deterioration (PSD) review and a Best Available Control Technology (BACT) determination. The application was considered complete subsequent to receiving additional information on September 21, 1993. Maximum fuel consumption and heat input for the boiler will be 1349 gallons/hour and 190 MMBtu/hr., respectively. Piney Point Phosphate, Inc. will fire only new No. 2 fuel oil containing no more than 0.05% sulfur by weight in the boiler. This modification will require a physical change of equipment but will not affect the emissions of any other source at the facility.

## II. Emissions/Technical Evaluation

The modification requested by Piney Point Phosphate, Inc. to increase the operating hours will be accomplished by increasing the consumption of fuel oil by approximately 1320.5 gal/hour. The fuel oil will contain no more than 0.05% sulfur by weight.

The current actual emissions at the affected sources were calculated using 1989, 1990, and 1991 fuel consumption data. Also, AP-42 emission factors and the emission factor for NO<sub>x</sub> from the previous permit application were used in the calculations for the current actual emissions.



The request by Piney Point Phosphate, Inc. to increase the operating hours of the auxiliary boiler will allow the boiler to be utilized as the primary source of steam for the facility and will also create exceedences of the "significant emission rates" for NO<sub>x</sub>. The proposed modification is subject to Prevention of Significant Deterioration (PSD) in accordance with F.A.C. Rule 17-212.400 and will require a determination of the Best Available Control Technology (BACT) for NO<sub>x</sub>. A BACT determination is also required for PM and SO<sub>2</sub> in accordance with Rule 17-296.406. Both of the PSD and BACT requirements are discussed in the rule applicability section. The actual, proposed and net emissions submitted in the application are as follows:

Pollutant	Actual Emissions #/hr(ton/yr)	Proposed* Emissions #/hr(ton/yr)	Net Emissions #/hr(ton/yr)	Significant Emission ton/yr
PM	01.4(0.3)	2.7 (11.8)	1.3(11.5)	15
SO <sub>2</sub>	87.4(14.7)	9.6(42.0)	-77.8(27.3)	40
NO <sub>x</sub>	53.8(11.0)	38.0(166.4)	-15.8(155.4)	100
VOC	0.2(0.03)	0.3(1.2)	0.1(1.17)	40
CO	3.4(0.7)	6.7(29.3)	3.3(28.6)	100

\*Refer to the BACT Determination for details on calculations of future emission values.

The applicants proposed emissions were calculated using 8760 hours of operation and uncontrolled emission factors for distillate fuel oil combustion in industrial boilers from AP-42, Table 1.3-1. The emission calculations are based on 0.05 and 0.02 percent by weight of sulfur and ash, respectively.

The following table provides the Department's maximum proposed allowable emissions:

190 MMBtu/hour Process Boiler  
Maximum Allowable Emission

Pollutant	lb/hr	ton/yr*
PM/PM <sub>10</sub>	2.7	11.8
SO <sub>2</sub>	9.6	42.0
NO <sub>x</sub>	28.5	124.8

\*Based on 8760 hours of operation per year

### III. Rule Applicability

The proposed project is subject to preconstruction review in accordance with Chapter 403 of the Florida Statutes and Florida Administrative Code (F.A.C.) Chapters 17-4, 17-210, 17-212, 17-292, 17-275, 17-296, and 17-297. The proposed facility will be located in an area classified as attainment for all regulated pollutants (F.A.C. Rule 17-275.400). The federal new source performance standards under 40 CFR 60 Subpart Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units) applies to this source. F.A.C. Rule 17-296 requires a BACT analysis for nitrogen oxides (NO<sub>x</sub>) since the significant emission level for this pollutant will be exceeded. Since the new source is a small boiler it is subject to BACT for PM and SO<sub>2</sub> in accordance with 17-296.406.

As originally filed, the application is a request to modify a construction permit of a major source and is subject to the provisions of F.A.C. Rule 17-212.400, Prevention of Significant Deterioration (PSD), since the proposed modification would cause an exceedence of the PSD significant emission rate for NO<sub>x</sub>. The BACT Determination (attached) established the allowable emissions for NO<sub>x</sub>.

### IV. Air Quality Analysis

#### A. Introduction

The proposed project will result in an emission increase which is projected to be greater than the PSD significant emission rate for NO<sub>x</sub>. Therefore, the project is subject to the PSD review requirements contained in F.A.C. Rule 17-212.400. An air quality impact analysis for this pollutant is required. This includes:

- o A PSD increment analysis;
- o An analysis of existing air quality;
- o An Ambient Air Quality Standards (AAQS) analysis;
- o An analysis of impacts on soils, vegetation, 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 are based on air quality dispersion modeling completed in accordance with EPA guidelines.

Based on these required analyses, the Department has reasonable assurance that the proposed project, 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 AAQS. A brief description of the modeling method used and results of the required analyses follow. A more complete description is contained in the permit application on file.

#### B. Analysis of the Existing Air Quality

Preconstruction ambient air quality monitoring may be required for pollutants subject to PSD review. However, an exemption to the monitoring requirement can be obtained if the maximum predicted air quality impact resulting from the projected emissions increase, as determined through air quality modeling, is less than a pollutant-specific de minimus concentration. The predicted maximum concentration increase for  $\text{NO}_x$  is  $2.6 \text{ ug/m}^3$ , annual average, which is less than the PSD de minimus concentration for  $\text{NO}_x$  of  $14 \text{ ug/m}^3$ , annual average. Therefore, this project is not subject to preconstruction ambient air quality monitoring.

#### C. Modeling Method

The EPA-approved Industrial Source Complex Short-Term (ISCST2) dispersion model was used by the applicant to predict the impact of the proposed project on the surrounding ambient air. All recommended EPA default options were used. Downwash parameters were used because the stacks were less than the good engineering practice (GEP) stack height. Five years of sequential hourly surface and mixing depth data from the Tampa, Florida National Weather Service (NWS) station collected during 1985 through 1989 were used in the model. The highest predicted yearly average was compared with the standards.

#### D. Modeling Results

The applicant first evaluated the potential increase in ambient ground-level concentrations associated with the project to determine if the maximum predicted ambient concentration increase would be greater than the specified PSD significant impact level for  $\text{NO}_x$ . Dispersion modeling was performed with receptors placed along the 36 standard radial directions (10 degrees apart) surrounding the auxiliary boiler at the following downwind distances: 460, 500, 600, 700, 1000, 1500, 2000, and 3000 m. The maximum predicted ambient  $\text{NO}_x$  concentration increase was  $2.6 \text{ ug/m}^3$ . This value is greater than the PSD significant impact level of  $1.0 \text{ ug/m}^3$ , thus requiring the applicant to do a full impact analysis for comparison with the AAQS and PSD Class II increment. The following maximum predicted concentrations are the results of the

full impact analysis: 29.0 ug/m<sup>3</sup>, annual average, which is less than the AAQS of 100 ug/m<sup>3</sup>, annual average; and 2.71 ug/m<sup>3</sup>, which is less than the PSD Class II increment of 25 ug/m<sup>3</sup>, annual average. The value of 29.0 ug/m<sup>3</sup> includes a background of 19 ug/m<sup>3</sup> based on 1992 data collected at the Gandy Boulevard NO<sub>2</sub> monitor in Tampa (4360-065-G01).

The nearest PSD Class I area is the Chassahowitzka National Wilderness Area located 110 km from the facility. The predicted impact of the proposed project on this area was evaluated by using the ISCST2 model. The maximum predicted impact was 0.007 ug/m<sup>3</sup>, annual average. This value is less than the National Park Service's proposed significant impact level of 0.025 ug/m<sup>3</sup>, annual average. Therefore, no further analysis of this project's impact on the Class I area was necessary.

#### E. Additional Impacts Analysis

A Level-1 screening analysis using the EPA model, VISCREEN was used to determine any potential adverse visibility impacts on the Class I Chassahowitzka National Wilderness Area. Based on this analysis, the maximum predicted visual impacts due to the proposed project are less than the screening criteria both inside and outside the Class I area. Because the maximum predicted impact of the project is significantly less than the National Park Service's proposed significant impact level, no further air quality related values analysis was required.

In addition, the proposed modification will not significantly change employment, population, housing or commercial/industrial development in the area to the extent that a significant air quality impact will result.

#### VI. Conclusion

Based on the information provided by Piney Point Phosphate, Inc., the Department has reasonable assurance that the proposed modification of the permit for this installation, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapters 17-212 of the Florida Administrative Code.



# Florida Department of Environmental Protection

Lawton Chiles  
Governor

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Virginia B. Wetherell  
Secretary

**PERMITTEE:**  
**Piney Point Phosphate, Inc.**  
**13300 US Highway 41 North**  
**Palmetto, FL 34221-8662**

**Permit No. : AC 41-232096**  
**PSD-FL-205**  
**Exp. Date : January 1, 1995**  
**County : Manatee**  
**Lat./Long. : 27°37'58"N**  
**82°32'08"W**  
**Project : 190 MMBtu/hour**  
**Process Steam Boiler**

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-210, 212, 272, 275, 296, and 297; and 17-4. 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 specifically described as follows:

For the construction of a 190 MMBtu/hour process steam boiler. This boiler is permitted to be fired with new No. 2 distillate fuel oil only. The maximum fuel consumption rate will be 1349 gallons/hour and the maximum heat input rate will be 190 MMBtu/hour while producing a maximum of 150,000 pounds/hour of steam. The boiler will be operated at 8760 hours/year. Nitrogen oxides emissions will be controlled with low-NO<sub>x</sub> burners, flue gas recirculation, and proper operation practices. Sulfur dioxide emissions will be controlled by only firing No. 2 fuel oil containing no more than 0.05% sulfur by weight. The facility will be located at 13300 US Highway 41 North, Palmetto, FL, Manatee County.

The UTM coordinates of this facility are Zone 17, 348.5 km E and 3057.3 km N.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

**Attachments are listed below:**

1. Application received May 28, 1993.
2. DEP letter dated June 24, 1993.
3. KA letter dated July 30, 1993
4. KA letter dated September 17, 1993.
5. KA memorandum dated November 22, 1993.

PERMITTEE:  
Piney Point Phosphate, Inc.

Permit Number : AC 41-232096  
PSD-FL-205  
Expiration Date: January 1, 1995

**GENERAL CONDITIONS:**

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
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. Neither 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 is not 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, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; 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.
6. The permittee shall 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 facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

**PERMITTEE:**  
Piney Point Phosphate, Inc.

Permit Number : AC 41-232096  
PSD-FL-205  
Expiration Date: January 1, 1995

**GENERAL CONDITIONS:**

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 and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sample or monitor 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 provide the Department with the following information:

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

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 for 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 involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

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.

PERMITTEE:  
Piney Point Phosphate, Inc.

Permit Number : AC 41-232096  
PSD-FL-205  
Expiration Date: January 1, 1995

**GENERAL CONDITIONS:**

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-730.300, F.A.C., 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 or a copy thereof shall be kept at the work site of the permitted activity.

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 (NSPS)

14. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold 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) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained 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 dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses



PERMITTEE:  
Piney Point Phosphate, Inc.

Permit Number : AC 41-232096  
PSD-FL-205  
Expiration Date: January 1, 1995

**GENERAL CONDITIONS:**

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 corrected promptly.

**SPECIFIC CONDITIONS:**

1. This permit, AC 41-232096, shall be valid only when the permittee formally surrenders AC 41-226205 and AC 41-211848. Issuance of this permit AC 41-232096 constitutes revocation of AC 41-226205 and AC 41-211848. When the new 190 MMBtu per hour boiler is constructed and in operation the existing 96 MMBtu per hour boiler shall be permanently shut down. Until that time the 96 MMBtu per hour boiler is authorized to operate under the conditions of AO 41-156789.

Construction Details

2. Construction of the proposed process steam boiler shall reasonably conform to the plans described in the application. The facility shall be designed, constructed, and operated so that its maximum heat input and maximum fuel consumption shall not exceed 190 MMBtu per hour and 1349 gallons per hour of new\* No. 2 distillate fuel oil, respectively. The sulfur content of the fuel oil shall not exceed 0.05% by weight, which is defined as "very low sulfuric oil in 40 CFR 60.41b, Subpart Db." The permittee shall provide the Department with engineering, monitoring, and reporting plans for the process steam boiler within 30 days after the plans become available.

\* New oil means an oil which has been refined from crude oil and has not been used in any manner that may contaminate it.

3. The stack sampling facilities (sample ports, work platforms, access, and electrical power) must comply with F.A.C. Rule 17-297.345 and 40 CFR 60.8(e).

4. The boiler shall be equipped with instruments to measure the fuel feed rate, steam production, steam pressure, and steam temperature.

5. The boiler shall be equipped with:

- Low-NO<sub>x</sub> burners designed for a maximum reduction in oxides of nitrogen; and
- Induced flue gas recirculation technology which will maximize the dilution of oxygen rich combustion air with oxygen deficient recirculated flue gas.

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Piney Point Phosphate, Inc.

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**SPECIFIC CONDITIONS:**

6. The permittee shall construct and install a continuous emission monitoring device on the boiler exhaust for opacity. The continuous emission monitoring device shall meet the applicable requirements of Section 17-297.500, F.A.C., and 40 CFR 60.48(b)(a).

7. During land clearing and site preparation, wetting operations or other soil treatment techniques appropriate for controlling unconfined particulates, including grass seeding and mulching of disturbed areas, shall be undertaken and implemented. Any open burning of land clearing debris on this site shall be performed in compliance with Department regulations.

Operational and Emission Restrictions

8. Prior to operation of the source, the permittee shall submit to the Department an operation and maintenance plan that will allow the permittee to monitor emission control equipment efficiency and enable the permittee to return malfunctioning equipment to proper operation as expeditiously as possible.

9. The issuance of this permit does not relieve the permittee from complying with applicable emission limiting standards or other requirements of Rules 17-210, 17-212, 17-272, 17-275, 17-296, 17-297 and 17-4, or any other requirements under federal, state or local law (Rule 17-210.300, F.A.C.).

10. This process steam boiler is subject to and shall meet all the applicable requirements of 40 CFR 60, Subpart Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units) of the Federal New Source Performance Standards (NSPS) (Rule 17-296.800, F.A.C.).

11. The maximum permitted operating hours for this process steam boiler is 8760 hours/year.

12. The visible emissions from this process steam boiler shall not exceed 20% opacity (6-minute average), except for one 6-minute period per hour during which the opacity shall not exceed 27%. These opacity standards shall apply at all times, except during periods of startup, shutdown or malfunction.

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**SPECIFIC CONDITIONS:**

13. The maximum allowable emission rates for the process boiler based on a No. 2 distillate fuel oil consumption of 1349 gallons/hour shall not exceed the following limits:

190 MMBtu/hour Process Boiler  
Maximum Allowable Emission

<u>Pollutant</u>	<u>lb/hr</u>	<u>ton/yr*</u>
PM/PM <sub>10</sub>	2.7	11.8
SO <sub>2</sub>	9.6	42.0
NO <sub>x</sub>	28.5	124.8

\*Based on 8760 hours of operation per year

14. The Best Available Control Technology (BACT) determination for controlling NO<sub>x</sub> emissions was determined to be flue gas recirculation and low-NO<sub>x</sub> burners. [Rule 17-296.330, F.A.C.]

Compliance Requirements

15. The process steam boiler shall conduct performance tests for the pollutants listed in specific condition No. 13 and visible emissions within 60 calendar days after achieving the maximum firing rate at which this boiler will be operated, but no later than 180 operating days after initial startup. The permittee shall conduct performance and visible emissions tests during normal operations (at or no less than 90% of the maximum heat input). A written report of the performance test results shall be submitted to the Department within 45 days after the test. The performance tests shall be conducted according to the requirements of 40 CFR 60.46 and F.A.C. Rule 17-296.800.

16. Compliance with the pollutants respective maximum allowable emission limits referenced in specific condition No. 13 shall be demonstrated using the applicable EPA methods as contained in 40 CFR 60, Appendix A, (July, 1993) and adopted by reference in Rule 17-297, F.A.C. The minimum test requirements for new stationary source emissions test procedures and reporting requirements shall be in accordance with Rule 17-297, F.A.C. and 40 CFR 60, Appendix A. A test protocol shall be submitted for approval to the Departments Southwest District Office at least 90 days prior to testing.

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**SPECIFIC CONDITIONS:**

<u>For Determination of</u>	<u>U.S. EPA. Test Method</u>
Sulfur Dioxide (SO <sub>2</sub> )	Emissions rates from new No. 2 distillate fuel oil samples and analysis procedures under EPA Method 19 [ASTM D2880-88]
Sample and Velocity Traverse	Method 1
Velocity and Volumetric Flow Rate	Method 2
Particulate Matter (PM)/(PM <sub>10</sub> )	Method 3A or 3B with Method 5/201 or 201A
Opacity	Method 9
Nitrogen Oxides (NO <sub>x</sub> )	Method 7, 7A, 7E or 19

17. The permittee shall comply with the excess emissions rule contained in F.A.C. Rule 17-210.700. The permittee is allowed excess emissions during startup conditions, provided such excess emissions do not exceed a duration of two hours.

18. The permittee shall notify the appropriate Air Sections of the Department, Manatee County Environmental Action Commission and the Southwest District Office of the Department in writing at least 15 days prior to the date on which each compliance test is to begin. The notification will include the date, time, and place of each test, and the test contact person who will be responsible for coordinating and having such test conducted (Rule 17-297.340 (1) (i), F.A.C.).

19. Testing of emissions shall be conducted with the source operating at capacity. Capacity is defined as 90-100% of rated capacity. If it is impracticable to test at capacity, then sources may be tested at less than capacity; in this case subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit, with prior notification to the Department.

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**SPECIFIC CONDITIONS:**

Monitoring and Recordkeeping Requirements

20. The permittee shall calibrate, maintain and operate a continuous emission monitoring system for opacity, and record the output of the system on a 6-minute average opacity basis (Rule 17-296.800, F.A.C. and 40 CFR 60.48b(a), Subpart Db).

21. The permittee shall maintain daily records of the hours of operation of the process steam boiler along with the quantity of fuel burned. On a monthly basis, the annual hours of operation of the boiler for the previous 12 months shall be determined and included in the records (Rules 17-4.070(3), F.A.C.).

22. The permittee shall maintain the daily continuous monitoring records as required by 40 CFR 60.49b(g), Subpart Db and Rule 17-296.800.

23. If the permittee elects to demonstrate compliance with the nitrogen oxides emission standard by monitoring steam generator unit operating conditions and predict nitrogen oxides emission rates; the permittee shall submit a plan for approval as specified in 40 CFR 60.49b(c).

24. In order to document continuing compliance with Specific Condition No. 2, the permittee shall obtain and maintain at the facility fuel oil analysis (SO<sub>2</sub>, trace metals, etc.) from the fuel oil supplier which certify that the oil received for firing in this boiler meets the specifications for No. 2 distillate fuel oil (Rules 17-4.070(3) and 17-296.800, F.A.C. and 40 CFR 60.49b(r)).

25. All records required by this permit and/or 40 CFR 60.49b, Subpart Db, shall be retained for a minimum of two years following the date of such records and be made available for inspection by the Department upon request (Rules 17-4.070(3), 17-296.800, F.A.C. and 40 CFR 60.49(o), Subpart Db).

Reporting Requirements

26. The permittee shall submit quarterly opacity and nitrogen oxide excess emission reports in accordance with 40 CFR 60.7(c) and 40 CFR 60.49b(h) & (i), Subpart Db. If there are no excess emissions during a calendar quarter the permittee shall submit a report stating that no excess emissions occurred during the reporting period (Rule 17-296.800 & 17-297.500, F.A.C. and 40 CFR 60.49b(h)).

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**SPECIFIC CONDITIONS:**

27. The permittee shall submit quarterly reports certifying that only No. 2 distillate fuel oil with a maximum sulfur content of 0.05% by weight was fired in this boiler in the preceding calendar quarter (Rules 17-4.070(3) and 17.296.800 & 17-297.500, F.A.C. and 40 CFR 60.49b(r), Subpart Db).

28. All reports required by this permit and/or 40 CFR 60.49b shall be submitted to the Air Sections of the Manatee County Environmental Action Commission and the Southwest District Office of the Department. All quarterly reports shall be postmarked by the 30th day following the end of the calendar quarter.

29. The permittee shall submit to the Air Sections of the Manatee County Environmental Action Commission and the Southwest District Office of the Department each calendar year on or before March 1 a completed DEP Form 17-213.900(4), an "Annual Operating Report for Air Pollutant Emitting Facility", for the preceding calendar year (Rule 17-210.300(2), F.A.C.).

30. The permittee shall provide the Southwest District office with the following notifications required by 40 CFR 60.7:

- When construction commenced within 30 days of commencement of construction
- Anticipated date of initial starting 30 to 60 days prior to startup
- Actual date of startup within 15 days after the starting
- Notification of the date of the compliance tests not less than 30 days prior to the test

Permitting Requirements

31. Any change in the method of operation, fuels or equipment that affect potential emissions shall be submitted to the Air Sections of the Manatee County Environmental Action Commission and the Southwest District Office of the Department for review and approval (Rule 17-210, F.A.C.).

32. All applicable rules of the Department and design discharge limitations specified in the application must be adhered to. The permit holder may also need to comply with county, municipal, federal, or other state regulations prior to construction (Rule 17-4.070(7), F.A.C.).

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**SPECIFIC CONDITIONS**

33. The permittee, for good cause, request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

34. An operation permit application must be submitted to the South District Office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, and certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this \_\_\_\_\_ day  
of \_\_\_\_\_, 1993

**STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION**

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Virginia B. Wetherell, Secretary  
Department of Environmental  
Protection

Best Available Control Technology (BACT) Determination  
Piney Point Phosphate, Inc.  
Manatee County  
AC 41-232096  
PSD-FL-205

The applicant has submitted a request to increase the maximum operating hours for the auxiliary boiler at their Palmetto, Florida facility from 876 hours/year to 8760 hours/year. The maximum heat input and consumption of new No. 2 distillate fuel oil is 190 MMBtu/hour and 1349.0 gallons per hour (gph), respectively. The new No. 2 distillate fuel oil will contain no more than 0.05% by weight of sulfur. The boiler is scheduled to operate 8760 hours per year.

A BACT determination is required for nitrogen oxide (NO<sub>x</sub>), as set forth in the Florida Administrative Code Rule 17-212.400(5) (a), (b) and (c) - Prevention of Significant Deterioration (Preconstruction Review Requirements), since this pollutant would be emitted in amounts exceeding the PSD-significant levels as follows:

<u>Pollutant</u>	<u>Actual Emissions</u>	<u>Proposed Emissions</u>	<u>Increase</u>	<u>PSD-Significant Levels</u>
NO <sub>x</sub>	11.0 TPY	166.4 TPY	155.4	40

The Department performed a BACT determination for nitrogen oxides (NO<sub>x</sub>) since the proposed emissions for this pollutant exceeded the PSD significant rate of 40 tons per year. A BACT determination is required for PM and SO<sub>2</sub> in accordance with Rule 17-296.406, F.A.C.

**BACT Determination Requested by the Applicant:**

Control of NO<sub>x</sub> emissions with low-NO<sub>x</sub> burners in conjunction with induced flue gas recirculation. The applicant has proposed using distillate fuel oil with a sulfur content not to exceed 0.05 percent, by weight, for compliance with the emission limits for PM and SO<sub>2</sub> which would not exceed the emission limits allowed under Rule 17-296.406, F.A.C.

**Submittal Date of BACT Application:**

May 28, 1993

**BACT Determination Procedure:**

In accordance with Florida Administrative Code Chapter 17-212.410, Best Available Control Technology Determination, Stationary Source-Preconstruction Review, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is



achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that in making the BACT determination the Department shall give consideration to:

- (a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to 40 CFR 52.21, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).
- (b) All scientific, engineering, and technical material and other information available to the Department.
- (c) The emission limiting standards or BACT determinations of any other state.
- (d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission source in question the most stringent control available for a similar or identical source or source category. If it is shown that this level of control is technically or economically infeasible for the source in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

**DEP BACT Determination:**

Nitrogen Oxide (NO<sub>x</sub>) emissions shall not exceed 0.20 pounds/MMBtu of heat input while utilizing low-NO<sub>x</sub> burners in conjunction with flue gas recirculation. The boiler shall be fired with distillate fuel oil with a sulfur content not to exceed 0.05 percent, by weight.

**BACT Determination Rationale:**

Sulfur content in fuel oil is a primary air pollution concern since most of the fuel sulfur becomes sulfur dioxide (SO<sub>2</sub>). Also, particulate matter emissions from fuel oil burning are related to sulfur content. The Department has determined that the firing of No. 2 fuel oil with a maximum of 0.05% sulfur content is BACT for particulates and SO<sub>2</sub>. These sulfur content limitations are representative of what has been recently established as BACT for oil-fired equipment.

The emission rate of nitrogen oxides proposed by the applicant is 0.20 pound per million BTU heat input. NO<sub>x</sub> emissions will be controlled using Low-NO<sub>x</sub> burners and flue gas recirculation. A review of other BACT determination for oil fired boilers indicates that the proposed emission level for nitrogen oxides is higher than several of the determinations on record and that an emissions level of 0.15 pounds of nitrogen oxides per million Btu heat input is achievable on new boilers. Additional NO<sub>x</sub> control could be provided by using add on control devices such as selective catalytic reduction (SCR) or selective noncatalytic reduction (SNCR). The applicant indicated that the costs for these technologies would range from \$6,675 to \$9,557 per ton of NO<sub>x</sub> removed. Other reviews of these control technologies indicates a cost effectiveness ranging from \$6802 to \$7321 per ton of NO<sub>x</sub> removed. These costs exceed those which have been previously judged to be representative of BACT, thereby dismissing these technologies as BACT for this facility. Based on the manufacturers information, a 0.15 pounds of nitrogen oxides per million BTU heat input is achievable and, therefore, is considered BACT for this source.

Details of the Analysis May be Obtained by Contacting:

Doug Outlaw, P.E., BACT Coordinator  
Department of Environmental Protection  
Bureau of Air Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Recommended by:

Approved by:

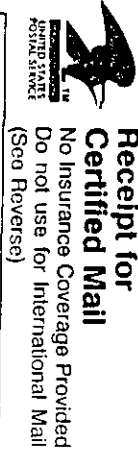
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C. H. Fancy, P.E., Chief  
Bureau of Air Regulation

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Virginia B. Wetherell, Secretary  
Dept. of Environmental Protection

\_\_\_\_\_  
Date 1993

\_\_\_\_\_  
Date 1993

P 872 562 510



PS Form 3800, JUNE 1991

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