



# Department of Environmental Protection

Jeb Bush  
Governor

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

David B. Struhs  
Secretary

## P.E. Certification Statement

Florida Power Corporation  
Hines Energy Complex Power Block 2  
Siting Certification PA92-335A

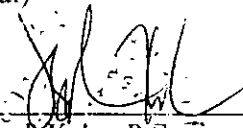
DEP File No.: 1050234-004-AC, PSD-FL-296  
Facility ID No.: 1050234

**Project:** ~~Air Construction~~/PSD Permit

**I HEREBY CERTIFY** that the engineering features described in the above referenced application and related additional information submittals, if any, and subject to the proposed permit conditions, provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).

This review was conducted by me and Cleve Holladay for modeling and ambient impact analyses under my responsible supervision.

(Seal)

  
\_\_\_\_\_  
Joseph Kahn, P.E.  
Registration # 45268

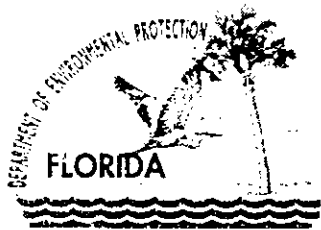
6/12/01  
\_\_\_\_\_  
Date

Permitting Authority:  
Florida Department of Environmental Protection  
Division of Air Resources Management  
Bureau of Air Regulation  
New Source Review Section  
Mail Station #5505  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Telephone: 850/488-0114  
Fax: 850/922-6979

"More Protection, Less Process"

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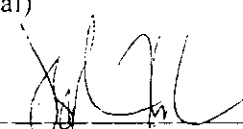
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2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

David B. Struhs  
Secretary

January 16, 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Bruce Baldwin  
Director of Combustion Turbine Operations  
Florida Power Corporation  
One Power Plaza  
263-13th Avenue South  
St. Petersburg, Florida 33701-5511

Re: 1050234-004-AC, PSD-FL-296  
Hines Energy Complex Power Block 2  
Siting Certification PA92-335A


Dear Mr. Baldwin:

Enclosed is one copy of the draft Prevention of Significant Deterioration (PSD) permit for the Hines Power Block 2 project located at the existing Hines Energy Complex at County Road 555, 2.5 miles south of CR 640, Bartow, Polk County. The Technical Evaluation and BACT Determination, the Department's Intent to Issue PSD Permit and the Public Notice of Intent to Issue PSD Permit are also included.

The Public Notice of Intent to Issue PSD Permit must be published one time only, as soon as possible, in the legal advertisement section of a newspaper of general circulation in the area affected, pursuant to the requirements Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit.


Please submit any written comments you wish to have considered concerning the Department's proposed action to A. A. Linero, P.E., Administrator, New Source Review Section at the above letterhead address. If you have any other questions, please contact Joseph Kahn, P.E., at 850/921-9509 or Mr. Linero at 850/488-0114.

Sincerely,

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

CHF/jk

Enclosures

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> <li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>	<p>A. Received by (Please Print Clearly) <b>P. COTTON</b>      B. Date of Delivery <b>01/22/01</b></p>
<p>1. Article Addressed to:</p> <p>Mr. Bruce Baldwin  Director of Combustion  Turbine Operations  Florida Power Corporation  One Power Plaza  263-13 Avenue South  St. Petersburg, FL 33701-5511</p>	<p>C. Signature <b>X</b>       <input type="checkbox"/> Agent  <input type="checkbox"/> Addressee</p>
<p>2. Article Number (Copy from service label)</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes  If YES, enter delivery address below: <input type="checkbox"/> No</p>
<p>PS Form 3811, July 1999</p>	<p>3. Service Type</p> <p><input checked="" type="checkbox"/> Certified Mail      <input type="checkbox"/> Express Mail  <input type="checkbox"/> Registered      <input type="checkbox"/> Return Receipt for Merchandise  <input type="checkbox"/> Insured Mail      <input type="checkbox"/> C.O.D.</p>
<p>Domestic Return Receipt</p>	<p>4. Restricted Delivery? (Extra Fee)      <input type="checkbox"/> Yes</p>
<p>102595-99-M-1789</p>	

**U.S. Postal Service**  
**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only; No Insurance Coverage Provided)

7099 3400 0000 0000 004E 6602

Article Sent To:

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Certified Fee		
Return Receipt Fee (Endorsement Required)		
Restricted Delivery Fee (Endorsement Required)		
<b>Total Postage &amp; Fees</b>	<b>\$</b>	

Name (Please Print Clearly) (to be completed by mailer)  
**Mr. Bruce Baldwin**

Street, Apt. No., or PO Box No.  
**263-13 Ave. South**

City, State, ZIP+4  
**St. Petersburg, FL 33701-5511**

PS Form 3800, July 1999      See Reverse for Instructions

In the Matter of an  
Application for Permit by:

Bruce Baldwin  
Director of Combustion Turbine Operations  
Florida Power Corporation  
One Power Plaza  
263-13th Avenue South  
St. Petersburg, Florida 33701-5511

DEP File No. 1050234-004-AC, PSD-FL-296  
Siting Certification PA92-335A  
Hines Energy Complex Power Block 2  
Polk County

### INTENT TO ISSUE PSD PERMIT

The Department of Environmental Protection (Department) gives notice of its intent to issue a Prevention of Significant Deterioration (PSD) permit (copy of draft permit attached) for the proposed project, detailed in the application specified above and the enclosed Technical Evaluation and Preliminary Determination, for the reasons stated below.

The applicant, Florida Power Corporation, applied on July 24, 2000, to the Department for a PSD permit to authorize the construction of its Power Block 2 project to be located at the existing Hines Energy Complex at County Road 555, 2.5 miles south of CR 640, Bartow, Polk County. Power Block 2 will consist of two nominal 170 MW Siemens Westinghouse 501 FD CTs, two unfired HRSGs and one steam electric turbine, with a total nominal generating capacity of approximately 530 MW.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above actions are not exempt from permitting procedures. The Department has determined that a PSD permit is required to perform the proposed work.

The Department intends to issue this PSD permit based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue PSD Permit. The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "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. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/ 922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the final permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments and requests for public meetings concerning the proposed permit issuance action for a period of thirty (30) days from the date of publication of Public Notice of Intent to Issue PSD Permit. Written comments and requests for public meetings should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

This PSD permitting action is being coordinated with a certification under the Power Plant Siting Act (Sections 403.501-519, F.S.). If a petition for an administrative hearing on the Department's Intent to Issue is filed by a substantially affected person, that hearing shall be consolidated with the certification hearing, as provided under Section 403.507(3).

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the 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 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that 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 such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation is not available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.


The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition

must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Executed in Tallahassee, Florida.

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

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this Intent to Issue PSD Permit (including the Public Notice of Intent to Issue PSD Permit, Technical Evaluation and Preliminary Determination, and the Draft permit) was sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on 1/18/01 to the person(s) listed:

Mr. Bruce Baldwin, FPC \*  
Mr. Ken Kosky, P.E., Golder  
Mr. Buck Oven, DEP Siting Coordination  
Mr. Bill Thomas, P.E., DEP SWD  
Mr. Gregg Worley, EPA  
Mr. John Bunyak, NPS

*bcc. Doug Roberts  
Hopping Green  
Mike Kennedy, FPC  
Jeff Spencer  
Palk Co*

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

*Charlotte J. Hayes* 1/18/01  
(Clerk) (Date)

PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 1050234-004-AC, PSD-FL-296

Florida Power Corporation  
Hines Energy Complex Power Block 2  
Polk County

The Department of Environmental Protection (Department) gives notice of its intent to issue a Prevention of Significant Deterioration (PSD) permit to Florida Power Corporation to authorize the construction of its Power Block 2 project to be located at the existing Hines Energy Complex at County Road 555, 2.5 miles south of CR 640, Bartow, Polk County. Power Block 2 will consist of two nominal 170 MW Siemens Westinghouse 501 FD combustion turbines fired primarily with natural gas and very low sulfur distillate fuel oil as a backup fuel, two unfired heat recovery steam generators and one steam electric turbine, with a total nominal generating capacity of approximately 530 MW. The applicant's mailing address is: Florida Power Corporation, One Power Plaza, 263-13th Avenue South, St. Petersburg, Florida 33701-5511. A Best Available Control Technology (BACT) determination was required for PM/PM<sub>10</sub>, NOx, SO<sub>2</sub>, sulfuric acid mist (SAM), CO and VOC pursuant to Rule 62-212.400, F.A.C. and 40 CFR 52.21, Prevention of Significant Deterioration. This project is subject to review under Section 403.506 F.S. (Power Plant Siting Act), because it provides for an expansion in steam generating capacity.

Generally, NOx emissions will be controlled with dry low NOx combustors and selective catalytic reduction. Other emissions will be limited by using clean burning fuels and through proper combustion. Emissions from the project are, in tons per year: PM/PM<sub>10</sub>, 121; NOx, 270; SO<sub>2</sub>, 149; SAM, 23; CO, 683; and VOC, 53. Ammonia slip is also limited.

An air quality impact analysis was conducted. No significant impacts from this project were predicted.

The Department will issue the Final permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments and requests for public meetings concerning the proposed permit issuance action for a period of thirty (30) days from the date of publication of this Public Notice of Intent to Issue PSD Permit. Written comments and requests for public meetings should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

This PSD permitting action is being coordinated with a certification under the Power Plant Siting Act (Sections 403.501-519, F.S.). If a petition for an administrative hearing on the Department's Intent to Issue is filed by a substantially affected person, that hearing shall be consolidated with the certification hearing, as provided under Section 403.507(3).

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the 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 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the

NOTICE TO BE PUBLISHED IN THE NEWSPAPER



Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by rule 28-106.301

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that 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 such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

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

Dept. of Environmental Protection	Dept. of Environmental Protection
Bureau of Air Regulation	Southwest District
Suite 4, 111 S. Magnolia Drive	3804 Coconut Palm Drive
Tallahassee, Florida, 32301	Tampa, Florida 33619-8218
Telephone: 850/488-0114	Telephone: 813/744-6100
Fax: 850/922-6979	

The complete project file includes the application, technical evaluations, draft permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, New Source Review Section, or the Department's reviewing engineer for this project, Joseph Kahn, P.E., at the Bureau of Air Regulation in Tallahassee, Florida, or call 850/488-0114, for additional information. Written comments directed to the Department's reviewing engineer should be sent to the following mailing address: Dept. of Environmental Protection, Bureau of Air Regulation, Mail Station #5505, Tallahassee, Florida, 32399-2400.

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

# TECHNICAL EVALUATION AND BACT DETERMINATION

## 1 APPLICANT NAME AND ADDRESS

Florida Power Corporation  
One Power Plaza, 263-13th Avenue South  
St. Petersburg, Florida 33701-5511  
Authorized Representative: Bruce Baldwin, Director of Combustion Turbine Operations

## 2 FACILITY DESCRIPTION, PROJECT DETAILS AND RULE APPLICABILITY

This facility consists of the existing Hines Energy Complex.

The applicant proposed in this project to construct two combustion turbines and related equipment to create Power Block 2 at the existing facility. Emissions units addressed by this permit are .

EMISSIONS UNIT NO.	EMISSIONS UNIT DESCRIPTION
014	Power Block 2, CT 1, a combined cycle combustion turbine system consisting of a Siemens Westinghouse 501 combustion turbine, an unfired heat recovery steam generator and associated emission control equipment.
015	Power Block 2, CT 2, a combined cycle combustion turbine system consisting of a Siemens Westinghouse 501 combustion turbine, an unfired heat recovery steam generator and associated emission control equipment.

The annual potential emissions associated with this project are: PM/PM<sub>10</sub>, 121; NO<sub>x</sub>, 270; SO<sub>2</sub>, 149; SAM, 23; CO, 683; and VOC, 53 tons per year. The emissions associated with this project subject the project to the requirements of PSD and BACT for these pollutants.

The proposed project is subject to preconstruction review requirements under the provisions of Chapter 403, F.S., and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The existing facility is located in an area designated, in accordance with Rule 62-204.340, F.A.C., as attainment or unclassifiable for the criteria pollutants ozone, PM<sub>10</sub>, carbon monoxide, SO<sub>2</sub>, nitrogen dioxide and lead. This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant exceeds 100 tons per year (TPY). At this facility potential emissions of PM/PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>2</sub>, CO and VOC exceed 100 TPY.

This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1 of Chapter 62-212, F.A.C. Because emissions are greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400. Prevention of Significant Deterioration (PSD). The net increase in emissions associated with this project of PM/PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>2</sub>, SAM, CO and VOC exceed the PSD significance levels of Table 212.400-2, F.A.C. Therefore the project is subject to PSD requirements of Rule 62-212.400, F.A.C., for these pollutants.

The project is subject to siting certification under Florida's Power Plant Siting Act. Because the PSD program is delegated by EPA to the Department for facilities subject to the Power Plant Siting Act, the project is also subject to the requirements of 40 CFR 52.21, Prevention of Significant Deterioration.

The limits associated with the PSD review and BACT requirements are established in Section III of the permit. The emissions units are also subject to regulation under the New Source Performance Standards: 40 CFR 60 Subpart A, General Provisions, and Subpart GG, Standards of Performance for Stationary Gas Turbines. The limits established as BACT for these emissions units are more stringent than the limits of the NSPS, so compliance with the BACT limits will ensure compliance with this rule.

The applicant's estimated emissions show that the project is not a major source of hazardous air pollutants (HAPs). This project is not subject to a case-by-case MACT determination, per Rule 62-204.800(10)(d)2.

F.A.C., because it does not result in the construction or reconstruction of a major source of HAP emissions.

### 3 SOURCE IMPACT ANALYSIS

#### 3.1 AIR QUALITY ANALYSIS INTRODUCTION

The proposed project will increase emissions of six regulated pollutants at levels in excess of PSD significant amounts: PM/PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>2</sub>, CO, VOC and SAM. PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>2</sub> are criteria pollutants and have national and state ambient air quality standards (AAQS), PSD increments, and significant impact levels defined for them. CO is a criteria pollutant and has only AAQS and significant impact levels defined for it. SAM is a non-criteria pollutant and has no AAQS or PSD increments defined for it; therefore, only a qualitative analysis of the impact of this pollutant was done. Potential emissions for VOC are above the 40 TPY significance threshold for the pollutant ozone. The applicant presented the potential increase to the Department. Based on the options available to predict potential impacts associated with the emissions and formation of ozone, the Department has determined that the use of regional models which incorporate the complex chemical mechanisms for predicting ozone formation are not feasible for this project.

The applicant's initial Class II PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>2</sub> and CO analyses revealed no significant impacts in the area surrounding the proposed facility; therefore, full impact Class II AAQS and PSD Class II increment analyses were not required to be conducted for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>2</sub> and CO. Because the project's impact for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>2</sub> and CO are less than the de minimus monitoring concentrations, preconstruction monitoring was not required for these pollutants.

PSD Class I impacts were predicted for the Chassahowitzka National Wilderness Area (CNWA) located 118 km to the northwest. No significant impacts for PM<sub>10</sub>, SO<sub>2</sub> or NO<sub>2</sub> were predicted; therefore, no further PSD Class I modeling was required.

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 significantly contribute to a violation of any AAQS or PSD increment. However, the following EPA-directed stack height language is included: "In approving this permit, the Department has determined that the application complies with the applicable provisions of the stack height regulations as revised by EPA on July 8, 1985 (50 FR 27892). Portions of the regulations have been remanded by a panel of the U.S. Court of Appeals for the D.C. Circuit in NRDC v. Thomas, 838 F. 2d 1224 (D.C. Cir. 1988). Consequently, this permit may be subject to modification if and when EPA revises the regulation in response to the court decision. This may result in revised emission limitations or may affect other actions taken by the source owners or operators." A more detailed discussion of the required analyses follows.

#### 3.2 ANALYSIS OF EXISTING AIR QUALITY

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review unless otherwise exempted or satisfied. This monitoring requirement may be satisfied by using previously existing representative monitoring data, if available. An exemption to the monitoring requirement shall be granted by rule if either of the following conditions is met: the maximum predicted air quality impact resulting from the projected emissions increase, as determined by air quality modeling, is less than a pollutant-specific de minimus ambient concentration; or the existing ambient concentrations are less than a pollutant-specific de minimus ambient concentration. No de minimus ambient concentration is provided for ozone. Instead the net emissions increase of VOC is compared to a de minimus monitoring emission rate of 100 tons per year. The table below shows maximum project air quality impacts for comparison to these de minimus levels.

## TECHNICAL EVALUATION AND BACT DETERMINATION

MAXIMUM PROJECT AIR QUALITY IMPACTS FOR COMPARISON TO THE DE MINIMUS LEVELS				
Pollutant	Averaging Time	Maximum Predicted Impact ( $\mu\text{g}/\text{m}^3$ )	Impact Greater than De Minimus (Yes/No)?	De Minimus Level ( $\mu\text{g}/\text{m}^3$ )
PM <sub>10</sub>	24-hr	3	NO	10
CO	8-hr	107	NO	575
NO <sub>2</sub>	Annual	0.1	NO	14
SO <sub>2</sub>	24-hour	5	NO	13
VOC	Annual Emission Rate	52 TPY	NO	100 TPY

As shown in the table, air quality impacts are predicted to be less than the de minimus levels; therefore, no preconstruction monitoring is required.

### 3.3 MODELS AND METEOROLOGICAL DATA USED IN THE AIR QUALITY ANALYSIS

#### *PSD Class II Area in the vicinity of the project*

The EPA-approved Industrial Source Complex Short-Term (ISCST3) dispersion model was used to evaluate the pollutant emissions from the proposed project and other existing major facilities. The model determines ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, area, and volume sources. The model incorporates elements for plume rise, transport by the mean wind, Gaussian dispersion, and pollutant removal mechanisms such as deposition. The ISCST3 model allows for the separation of sources, building wake downwash, and various other input and output features. A series of specific model features, recommended by the EPA, are referred to as the regulatory options. The applicant used the EPA recommended regulatory options in each modeling scenario. Direction-specific downwash parameters were used for all sources for which downwash was considered. The stacks associated with this project will not exceed the good engineering practice (GEP) stack height criteria.

Meteorological data used in the ISCST3 model consisted of a concurrent 5-year period of hourly surface weather observations and twice-daily upper air soundings from the National Weather Service (NWS) stations at Tampa (surface) and Ruskin (upper air). The 5-year period of meteorological data was from 1987 through 1991. These NWS stations were selected for use in the study because they are the closest primary weather stations to the study area and are most representative of the project site. The surface observations included wind direction, wind speed, temperature, cloud cover, and cloud ceiling.

Because five years of data are used in ISCST3, the highest-second-high (HSH) short-term predicted concentrations were compared with the appropriate AAQS or PSD increments. For the annual averages, the highest predicted annual average was compared with the standards. For determining the project's significant impact area in the vicinity of the facility, both the highest short-term predicted concentrations and the highest predicted yearly averages were compared to their respective significant impact levels.

#### *PSD Class I Area*

The California Puff (CALPUFF) dispersion model was used to evaluate the pollutant emissions from the proposed project in the Class I Chassahowitzka National Wilderness Area (CNWA). Meteorological data used in this model was 1990 ISCST3 data which was enhanced for CALPUFF. CALPUFF is a non-steady state, Lagrangian, long-range transport model that incorporates Gaussian puff dispersion algorithms. This model determines ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, line, area, and volume sources. The CALPUFF model has the capability to treat time-varying sources. It is also suitable for modeling domains from tens of meters to hundreds of kilometers, and has mechanisms to handle rough or complex terrain situations. Finally, the CALPUFF

**TECHNICAL EVALUATION AND BACT DETERMINATION**

model is applicable for inert pollutants as well as pollutants that are subject to linear removal and chemical conversion mechanisms.

**3.4 SIGNIFICANT IMPACT ANALYSIS**

Preliminary modeling is performed using only the proposed project's worst-case emission scenario for each pollutant and applicable averaging time. Over 700 receptors were placed along the facility's restricted property line and out to 50 km from the facility, which is located in a PSD Class II area. Modeling refinements were done, as needed, by using a polar receptor grid with a maximum spacing of 100 m along each radial and an angular spacing between radials of one or two degrees. A network of 13 discrete receptors was placed at the boundary of the CNWA in order to assess the impact of the project on this Class I area. For each pollutant subject to PSD and also subject to PSD increment and/or AAQS analyses, this modeling compares maximum predicted impacts due to the project with PSD significant impact levels to determine whether significant impacts were predicted in the vicinity of the facility or in the Class I CNWA. In the event that the maximum predicted impact of a proposed project is less than the appropriate significant impact level, a full impact analysis for that pollutant is not required. Full impact modeling is modeling that considers not only the impact of the project but also other major sources, including background concentrations, located within the vicinity of the project to determine whether all applicable AAQS or PSD increments are predicted to be met for that pollutant. Consequently, a preliminary modeling analysis, which shows an insignificant impact, is accepted as the required air quality analysis (AAQS and PSD increments) for that pollutant and no further modeling for comparison to the AAQS and PSD increments is required for that pollutant. The tables below show the results of this modeling. The radius of significant impact, if any, for each pollutant and applicable pollutant averaging time is also shown in the tables below.

<b>MAXIMUM PROJECT AIR QUALITY IMPACTS FOR COMPARISON TO THE PSD CLASS II SIGNIFICANT IMPACT LEVELS IN THE VICINITY OF THE FACILITY</b>					
<b>Pollutant</b>	<b>Averaging Time</b>	<b>Maximum Predicted Impact (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Significant Impact Level (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Significant Impact? (Yes/No)</b>	<b>Radius of Significant Impact (km)</b>
PM <sub>10</sub>	Annual	0.04	1	NO	---
	24-hr	3	5	NO	---
SO <sub>2</sub>	Annual	0.04	1	NO	---
	24-hour	4.9	5	NO	---
	3-hour	17.8	25	NO	---
CO	8-hr	35	500	NO	---
	1-hr	107	2,000	NO	---
NO <sub>2</sub>	Annual	0.01	1	NO	---

## TECHNICAL EVALUATION AND BACT DETERMINATION

MAXIMUM PROJECT IMPACTS IN THE CNWA FOR COMPARISON TO THE PSD CLASS I SIGNIFICANT IMPACT LEVELS				
Pollutant	Averaging Time	Maximum Predicted Impact ( $\mu\text{g}/\text{m}^3$ )	Significant Impact Level ( $\mu\text{g}/\text{m}^3$ )	Significant Impact? (Yes/No)
PM <sub>10</sub>	Annual	0.001	0.2	NO
	24-hr	0.033	0.3	NO
NO <sub>2</sub>	Annual	0.0013	0.1	NO
SO <sub>2</sub>	Annual	0.0014	0.1	NO
	24-hour	0.12	0.2	NO
	3-hour	0.46	1.0	NO

As shown in the tables the maximum predicted air quality impacts from the proposed project are less than the PSD significant impact levels in the vicinity of the facility and in the CNWA. Therefore, the applicant was not required to do full impact modeling for any pollutant.

### 3.5 ADDITIONAL IMPACTS-IMPACTS ON SOIL, VEGETATION, WILDLIFE, VISIBILITY AND GROWTH

The maximum ground-level concentrations predicted to occur for all regulated pollutants, as a result of the proposed project, including background concentrations and all other nearby sources, will be less than the respective ambient air quality standard (AAQS). The project impacts are less than the AAQS for all regulated pollutants, and less than the applicable allowable increments for all regulated pollutants. Because the AAQS are designed to protect both the public health and welfare, it is reasonable to assume the impacts on soils, vegetation, and wildlife will be minimal or insignificant. A regional haze analysis using the CALPUFF model was performed to determine visibility impacts in the Class I CNWA. No significant impact on visibility in this area was predicted. There will be little no growth associated with this project.

### 4 BACT DETERMINATION REQUESTED BY THE APPLICANT

The applicant, in its application and response to request for additional information, proposed BACT for the PSD pollutants PM/PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>2</sub>, SAM, CO and VOC. BACT for VE was proposed as a surrogate for. Generally, the applicant proposed to control NO<sub>x</sub> emissions from firing natural gas using dry low NO<sub>x</sub> combustors and selective catalytic reduction (SCR), and from firing distillate fuel oil using water injection and SCR. Control for SO<sub>2</sub> and SAM is through the use of pipeline natural gas and very low sulfur (0.05%) distillate fuel oil. Control for the other pollutants is by proper combustion design and operation.

### 5 BACT DETERMINATION PROCEDURE

In accordance with Chapter 62-212, F.A.C., 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 for control of each such pollutant. In addition, Rule 62-212.400(6)(a), F.A.C., states that in making the BACT determination, the Department shall give consideration to:

1. Any Environmental Protection Agency determination of BACT pursuant to Section 169 of the Clean Air Act, 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).
2. All scientific, engineering, and technical material and other information available to the Department.
3. The emission limiting standards or BACT determination of any other state.
4. The social and economic impact of the application of such technology.

## TECHNICAL EVALUATION AND BACT DETERMINATION

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The EPA currently directs that BACT should be determined using the "top-down" approach. In this approach, available control technologies are ranked in order of control effectiveness for the emissions unit under review. The most stringent alternative is evaluated first. That alternative is selected as BACT unless the alternative is found to not be achievable based on technical considerations or energy, environmental or economic impacts. If this alternative is eliminated for these reasons, the next most stringent alternative is considered. This top-down approach is continued until BACT is determined. In general EPA has identified five key steps in the top-down BACT process: Identify alternative control technologies; eliminate technically infeasible options; rank remaining control technologies by control effectiveness; evaluate most effective controls; select BACT.

The Department will consider the control or reduction of "non-regulated" air pollutants when determining the BACT limit for regulated pollutants, and will weigh control of non-regulated air pollutants favorably when considering control technologies for regulated pollutants. The Department will also favorably consider control technologies that utilize pollution prevention strategies. These approaches are consistent with EPA's consideration of environmental impacts.

The EPA has determined that a BACT determination shall not result in a selection of a control technology which would not meet any applicable emission limitation under 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants). The only such limits applicable to this project are the requirements of NSPS Subpart GG, but the BACT requirements of the permit are more stringent than these requirements.

The BACT evaluation should be performed for each emissions unit and pollutant under consideration. For this project, the BACT evaluation was performed for the emission units for PM/PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>2</sub>, SAM, CO, VOC and VE.

In addition to the information submitted by the applicant in its application and that information mentioned above, the Department may rely upon other available information in making its BACT determination. For this project, the Department also relied upon information in its previous and current BACT determinations for combined cycle projects, particularly those of CPV Gulfcoast (draft), TECO Bayside (under review), Calpine Osprey (draft), KUA Cane Island 3 and Lake Worth LLC. The Department also relied upon the determination for Alabama DEM's Tenaska Central Alabama Generating Station, information in EPA's RACT/BACT/LAER Clearinghouse and upon information previously provided in comments to other similar projects by EPA Region 4 and the Air Quality Branch of the US Fish and Wildlife Service. For each emission source, the Department's BACT determination is based on this information and the informed judgement of the Department.

### 6 BACT ANALYSIS AND DEPARTMENT'S DETERMINATION

For this project the PSD pollutants of concern are PM/PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>2</sub>, SAM, CO, and VOC. Visible emissions is included in the evaluation because of its relationship to PM/PM<sub>10</sub>. The technologies proposed by the applicant as BACT for this project were generally acceptable to the Department. However, the Department's specific emission limits and compliance monitoring requirements were not necessarily the same as those suggested by the applicant. The Department does not endorse the applicant's technical or economic analyses of control technologies for this project.

The Department has written extensively about the available technologies for control of these pollutants from combined cycle combustion turbine projects. Because of the similarities between this project and the other recent projects reviewed by the Department, a detailed discussion of the control technologies reviewed for each pollutant will be omitted from this document.

For control of PM/PM<sub>10</sub> and VOC emissions, the applicant proposed the use of clean burning fuels and good combustion practices. The Department has previously written for similar projects that these are

## TECHNICAL EVALUATION AND BACT DETERMINATION

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generally regarded as the top controls for combustion turbines. SO<sub>2</sub> and SAM emissions are limited in a similar manner, with particular emphasis on limiting the sulfur content of the fuels and limiting the quantity of fuel oil fired. The primary fuel is pipeline natural gas with a sulfur content of 1 grain per 100 scf. The backup fuel is distillate fuel oil with a sulfur content of 0.05% by weight, with fuel consumption limited to an equivalent of 1000 hours of operation for each turbine. As with previous determinations, these fuels are BACT for these pollutants.

For control of NO<sub>x</sub>, the applicant evaluated combustion process designs (water/steam injection, dry low NO<sub>x</sub> combustor design and XONON catalytic combustor) and post-combustion controls (selective catalytic reduction—SCR, selective non-catalytic reduction—SNCR, and SCONO<sub>x</sub>). The applicant proposed to use a dry low NO<sub>x</sub> combustor design for firing natural gas and water injection for firing oil, coupled with an SCR system. The applicant rejected XONON and SNCR because of technical unfeasibility, and rejected SCONO<sub>x</sub> in part because of economic impacts. The Department agreed with the selection of SCR, combined with dry low NO<sub>x</sub> for natural gas and water injection for fuel oil, as BACT for NO<sub>x</sub>. The Department asked the applicant to evaluate a more stringent limit on NO<sub>x</sub> emissions during distillate oil firing than that proposed by the applicant. The applicant informed the Department that decreasing the emission limit from 15 ppmvd @ 15% O<sub>2</sub> to 10 ppmvd @ 15% O<sub>2</sub> would increase annualized costs by approximately \$150,000 because of costs of additional catalyst, and higher energy costs associated with the additional pressure drop from the necessary extra catalyst. This option would require the applicant to use the backup fuel as the design limiting condition, even though use of this fuel is limited. The applicant presented a complete cost effectiveness analysis for this option. The applicant did not show this alternative is not cost effective. However, the Department ultimately determined that an emissions limit of 12 ppmvd @ 15% O<sub>2</sub>, with an aggregate fuel consumption limit equivalent to 720 hours of operation for each unit, represents BACT for this project. This alternative will reduce potential NO<sub>x</sub> emissions from oil firing to approximately 67 TPY from the 117 TPY originally proposed, and is consistent with the determinations of the Department and other states. The Department set the averaging time for the NO<sub>x</sub> emission standard at a 24 hour block starting at midnight of each day. This averaging time simplifies compliance recording requirements, provides for sufficient averaging time to account for measurement uncertainties, and is appropriate given that the ambient NO<sub>2</sub> standard is based on an annual average. The Department also set limits on ammonia slip for both natural gas and distillate fuel oil firing.

For control of CO, the applicant evaluated combustion process design (high combustion temperatures, adequate excess air, good fuel/air mixing during combustion) and post-combustion control (oxidation catalyst). The applicant rejected oxidation catalysts because of economic impacts. The Department did not necessarily agree that the oxidation catalyst was not cost effective based on the applicant's initial emissions estimate. However, the Department specified good combustion design and control as BACT for this project, in part because it set a more stringent CO emission limit than the applicant originally proposed. Because of the relationship between NO<sub>x</sub> and CO emissions, the averaging time for the CO limit was set at a 24 hour block to match the averaging time of the NO<sub>x</sub> limit.

Because the Department has also written extensively regarding its rationale for making its BACT determinations for similar projects, such documentation will not be extensively presented again here. Considerations particular to this project are the applicant's need to operate the turbines at less than full load for extended periods of time, the limited number of expected startup and shutdown events each year (the project is for base load operation), the requirement of a CEM system for NO<sub>x</sub> and CO compliance demonstration, design of the SCR system for natural gas firing and the limited amount of permitted operation while firing fuel oil. Following is a summary of the Department's BACT determination and the associated emission limits. Note that SO<sub>2</sub> and SAM are limited by limiting the sulfur content of natural gas to 1 grain per 100 scf and fuel oil to 0.05% by weight, and by limiting the combined fuel consumption for both emissions units to the equivalent of approximately 720 hours of operation each.



## TECHNICAL EVALUATION AND BACT DETERMINATION

### SUMMARY OF BACT TECHNOLOGY DETERMINATIONS

Emissions Unit	Pollutants	BACT Requirements
014 and 015	NOx	Dry low NOx combustors and selective catalytic reduction
014 and 015	PM/PM <sub>10</sub> , VE	Good combustion practices, clean fuels
014 and 015	SO <sub>2</sub> , SAM	Limit fuel sulfur (clean fuels) and fuel oil consumption
014 and 015	CO, VOC	Combustor design, good combustion practices

The allowable emission limits associated with the BACT technologies and related compliance requirements are specified in detail in Section III of the permit, and are summarized below:

POLLUTANT	EMISSION LIMIT NATURAL GAS	EMISSION LIMIT, DISTILLATE FUEL OIL	COMPLIANCE METHOD
PM/PM <sub>10</sub>	7.3 lb/hour	64.8 lb/hour	Test
NOx	3.5 ppmvd @ 15% O <sub>2</sub>	12 ppmvd @ 15% O <sub>2</sub>	CEM, 24 hr block
CO	16 ppmvd @ 15% O <sub>2</sub>	30 ppmvd @ 15% O <sub>2</sub>	CEM, 24 hr block
Ammonia	5 ppmvd @ 15% O <sub>2</sub>	9 ppmvd @ 15% O <sub>2</sub>	Test
VOC	2 ppmvd @ 15% O <sub>2</sub>	10 ppmvd @ 15% O <sub>2</sub>	Test
VE	10% opacity	10% opacity	Test

#### 6.1 BACT EXCESS EMISSIONS APPROVAL

As part of this BACT determination, the Department specified allowable excess emissions in the permit pursuant to its authority at Rule 62-210.700(5), F.A.C.. Allowable excess emissions for visible emissions are limited by condition 14 of Section II of the permit. The excess emissions provisions of Rule 62-210.200, F.A.C., are not applicable to any other pollutant. However, condition 7 of Section III includes provisions for excluding CEM system data from the calculation of the block averages for NOx and CO for startup, shutdown and malfunction episodes. The emissions during these episodes are not explicitly limited, but best operational practices must be used to minimize hourly emissions during these episodes. Emissions of any quantity or duration that occur entirely or in part from poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented are prohibited.

#### 7 MACT REQUIREMENTS

As discussed above, although the applicant indicated that the facility is a major source of HAP emissions, this facility is not subject to a case-by-case MACT determination for control of emissions of HAPs. Rule 62-204.800(10)(d)2, F.A.C., generally requires a MACT review for all major sources of HAPs that are to be constructed or reconstructed. In this case, no source of HAPs is proposed to be constructed or reconstructed, so this project is not subject to a case-by-case MACT determination.

#### 8 COMPLIANCE

The compliance methods are detailed in Section III of the permit. Briefly, initial and annual tests are required for PM/PM<sub>10</sub>, ammonia and visible emissions. Tests for VOC are required initially and prior to renewal of each subsequent operation permit. A CEM system is required to demonstrate compliance with the emission limits for NOx and CO. Monitoring and record keeping are required of operational parameters.

#### 9 PRELIMINARY DETERMINATION

Based on the foregoing technical evaluation of the application and additional information submitted by the applicant and other available information, the Department has made a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations. The

**TECHNICAL EVALUATION AND BACT DETERMINATION**

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Department's preliminary determination is to issue the draft permit to allow construction of the Power Block 2 project, subject to the terms and conditions of the draft permit.

**10 FINAL DETERMINATION**

^DRAFT (This section will be revised when a final permit is issued for this project.)

**DETAILS OF THIS ANALYSIS MAY BE OBTAINED BY CONTACTING:**

Joseph Kahn, P.E. and Cleve Holladay (impact analysis)  
Department of Environmental Protection  
Bureau of Air Regulation  
Mail Station #5505  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400  
Telephone: 850/488-0114

Recommended By:

Approved By:

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

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Howard L. Rhodes, Director  
Division of Air Resources Management

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Date:

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Date:

**PERMITTEE**

Florida Power Corporation  
One Power Plaza  
263-13th Avenue South  
St. Petersburg, Florida 33701-5511

<b>Permit No.</b>	1050234-004-AC, PSD-FL-296
<b>Project</b>	Hines Energy Complex Power Block 2 Siting Certification PA92-335A
<b>SIC No.</b>	4911
<b>Expires:</b>	^DRAFT

**Authorized Representative:**

Bruce Baldwin, Director of Combustion Turbine Operations

**PROJECT AND LOCATION**

This permit authorizes Florida Power Corporation to construct two combustion turbines and related equipment to create Power Block 2 at the existing Hines Energy Complex.

This facility is located at County Road 555, 2.5 miles south of CR 640, Bartow, Polk County. The UTM coordinates are: Zone 17; 414.4 km E and 3073.9 km N.

**STATEMENT OF BASIS**

This PSD permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297. The above named permittee is authorized to construct the emissions units in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

**APPENDICES**

The attached appendices are a part of this permit:

Appendix A      NSPS General Provisions  
Figure 1        Summary Report--Gaseous and Opacity Excess Emission & Monitoring System  
                         Performance  
Appendix GC    General Permit Conditions

**DRAFT**

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Howard L. Rhodes, Director  
Division of Air Resources  
Management

**AIR CONSTRUCTION PERMIT**  
**SECTION I. FACILITY INFORMATION**

**FACILITY DESCRIPTION, PROJECT DETAILS AND RULE APPLICABILITY**

The facility is an existing electric power plant that currently consists of an existing combined cycle combustion turbine power generating system designated Power Block 1. Power Block 1 consists of two Siemens Westinghouse 501 combustion turbines (CTs), two unfired heat recovery steam generators (HRSGs) and one steam electric turbine, with a total nominal generating capacity of 500 MW. This permit is to authorize the construction of Power Block 2 consisting of two nominal 170 MW Siemens Westinghouse 501 FD CTs, two unfired HRSGs and one steam electric turbine, with a total nominal generating capacity of approximately 530 MW. The emissions units for this project are:

EMISSIONS UNIT No.	EMISSIONS UNIT DESCRIPTION
014	Power Block 2, CT 1, a combined cycle combustion turbine system consisting of a Siemens Westinghouse 501 combustion turbine, an unfired heat recovery steam generator and associated emission control equipment.
015	Power Block 2, CT 2, a combined cycle combustion turbine system consisting of a Siemens Westinghouse 501 combustion turbine, an unfired heat recovery steam generator and associated emission control equipment.

The annual potential emissions associated with this project are: PM/PM<sub>10</sub>, 121; NO<sub>x</sub>, 270; SO<sub>2</sub>, 149; SAM, 23; CO, 683; and VOC, 53 tons per year. The facility information, project scope, emissions and rule applicability are described in detail in the Department's Technical Evaluation and BACT Determination.

**SUMMARY OF BACT/MACT DETERMINATION**

A complete discussion of the Department's technical evaluation and BACT determination is included in the Department's Technical Evaluation and BACT Determination. Following is a summary of the Department's control technology determinations pursuant to Rules 62-212.400, F.A.C., (BACT). As noted in that document, this project is not subject to the requirements of Rule 62-204.800(10)(d)2, F.A.C., for a case-by-case MACT determination.

**SUMMARY OF BACT TECHNOLOGY DETERMINATIONS**

Emissions Unit	Pollutants	BACT Requirements
014 and 015	NO <sub>x</sub>	Dry low NO <sub>x</sub> combustors and selective catalytic reduction
014 and 015	PM/PM <sub>10</sub> , VE	Good combustion practices, clean fuels
014 and 015	SO <sub>2</sub> , SAM	Limit fuel sulfur (clean fuels) and fuel oil consumption
014 and 015	CO, VOC	Combustor design, good combustion practices

The allowable emission limits associated with the BACT technologies and related compliance requirements are shown in Section III of the permit.

**AIR CONSTRUCTION PERMIT**  
**SECTION I. FACILITY INFORMATION**

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**REVIEWING AND PROCESS SCHEDULE**

July 24, 2000	Received permit application and fee
August 23, 2000	Department's request for additional information
November 27, 2000	Received response to request for additional information
November 27, 2000	Application complete
^ DRAFT	Distributed Notice of Intent to Issue and supporting documents
^ DRAFT	Notice of Intent published in ^ DRAFT

**RELEVANT DOCUMENTS**

The documents listed below are the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

- Permit application
- Department's request for additional information
- Applicant's additional information
- Department's Technical Evaluation and BACT Determination
- Department's Intent to Issue

**AIR CONSTRUCTION PERMIT**  
**SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS**

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The following specific conditions apply to all emissions units at this facility addressed by this permit.

**ADMINISTRATIVE**

1. Regulating Agencies: All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the Bureau of Air Regulation, Florida Department of Environmental Protection at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, phone number 850/488-0114. All documents related to reports, tests, minor modifications and notifications shall be submitted to the Department's Southwest District office at 3804 Coconut Palm Drive, Tampa, FL 33619-8218, and phone number 813-744-6100
2. General Conditions: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in Appendix GC of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-110, 62-204, 62-212, 62-213, 62-296, 62-297 and the Code of Federal Regulations Title 40, Part 60, adopted by reference in the Florida Administrative Code (F.A.C.) regulations. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. New or Additional Conditions: Pursuant to Rule 62-4.080, F.A.C., for good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Expiration: This air construction permit shall expire on ^ DRAFT. The permittee, for good cause, may request that this construction/PSD permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit. [Rules 62-210.300(1), 62-4.070(4), 62-4.080, and 62-4.210, F.A.C.]

PSD Expiration: Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [Rules 62-4.070(4), 62-4.210(2) & (3), and 62-210.300(1)(a), F.A.C.]

BACT Determination Review: In conjunction with extension of the 18 month periods to commence or continue construction, extension of the permit expiration date, or where construction is conducted

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in two or more phases, the permittee may be required to demonstrate the adequacy of any previous determination of Best Available Control Technology (BACT) for the source. [Rules 62-4.070(4), 62-4.210(2) & (3), 62-210.300(1)(a), and 62-212.400(6)(b), F.A.C.]

BACT Determination: In accordance with paragraph (4) of 40 CFR 52.21 (j) and 40 CFR 51.166(j), the Best Available Control Technology (BACT) determination shall be reviewed and modified as appropriate in the event of a plant conversion. This paragraph states: "For phased construction projects, the determination of best available control technology shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the applicable stationary source may be required to demonstrate the adequacy of any previous determination of best available control technology for the source." This reassessment will also be conducted for this project if there are any increases in heat input limits, hours of operation, oil firing, low or base load operation, short-term or annual emission limits, annual fuel heat input limits or similar changes. [40 CFR 52.21(j), 40 CFR 51.166(j) and Rule 62-4.070 F.A.C.]

7. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department's Bureau of Air Regulation. Such permit must be obtained prior to the beginning of construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
8. Title V Operation Permit Required: This permit authorizes construction and/or installation of the permitted emissions unit and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The owner or operator shall apply for a Title V operation permit at least ninety days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Bureau of Air Regulation, and a copy sent to the Department's Southwest District office. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

Application for Title IV Permit: An application for a Title IV Acid Rain Permit, must be submitted to the U.S. Environmental Protection Agency Region IV office in Atlanta, Georgia and a copy submitted to the Department's Bureau of Air Regulation 24 months before the date on which the new unit begins serving an electrical generator greater than 25 MW. [40 CFR 72]

#### EMISSION LIMITING STANDARDS

9. General Visible Emissions Standard: Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20% opacity). The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C. [Rule 62-296.320(4)(b)1, F.A.C.]

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### SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

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10. Unconfined Emissions of Particulate Matter: [Rule 62-296.320(4)(c), F.A.C.]

- (a) No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.
- (b) Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.
- (c) Reasonable precautions applicable to this facility include the following:
- Paving and maintenance of roads, parking areas and yards.
  - Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
  - Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
  - Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
  - Landscaping or planting of vegetation.
  - Confining abrasive blasting where possible.
- (d) In determining what constitutes reasonable precautions for a particular source, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

11. General Pollutant Emission Limiting Standards: [Rule 62-296.320(1)(a)&(2), F.A.C.]

- (a) No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.
- (b) No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

[Note: An objectionable odor is defined in Rule 62-210.200(198), F.A.C., as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.]

#### OPERATIONAL REQUIREMENTS

12. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department's Southwest District office. The notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward



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### SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

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reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. [Rule 62-4.130, F.A.C.]

13. Circumvention: No person shall circumvent any air pollution control device or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]
14. Excess Emissions: The following excess emissions provisions of state rule apply to the emissions units as specified below. These excess emissions provisions of state rule do not apply to federal requirements and can not be used to vary any NSPS requirements applicable to these emissions units. Except for visible emissions, no other excess emissions are allowed by this condition. See condition 7 of Section III of this permit for provisions that relate to excluding periods of CEM system data recorded for NO<sub>x</sub> and CO for episodes of startup, shutdown and malfunction.
  - (a) Excess visible emissions resulting from startup, shutdown or malfunction are permitted for these emissions units providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized, but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.
  - (b) Any excess visible emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during start-up, shutdown, or malfunction shall be prohibited.

[Rules 62-210.700(1), (4) and (5), F.A.C.]

#### COMPLIANCE MONITORING AND TESTING REQUIREMENTS

15. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]
16. Operating Rate During Testing: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operation at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities

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is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]

17. Calculation of Emission Rate: The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
18. Test Procedures shall meet all applicable requirements of Rule 62-297.310(4), F.A.C. [Rule 62-297.310(4), F.A.C.]
19. Determination of Process Variables: [Rule 62-297.310(5), F.A.C.]
  - (a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
  - (b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.
20. Required Stack Sampling Facilities: Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E. Sampling facilities shall also conform to the requirements of Rule 62-297.310(6), F.A.C. [Rule 62-297.310(6), F.A.C.]
21. Test Notification: The owner or operator shall notify the Department's Southwest District office, at least 15 days prior to the date on which each formal compliance test is to begin. Notification shall include the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator. [Rule 62-297.310(7)(a)9., F.A.C., and 40 CFR 60.8]

[Note: The federal requirements of 40 CFR 60.8 require 30 days notice of the initial test and any tests required under section 114 of the Clean Air Act, but the Department rules require 15 days notice for the annual compliance tests. Unless otherwise advised by the Southwest District office, provide 15 days notice prior to conducting annual tests, except for the initial test when 30 days notice is required.]
22. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the facility to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions units and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

**AIR CONSTRUCTION PERMIT**  
**SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS**

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**REPORTING AND RECORD KEEPING REQUIREMENTS**

23. Duration of Record Keeping: 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. 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 five years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule. [Rules 62-4.160(14)(a)&(b) and 62-213.440(1)(b)2.b., F.A.C.]
24. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]
25. Excess Emissions Report: In case of excess emissions resulting from malfunction, the owner or operator shall notify the Department's Southwest District office within one working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. A full written report on the malfunctions shall be submitted in a quarterly report if requested by the Department. [Rules 62-4.130 and 62-210.700(6), F.A.C.]
- [Note: Because excess emissions pursuant to state rule are limited by condition 14 of Section II of this permit (permitting excess emissions only for visible emissions), the written reports which may be required by this condition are different from the reports that are required by condition 7 of Section III of this permit and 40 CFR 60.7.]
26. Annual Operating Report for Air Pollutant Emitting Facility: The Annual Operating Report for Air Pollutant Emitting Facility shall be completed each year and shall be submitted to the Department's Southwest District office by March 1 of the following year. The NO<sub>x</sub> and CO emissions reported shall be based on the data recorded by the continuous emission monitoring (CEM) system, and substitute data, if applicable. The total annual emissions shall include data recorded during episodes of startup, shutdown and malfunction, whether or not such data were excluded during the year for purposes of compliance with this permit. SO<sub>2</sub> and SAM emissions reported shall be based on the quantity of and sulfur content of fuels fired. [Rules 62-4.070(3) and 62-210.370(3), F.A.C.]

**AIR CONSTRUCTION PERMIT**  
**SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS**

The following specific conditions apply to the following emissions units after construction:

EMISSIONS UNIT NO.	EMISSIONS UNIT DESCRIPTION
014	Power Block 2, CT 1, a combined cycle combustion turbine system consisting of a Siemens Westinghouse 501 combustion turbine, an unfired heat recovery steam generator and associated emission control equipment.
015	Power Block 2, CT 2, a combined cycle combustion turbine system consisting of a Siemens Westinghouse 501 combustion turbine, an unfired heat recovery steam generator and associated emission control equipment.

[Note: Emissions units 014 and 015 are subject to 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines (40 CFR 60.330 - 60.344) and 40 CFR 60 Subpart A (revised as of July 1, 1999) as indicated in this permit; and are subject to the requirements of the state rules, including the requirements for Prevention of Significant Deterioration of Rule 62-212.400, F.A.C., as indicated in this permit. Operation at loads less than 100% to a limit of 60% of capacity is not limited by this permit. SO<sub>2</sub> and SAM are limited by limited fuel sulfur content and fuel consumption. Based on maximum potential emissions at 20 °F, the emission limits of this permit effectively limit annual emissions from both emissions units, in tons per year, to approximately: PM/PM<sub>10</sub>, 121; NO<sub>x</sub>, 270; SO<sub>2</sub>, 149; SAM, 23; CO, 683; and VOC, 53.]

**STATE REQUIREMENTS**

**OPERATIONAL REQUIREMENTS**

1. **Hours of Operation:** These emissions units may operate continuously, i.e., 8,760 hours/year. [Rules 62-4.070(3) and 62-210.200, F.A.C., limitation on potential to emit]
2. **Fuel and Consumption Limited:** These emission units shall be fired primarily with pipeline natural gas containing no more than 1.0 grain of sulfur per 100 scf of natural gas. Natural gas consumption is not directly limited by this permit. These emissions units may be fired with distillate fuel oil. Distillate fuel oil consumption of both emissions units combined shall not exceed 19,728,000 gallons in any consecutive 12 month period. Distillate fuel oil fired shall contain a maximum of 0.05 percent sulfur by weight. [Rules 62-4.070(3) and 62-210.200, F.A.C., limitation on potential to emit]

[Note: This condition limits annual average fuel oil consumption to the equivalent of approximately 720 hours per year operation for each turbine, based on 59°F annual average temperature. Fuel oil consumption is not limited per turbine, and the allowable fuel may be used by one turbine.]

3. **Combustion Turbine Capacity:** The maximum heat input rates, based on the higher heating value of the fuels, and an ambient air temperature of 59 °F, shall not exceed 1915 mmBtu/hr when firing gas and 2020 mmBtu/hr when firing distillate fuel oil. This maximum heat input rate will vary depending upon ambient conditions and the combustion turbine characteristics that are described by the manufacturer's curves required by condition 6 of this section. Operation of these emissions units at less than 60% of capacity (based on heat input rates) is not allowed, except as required to cycle the units through periods of startup, shutdown and malfunction. [Rules 62-4.070(3) and 62-210.200, F.A.C., limitation on potential to emit]

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### SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

4. Control Technology Requirements: NO<sub>x</sub> emissions from these emissions units shall be controlled with dry low NO<sub>x</sub> combustors and selective catalytic reduction to comply with the NO<sub>x</sub> and ammonia limits of this permit. The emissions units shall not be operated without the use of the SCR system except during periods of startup and shutdown when the operating temperatures are outside the range of catalyst operating temperatures that are established by the catalyst manufacturer. [Rules 62-4.070(3) and 62-212.400, F.A.C., and BACT]

#### EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

5. Emissions Limited: Emissions from each of these emissions units shall not exceed the following limits for the listed pollutants at any ambient temperature.

POLLUTANT	EMISSION LIMIT NATURAL GAS	EMISSION LIMIT, DISTILLATE FUEL OIL	AVERAGING TIME
PM/PM <sub>10</sub>	7.3 lb/hour	64.8 lb/hour	3 hours (oil) <sup>1</sup> 6 hours (gas) <sup>1</sup>
NO <sub>x</sub>	3.5 ppmvd @ 15% O <sub>2</sub>	12 ppmvd @ 15% O <sub>2</sub>	24 hour block <sup>2</sup>
CO	16 ppmvd @ 15% O <sub>2</sub>	30 ppmvd @ 15% O <sub>2</sub>	24 hour block <sup>2</sup>
Ammonia	5 ppmvd @ 15% O <sub>2</sub>	9 ppmvd @ 15% O <sub>2</sub>	3 hours <sup>1</sup>
VOC	2 ppmvd @ 15% O <sub>2</sub>	10 ppmvd @ 15% O <sub>2</sub>	3 hours <sup>1</sup>
VE	10% opacity	10% opacity	6 minutes <sup>3</sup>

<sup>1</sup> The averaging time for these pollutants and emission limits corresponds to the required length of sampling for the initial and subsequent emission tests required by this permit.

<sup>2</sup> The averaging time for these pollutants and emission limits is a block average. Blocks shall start at midnight each operating day.

<sup>3</sup> This averaging time represents the minimum averaging time per EPA Method 9.

[Rules 62-4.070(3), 62-204.800(10)(d)2 and 62-212.400, F.A.C., and BACT]

[Note: The concentration limits for NO<sub>x</sub> are equivalent to an average of 25.2 lb/hour while firing gas, and 93.5 lb/hour while firing distillate fuel oil, as pounds of NO<sub>2</sub> per hour, at 20 °F. The concentration limits for CO are equivalent to an average of 73.6 lb/hour while firing gas, and 112 lb/hour while firing distillate fuel oil, at 20 °F. The concentration limits for VOC are equivalent to an average of 3.5 lb/hour while firing gas and 22 lb/hour while firing distillate fuel oil, reported as pounds of methane per hour, at 20 °F.]

#### COMPLIANCE MONITORING, TESTING, RECORD KEEPING AND REPORTING REQUIREMENTS

6. Emission Tests Required: The owner or operator shall demonstrate compliance with the emission limits of this section for the following pollutants, by testing each emissions unit at the frequencies and using the test methods specified below. Initial emissions testing shall be performed separately for each of the allowable fuels. Annual emissions testing while firing distillate fuel oil is not required during any federal fiscal year (October 1 – September 30) during which less than 5,480,000 gallons of distillate fuel oil is fired in both emissions units combined.

[Note: The fuel limitation for waiving testing while firing distillate fuel oil corresponds to the equivalent of approximately 200 hours of operation per year for each turbine.]

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POLLUTANT	TEST METHOD <sup>1</sup>	TEST FREQUENCY
PM/PM <sub>10</sub>	Method 5 <sup>2</sup>	Initially and annually
Ammonia	CTM-027 <sup>3</sup>	Initially and annually
VE	Method 9 <sup>4</sup>	Initially and annually
VOC	Method 25A. and optional Method 18 <sup>5</sup>	Initially and prior to renewal of each subsequent operation permit

- <sup>1</sup> Test methods are from 40 CFR 60 Appendix A, except for Method CTM-027, "Procedure for Collection and Analysis of Ammonia in Stationary Sources," which is an EPA conditional test method.
- <sup>2</sup> For tests conducted while firing gas, the sampling time for each run shall be a minimum of two hours and the sampling volume shall be a minimum of 60 dscf. For tests conducted while firing oil, the sampling time for each run shall be a minimum of one hour and the sampling volume shall be a minimum of 30 dscf. Only an analysis of the "front half catch" is required.
- <sup>3</sup> The test and analyses shall be conducted so that the minimum detection limit is 1 ppmvd.
- <sup>4</sup> The test shall be conducted for a minimum of 30 minutes simultaneously with one run of the Method 5 test.
- <sup>5</sup> Method 18 may be used simultaneously with Method 25A to determine the concentration of methane and ethane which may be subtracted from the results of the Method 25A analysis, with all results expressed on a common basis.

In addition to the requirements of condition 16 of Section II of this permit, permitted capacity is defined as 90-100 percent of the maximum heat input rate allowed by the permit, corrected for the average ambient air temperature during the test (with 100 percent represented by a curve depicting heat input vs. ambient temperature provided by the turbine manufacturer).

Manufacturer's curves that relate combustion turbine heat input to temperature and other ambient conditions shall be provided to the Department's Bureau of Air Regulation and the Southwest District Office within 45 days of completing the initial compliance testing.

Replacement of the major components of the air pollution control equipment, such as SCR catalyst or the combustors, may be used by the Department as justification to require a special compliance test pursuant to the requirements of condition 22 of Section II of this permit.

[Rules 62-4.070(3), 62-212.400 and 62-297.310, F.A.C.]

7. Continuous Emission Monitoring System: The owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring (CEM) system in the exhaust stack of each emissions unit to measure and record the emissions of NO<sub>x</sub> and CO from these emissions units, and the oxygen (O<sub>2</sub>) content of the flue gas at the location where NO<sub>x</sub> and CO are monitored, in a manner sufficient to demonstrate compliance with the emission limits of this permit. The CEM system shall be used to demonstrate compliance with the emission limits for NO<sub>x</sub> and CO of condition 5 of this section. Compliance with the emission limits for NO<sub>x</sub> and CO shall be based on a 24-hour block average starting at midnight of each operating day. The 24-hour block average shall be calculated from 24 consecutive hourly average emission rate values. Each hourly value shall be computed using at least

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### SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

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one data point in each fifteen minute quadrant of an hour, where the unit combusted fuel during that quadrant of an hour. Notwithstanding this requirement, an hourly value shall be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of an hour). The owner or operator shall use all valid measurements or data points collected during an hour to calculate the hourly averages. All data points collected during an hour shall be, to the extent practicable, evenly spaced over the hour. If the CEM system measures concentration on a wet basis, the CEM system shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the owner or operator may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Final results of the CEM system shall be expressed as ppmvd, corrected to 15% oxygen.

The NO<sub>x</sub> monitor shall be certified and operated in accordance with the following requirements. The NO<sub>x</sub> monitor shall be certified pursuant to 40 CFR Part 75 and shall be operated and maintained in accordance with the applicable requirements of 40 CFR Part 75, Subparts B and C. For purposes of determining compliance with the emission limits of condition 5 of this section, missing data shall not be substituted. Instead the block average shall be determined using the remaining hourly data in the 24 hour block. Record keeping and reporting shall be conducted pursuant to 40 CFR Part 75, Subparts F and G. The RATA tests required for the NO<sub>x</sub> monitor shall be performed using EPA Method 20 or 7E, of Appendix A of 40 CFR 60. The NO<sub>x</sub> monitor shall be a dual range monitor. The span for the lower range shall not be greater than 10 ppm, and the span for the upper range shall not be greater than 30 ppm, as corrected to 15% O<sub>2</sub>.

The CO monitor and O<sub>2</sub> monitor shall be certified and operated in accordance with the following requirements. The CO monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4. The O<sub>2</sub> monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 3. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of section 7 shall be made each calendar quarter, and reported semi-annually to the Department's Southwest District Office. The RATA tests required for the CO monitor shall be performed using EPA Method 10, of Appendix A of 40 CFR 60. The Method 10 analysis shall be based on a continuous sampling train, and the ascarite trap may be omitted or the interference trap of section 10.1 may be used in lieu of the silica gel and ascarite traps. The span for the CO monitor shall not be greater than 50 ppm, as corrected to 15% O<sub>2</sub>. The RATA tests required for the O<sub>2</sub> monitor shall be performed using EPA Method 3B, of Appendix A of 40 CFR 60. The span for the O<sub>2</sub> monitor shall not be greater than 21 percent.

NO<sub>x</sub>, CO and O<sub>2</sub> emissions data shall be recorded by the CEM system during episodes of startup, shutdown and malfunction. NO<sub>x</sub> and CO emissions data recorded during these episodes may be excluded from the block average calculated to demonstrate compliance with the emission limits of condition 5 of this section as provided in this paragraph. Periods of data excluded for startup shall not exceed two hours in any block 24 hour period except for "cold startup." A cold startup is defined as a startup following a complete shutdown lasting a minimum of 48 hours. Periods of data excluded for cold startup shall not exceed four hours in any 24-hour block period. Periods of data excluded for shutdown shall not exceed two hours in any 24-hour block period. Periods of data excluded for

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malfunctions shall not exceed two hours in any 24-hour block period. All periods of data excluded for any startup, shutdown or malfunction episode shall be consecutive for each episode. Periods of data excluded for all startup, shutdown or malfunction episodes shall not exceed four hours in any 24-hour block period. The owner or operator shall minimize the duration of data excluded for startup, shutdown and malfunctions, to the extent practicable. Data recorded during startup, shutdown or malfunction events shall not be excluded if the startup, shutdown or malfunction episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented.

Best operational practices shall be used to minimize hourly emissions that occur during episodes of startup, shutdown and malfunction. Emissions of any quantity or duration that occur entirely or in part from poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented shall be prohibited.

A summary report of duration of data excluded from the block average calculation, and all instances of missing data from monitor downtime, shall be reported to the Department's Southwest District office semi-annually, and shall be consolidated with the report required pursuant to 40 CFR 60.7. For purposes of reporting "excess emissions" pursuant to the requirements of 40 CFR 60.7, excess emissions shall be defined as the hourly emissions which are recorded by the CEM system during periods of data excluded for episodes of startup, shutdown and malfunction, allowed above. The duration of excess emissions shall be the duration of the periods of data excluded for such episodes. Reports required by this paragraph and by 40 CFR 60.7 shall be submitted no less than semi-annually, including semi-annual periods in which no data is excluded or no instances of missing data occur.

Upon request from the Department, the CEMS emission rates shall be corrected to ISO conditions to demonstrate compliance with the applicable standards of 40 CFR 60.332.

[Rules 62-4.070(3) and 62-212.400., F.A.C., and BACT]

[Note: Compliance with these requirements will ensure compliance with the other CEM system requirements of this permit to comply with Subpart GG requirements, as well as the applicable requirements of Rule 62-297.520, F.A.C., 40 CFR 60.7(a)(5) and 40 CFR 60.13. and with 40 CFR Part 51, Appendix P, 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60, Appendix F, Quality Assurance Procedures.]

8. Ammonia Monitoring Requirements: The permittee shall install, calibrate, maintain and operate, in accordance with the meter manufacturer's specifications, an ammonia flow meter to measure and record the ammonia injection rate to the SCR system of each emissions unit. The owner or operator shall document the general range of ammonia flow rates required to meet emissions limitations over the range of combustion turbine load conditions allowed by this permit by comparing NO<sub>x</sub> emissions recorded by the NO<sub>x</sub> monitor with ammonia flow rates recorded using the ammonia flow meter. During NO<sub>x</sub> monitor downtimes or malfunctions, the owner or operator shall operate at the ammonia flow rate which is consistent with the documented flow rate for the combustion turbine load. [Rules 62-4.070(3) and 62-212.400., F.A.C., and BACT]
9. Monitoring of Operation: To demonstrate compliance with the fuel consumption and sulfur content limits of condition 2 of this section, the owner or operator shall monitor and record the rates of



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consumption and sulfur content of each of the allowable fuels in accordance with the provisions of 40 CFR 75 Appendix D. To demonstrate compliance with the heat input limits of condition 3 of this section, the owner or operator shall monitor and record the operating rate of each emissions unit on a daily average basis, considering the number of hours of operation during each day, including the duration of startup, shutdown and malfunction episodes. To demonstrate compliance with the 60% turbine capacity limit of condition 3 of this section, the owner or operator shall monitor and record the operating rate of each emissions unit on an hourly average basis for each operating hour, excluding the duration of episodes of startup, shutdown and malfunction that are permitted to be excluded pursuant to condition 7 of this section. Such monitoring shall be made using a monitoring component of the CEM system required above, or by monitoring daily rates of consumption and heat content of each of the allowable fuels in accordance with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3) and 62-212.400., F.A.C., and BACT]

10. Frequency of Record Keeping: The owner or operator shall complete daily records required by this permit by the end of each operating day. [Rule 62-4.070(3), F.A.C.]

#### NSPS SUBPART GG REQUIREMENTS

[Note: Inapplicable provisions have been deleted in the following conditions, but the numbering of the original rules has been preserved for ease of reference to the original rules. The term "Administrator" when used in 40 CFR 60 shall mean the Department's Secretary or the Secretary's designee. Department notes and requirements related to the Subpart GG requirements are shown in **bold** immediately following the section to which they refer. The rule basis for the Department requirements specified below is Rule 62-4.070(3), F.A.C.]

11. Pursuant to 40 CFR 60.332 Standard for Nitrogen Oxides:

- (a) On and after the date of the performance test required by § 60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraph (b) section shall comply with:
- (1) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$\text{STD} = 0.0075 \frac{(14.4)}{Y} + F$$

where:

STD = allowable NO<sub>x</sub> emissions (percent by volume at 15 percent oxygen and on a dry basis).  
Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F = NO<sub>x</sub> emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of this section.

- (3) F shall be defined according to the nitrogen content of the fuel as follows:

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Fuel-bound nitrogen (percent by weight)	F (NOx percent by volume)
$N \leq 0.015$ .....	0
$0.015 < N \leq 0.1$ .....	$0.04(N)$
$0.1 < N \leq 0.25$ .....	$0.004 + 0.0067(N - 0.1)$
$N > 0.25$ .....	0.005

where:

N = the nitrogen content of the fuel (percent by weight).

**Department requirement:** While firing gas, the "F" value shall be assumed to be 0.

[Note: This is required by EPA's March 12, 1993 determination regarding the use of NOx CEMS. The "Y" values provided by the applicant are approximately 9.5 for natural gas and 9.6 for fuel oil. The equivalent emission standards are 113.5 and 112.7 ppmvd at 15% oxygen. The BACT limit of this permit is more stringent than this requirement.]

(b) Electric utility stationary gas turbines with a heat input at peak load greater than 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired shall comply with the provisions of paragraph (a)(1) of this section.

12. Pursuant to 40 CFR 60.333 Standard for Sulfur Dioxide:

On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with:

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8 percent by weight.

13. Pursuant to 40 CFR 60.334 Monitoring of Operations:

(b) The owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

(1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.

**Department requirement:** The owner or operator is allowed to use vendor analyses of the fuel as received to satisfy the sulfur content monitoring requirements of this rule for fuel oil. Alternatively, if the fuel oil storage tank is isolated from the combustion turbines while being filled, the owner or operator is allowed to determine the sulfur content of the tank after completion of filling of the tank, before it is placed back into service.

[Note: This is consistent with guidance from EPA Region 4 dated May 26, 2000 to Ronald W. Gore of the Alabama Department of Environmental Management.]

(2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and

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must be approved by the Administrator before they can be used to comply with paragraph (b) of this section.

**Department requirement:** The requirement to monitor the nitrogen content of pipeline quality natural gas fired is waived. The requirement to monitor the nitrogen content of fuel oil fired is waived because a NOx CEMS shall be used to demonstrate compliance with the NOx limits of this permit. For purposes of complying with the sulfur content monitoring requirements of this rule, the owner or operator is allowed to determine the sulfur content of the pipeline quality natural gas semi-annually, because the owner or operator has the results of bimonthly and quarterly natural gas sulfur content analyses from the operation of the existing Power Block 1.

[Note: This is consistent with EPA's custom fuel monitoring policy and guidance from EPA Region 4.]

(c) For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions that shall be reported are defined as follows:

(1) *Nitrogen oxides.* Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with 40 CFR 60.332 by the performance test required in § 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in § 60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under 40 CFR 60.335(a).

**Department requirement:** NOx emission monitoring by CEM system shall substitute for the requirements of paragraph (c)(1) because a NOx monitor shall be used to demonstrate compliance with the BACT NOx limits of this permit. Data from the NOx monitor shall be used to determine "excess emissions" for purposes of 40 CFR 60.7 as described in condition 7 of this section.

**Department requirement:** NOx and CO monitor availability shall not be less than 95% in any calendar quarter. The report required by condition 7 of this section shall be used to demonstrate compliance with this requirement.

[Note: As required by EPA's March 12, 1993 determination, the NOx monitor shall meet the applicable requirements of 40 CFR 60.13, Appendix B and Appendix F for certifying, maintaining, operating and assuring the quality of the system; shall be capable of calculating NOx emissions concentrations corrected to 15% oxygen; shall have no less than 95% monitor availability in any given calendar quarter; and shall provide a minimum of four data points for each hour and calculate an hourly average. The requirements for the CEMS specified by the specific conditions of this permit satisfy these requirements.]

(2) *Sulfur dioxide.* Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent.

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14. Pursuant to 40 CFR 60.335 Test Methods and Procedures:

- (a) To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 per-cent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.
- (b) In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as pro-vided for in 40 CFR 60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.
- (c) The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in 40 CFR 60.332 and 60.333(a) as follows:
  - (1) The nitrogen oxides emission rate (NO<sub>x</sub>) shall be computed for each run using the following equation:

$$\text{NO}_x = (\text{NO}_{x0}) (\text{Pr}/\text{Po})^{0.5} e^{19(\text{H}_0 - 0.00633)} (288^\circ\text{K}/\text{Ta})^{1.53}$$

where:

NO<sub>x</sub> = emission rate of NO<sub>x</sub> at 15 percent O<sub>2</sub> and ISO standard ambient conditions, volume percent.

NO<sub>x0</sub> = observed NO<sub>x</sub> concentration, ppm by volume.

Pr = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.

Po = observed combustor inlet absolute pressure at test, mm Hg.

H<sub>0</sub> = observed humidity of ambient air, g H<sub>2</sub>O/g air.

e = transcendental constant, 2.718.

Ta = ambient temperature, °K.

**Department requirement:** The owner or operator is not required to have the NO<sub>x</sub> monitor required by this permit continuously calculate NO<sub>x</sub> emissions concentrations corrected to ISO conditions. However, the owner or operator shall keep records of the data needed to make the correction, and shall make the correction when required by the Department or Administrator.

[Note: This is consistent with guidance from EPA Region 4.]

- (2) The monitoring device of 40 CFR 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with 40 CFR 60.332 at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.

**Department requirement:** The owner or operator is allowed to conduct initial performance tests at a single load because a NO<sub>x</sub> monitor shall be used to demonstrate compliance with the BACT NO<sub>x</sub> limits of this permit.

[Note: This is consistent with guidance from EPA Region 4.]

- (3) Method 20 shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The

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NO<sub>x</sub> emissions shall be determined at each of the load conditions specified in paragraph (c)(2) of this section.

**Department requirement:** The owner or operator is allowed to make the initial compliance demonstration for NO<sub>x</sub> emissions using certified CEM system data, provided that compliance be based on a minimum of three test runs representing a total of at least three hours of data, and that the CEMS be calibrated in accordance with the procedure in section 6.2.3 of Method 20 following each run. Alternatively, initial compliance may be demonstrated using data collected during the initial relative accuracy test audit (RATA) performed on the NO<sub>x</sub> monitor. The span value specified in condition 7 of this section shall be used instead of the span value of 300 ppm specified by paragraph (3) above.

[Note: These initial compliance demonstration requirements are consistent with guidance from EPA Region 4. The span value is changed pursuant to Department authority and is consistent with guidance from EPA Region 4.]

(d) The owner or operator shall determine compliance with the sulfur content standard in 40 CFR 60.333(b) as follows: ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels (incorporated by reference – see 40 CFR 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.

**Department requirement:** Condition 9 of this section requires the owner or operator to follow the requirements of 40 CFR 75 Appendix D to determine the sulfur content of liquid fuels.

[Note: This requirement establishes different analysis methods than provided by paragraph (d) above, but the requirements are equally stringent and will ensure compliance with this rule.]

(e) To meet the requirements of 40 CFR 60.334(b), the owner or operator shall use the methods specified in paragraphs (a) and (d) of this section to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

[Note: The fuel analysis requirements of condition 9 of this section meet or exceed the requirements of this rule and will ensure compliance with this rule.]

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[Note: Inapplicable provisions have been deleted in the following conditions. The numbering of the original rules in the following conditions has been preserved for ease of reference to the rules. The term "Administrator" when used in 40 CFR 60 shall mean the Secretary or the Secretary's designee.]

1. Pursuant to 40 CFR 60.1 Applicability:

- (a) Except as provided in 40 CFR 60 subparts B and C, the provisions of this part apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.
- (b) Any new or revised standard of performance promulgated pursuant to section 111(b) of the Act shall apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of such new or revised standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.
- (c) In addition to complying with the provisions of this part, the owner or operator of an affected facility may be required to obtain an operating permit issued to stationary sources by an authorized State air pollution control agency or by the Administrator of the U.S. Environmental Protection Agency (EPA) pursuant to Title V of the Clean Air Act (CAA) as amended November 15, 1990 (42 U.S.C. 7661).

2. Pursuant to 40 CFR 60.7 Notification And Record Keeping:

- (a) Any owner or operator subject to the provisions of this part shall furnish the Administrator written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, as follows:
  - (1) A notification of the date construction (or reconstruction as defined under 40 CFR 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
  - (2) [Reserved]
  - (3) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.
  - (4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(c). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.

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- (5) A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with 40 CFR 60.13(c). Notification shall be postmarked not less than 30 days prior to such date.
- (b) The owner or operator subject to the provisions of 40 CFR 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
- (c) The owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form (see 40 CFR 60.7(d)) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the CMS data are to be used directly for compliance determination, in which case quarterly reports shall be submitted; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:
- (1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
  - (2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
  - (3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
  - (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
- (d) The summary report form shall contain the information and be in the format shown in Figure 1 unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.
- (1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.
  - (2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.

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*[See Attached Figure 1-Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance]*

- (f) The owner or operator subject to the provisions of this part shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records, except as follows.
    - (1) This paragraph applies to owners or operators required to install a continuous emissions monitoring system (CEMS) where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. An automated CEMS records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (f) of this section, the owner or operator shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.
    - (2) This paragraph applies to owners or operators required to install a CEMS where the measured data is manually reduced to obtain the reportable form of the standard, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (f) of this section, the owner or operator shall retain all subhourly measurements for the most recent reporting period. The subhourly measurements shall be retained for 120 days from the date of the most recent summary or excess emission report submitted to the Administrator.
    - (3) The Administrator or delegated authority, upon notification to the source, may require the owner or operator to maintain all measurements as required by paragraph (f) of this section, if the Administrator or the delegated authority determines these records are required to more accurately assess the compliance status of the affected source.
  - (g) If notification substantially similar to that in 40 CFR 60.7(a) is required by any other State or local agency, sending the Administrator a copy of that notification will satisfy the requirements of 40 CFR 60.7(a).
  - (h) Individual subparts of this part may include specific provisions which clarify or make inapplicable the provisions set forth in this section.
3. Pursuant to 40 CFR 60.8 Performance Tests:
- (a) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).



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- (b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology; (2) approves the use of an equivalent method; (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance; (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.
- (c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.
- (d) The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present.
- (e) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows: (1) Sampling ports adequate for test methods applicable to such facility. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures. (2) Safe sampling platform(s). (3) Safe access to sampling platform(s). (4) Utilities for sampling and testing equipment.
- (f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

[See the note for specific condition 21 of Section II of this permit regarding the proper advance notification of compliance tests.]

4. Pursuant to 40 CFR 60.11, Compliance With Standards And Maintenance Requirements:

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- (a) Compliance with standards in this part, other than opacity standards, shall be determined only by performance tests established by 40 CFR 60.8, unless otherwise specified in the applicable standard.
- (d) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
- (f) Special provisions set forth under an applicable subpart of this part shall supersede any conflicting provisions of paragraphs (a) through (e) of 40 CFR 60.11.
- (g) For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in this part, nothing in this part shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

5. Pursuant to 40 CFR 60.12 Circumvention:

No owner or operator subject to the provisions of 40 CFR 60.12 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

6. Pursuant to 40 CFR 60.13 Monitoring Requirements:

- (a) For the purposes of this section, all continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section upon promulgation of performance specifications for continuous monitoring systems under appendix B of 40 CFR 60 and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, appendix F to 40 CFR 60, unless otherwise specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.
- (b) All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests under 40 CFR 60.8. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.
- (c) The owner or operator of an affected facility shall conduct a performance evaluation of the continuous emission monitoring system (CEMS) during any performance test required under 40 CFR 60.8 or within 30 days thereafter in accordance with the applicable performance specification in appendix B of 40 CFR 60. The owner or operator of an affected facility shall

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conduct CEMS performance evaluations at such other times as may be required by the Administrator under section 114 of the Act.

- (2) Except as provided in 40 CFR 60.13(c)(1), the owner or operator of an affected facility shall furnish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.
- (d) (1) Owners and operators of all continuous emission monitoring systems installed in accordance with the provisions of this part shall check the zero (or low-level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span shall, as a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications in appendix B. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified. For continuous monitoring systems measuring opacity of emissions, the optical surfaces exposed to the effluent gases shall be cleaned prior to performing the zero and span drift adjustments except that for systems using automatic zero adjustments. The optical surfaces shall be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity.
- (2) Unless otherwise approved by the Administrator, the following procedures shall be followed for continuous monitoring systems measuring opacity of emissions. Minimum procedures shall include a method for producing a simulated zero opacity condition and an upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of the analyzer internal optical surfaces and all electronic circuitry including the lamp and photo detector assembly.
- (e) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d), all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:
- (1) All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.
- (2) All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
- (f) All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of appendix B of 40 CFR 60 shall be used.
- (g) When the effluents from a single affected facility or two or more affected facilities subject to the same emission standards are combined before being released to the atmosphere, the owner or operator may install applicable continuous monitoring systems on each effluent or on the

**AIR CONSTRUCTION PERMIT**  
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combined effluent. When the affected facilities are not subject to the same emission standards, separate continuous monitoring systems shall be installed on each effluent. When the effluent from one affected facility is released to the atmosphere through more than one point, the owner or operator shall install an applicable continuous monitoring system on each separate effluent unless the installation of fewer systems is approved by the Administrator. When more than one continuous monitoring system is used to measure the emissions from one affected facility (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required from each continuous monitoring system.

- (h) Owners or operators of all ... continuous monitoring systems other than opacity [shall reduce all data] to 1-hour averages for time periods as defined in 40 CFR 60.2. For continuous monitoring systems other than opacity, 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorder during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or non reduced form (e.g., ppm pollutant and percent O<sub>2</sub> or ng/l of pollutant). All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in subparts. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in the applicable subparts to specify the emission limit (e.g., rounded to the nearest 1 percent opacity).
- (i) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring procedures or requirements of this part including, but not limited to the following:
- (1) Alternative monitoring requirements when installation of a continuous monitoring system or monitoring device specified by this part would not provide accurate measurements due to liquid water or other interferences caused by substances with the effluent gases.
  - (2) Alternative monitoring requirements when the affected facility is infrequently operated.
  - (3) Alternative monitoring requirements to accommodate continuous monitoring systems that require additional measurements to correct for stack moisture conditions.
  - (4) Alternative locations for installing continuous monitoring systems or monitoring devices when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements.
  - (5) Alternative methods of converting pollutant concentration measurements to units of the standards.
  - (6) Alternative procedures for performing daily checks of zero and span drift that do not involve use of span gases or test cells.
  - (7) Alternatives to the A.S.T.M. test methods or sampling procedures specified by any subpart.
  - (9) Alternative monitoring requirements when the effluent from a single affected facility or the combined effluent from two or more affected facilities are released to the atmosphere through more than one point.

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- (j) An alternative to the relative accuracy test specified in Performance Specification 2 of appendix B may be requested as follows:
- (1) An alternative to the reference method tests for determining relative accuracy is available for sources with emission rates demonstrated to be less than 50 percent of the applicable standard. A source owner or operator may petition the Administrator to waive the relative accuracy test in section 7 of Performance Specification 2 and substitute the procedures in section 10 if the results of a performance test conducted according to the requirements in 40 CFR 60.8 of this subpart or other tests performed following the criteria in 40 CFR 60.8 demonstrate that the emission rate of the pollutant of interest in the units of the applicable standard is less than 50 percent of the applicable standard. For sources subject to standards expressed as control efficiency levels, a source owner or operator may petition the Administrator to waive the relative accuracy test and substitute the procedures in section 10 of Performance Specification 2 if the control device exhaust emission rate is less than 50 percent of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the continuous emission monitoring system is used to determine compliance continuously with the applicable standard. The petition to waive the relative accuracy test shall include a detailed description of the procedures to be applied. Included shall be location and procedure for conducting the alternative, the concentration or response levels of the alternative RA materials, and the other equipment checks included in the alternative procedure. The Administrator will review the petition for completeness and applicability. The determination to grant a waiver will depend on the intended use of the CEMS data (e.g., data collection purposes other than NSPS) and may require specifications more stringent than in Performance Specification 2 (e.g., the applicable emission limit is more stringent than NSPS).
- (2) The waiver of a CEMS relative accuracy test will be reviewed and may be rescinded at such time following successful completion of the alternative RA procedure that the CEMS data indicate the source emissions approaching the level of the applicable standard. The criterion for reviewing the waiver is the collection of CEMS data showing that emissions have exceeded 70 percent of the applicable standard for seven, consecutive, averaging periods as specified by the applicable regulation(s). For sources subject to standards expressed as control efficiency levels, the criterion for reviewing the waiver is the collection of CEMS data showing that exhaust emissions have exceeded 70 percent of the level needed to meet the control efficiency requirement for seven, consecutive, averaging periods as specified by the applicable regulation(s) [e.g., 40 CFR 60.45(g)(2) and 40 CFR 60.45(g)(3), 40 CFR 60.73(e), and 40 CFR 60.84(e)]. It is the responsibility of the source operator to maintain records and determine the level of emissions relative to the criterion on the waiver of relative accuracy testing. If this criterion is exceeded, the owner or operator must notify the Administrator within 10 days of such occurrence and include a description of the nature and cause of the increasing emissions. The Administrator will review the notification and may rescind the waiver and require the owner or operator to conduct a relative accuracy test of the CEMS as specified in section 7 of Performance Specification 2.
7. Pursuant to 40 CFR 60.14 Modification:
- (a) Except as provided under 40 CFR 60.14(e) and 40 CFR 60.14(f), any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere

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of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.

- (b) Emission rate shall be expressed as kg/hr (lbs./hour) of any pollutant discharged into the atmosphere for which a standard is applicable. The Administrator shall use the following to determine emission rate:
  - (1) Emission factors as specified in the latest issue of "Compilation of Air Pollutant Emission Factors", EPA Publication No. AP-42, or other emission factors determined by the Administrator to be superior to AP-42 emission factors, in cases where utilization of emission factors demonstrate that the emission level resulting from the physical or operational change will either clearly increase or clearly not increase.
  - (2) Material balances, continuous monitor data, or manual emission tests in cases where utilization of emission factors as referenced in 40 CFR 60.14(b)(1) does not demonstrate to the Administrator's satisfaction whether the emission level resulting from the physical or operational change will either clearly increase or clearly not increase, or where an owner or operator demonstrates to the Administrator's satisfaction that there are reasonable grounds to dispute the result obtained by the Administrator utilizing emission factors as referenced in 40 CFR 60.14(b)(1). When the emission rate is based on results from manual emission tests or continuous monitoring systems, the procedures specified in appendix C of 40 CFR 60 shall be used to determine whether an increase in emission rate has occurred. Tests shall be conducted under such conditions as the Administrator shall specify to the owner or operator based on representative performance of the facility. At least three valid test runs must be conducted before and at least three after the physical or operational change. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.
- (c) The addition of an affected facility to a stationary source as an expansion to that source or as a replacement for an existing facility shall not by itself bring within the applicability of this part any other facility within that source.
- (d) [Reserved]
- (e) The following shall not, by themselves, be considered modifications under this part:
  - (1) Maintenance, repair, and replacement which the Administrator determines to be routine for a source category, subject to the provisions of 40 CFR 60.14(c) and 40 CFR 60.15.
  - (2) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.
  - (3) An increase in the hours of operation.
  - (4) Use of an alternative fuel or raw material if, prior to the date any standard under this part becomes applicable to that source type, as provided by 40 CFR 60.1, the existing facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fuel or raw material if that use could be accomplished under the facility's construction specifications as amended prior to the change. Conversion to coal required

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**APPENDIX A. NSPS GENERAL PROVISIONS**

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for energy considerations, as specified in section 111(a)(8) of the Act, shall not be considered a modification.

- (5) The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.
- (6) The relocation or change in ownership of an existing facility.
- (f) Special provisions set forth under an applicable subpart of this part shall supersede any conflicting provisions of this section.
- (g) Within 180 days of the completion of any physical or operational change subject to the control measures specified in 40 CFR 60.14(a), compliance with all applicable standards must be achieved.
- (h) No physical change, or change in the method of operation, at an existing electric utility steam generating unit shall be treated as a modification for purposes of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the five years prior to the change.

8. Pursuant to 40 CFR 60.15 Reconstruction:

- (a) An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate.
- (b) "Reconstruction" means the replacement of components of an existing facility to such an extent that:
  - (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and
  - (2) It is technologically and economically feasible to meet the applicable standards set forth in this part.
- (c) "Fixed capital cost" means the capital needed to provide all the depreciable components.
- (d) If an owner or operator of an existing facility proposes to replace components, and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, he shall notify the Administrator of the proposed replacements. The notice must be postmarked 60 days (or as soon as practicable) before construction of the replacements is commenced and must include the following information:
  - (1) Name and address of the owner or operator.
  - (2) The location of the existing facility.
  - (3) A brief description of the existing facility and the components which are to be replaced.
  - (4) A description of the existing air pollution control equipment and the proposed air pollution control equipment.

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- (5) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility.
  - (6) The estimated life of the existing facility after the replacements.
  - (7) A discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.
  - (e) The Administrator will determine, within 30 days of the receipt of the notice required by 40 CFR 60.15(d) and any additional information he may reasonably require, whether the proposed replacement constitutes reconstruction.
  - (f) The Administrator's determination under 40 CFR 60.15(e) shall be based on:
    - (1) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new facility;
    - (2) The estimated life of the facility after the replacements compared to the life of a comparable entirely new facility;
    - (3) The extent to which the components being replaced cause or contribute to the emissions from the facility; and
    - (4) Any economic or technical limitations on compliance with applicable standards of performance which are inherent in the proposed replacements.
  - (g) Individual subparts of this part may include specific provisions which refine and delimit the concept of reconstruction set forth in this section.
9. Pursuant to 40 CFR 60.19 General notification and reporting requirements:
- (a) For the purposes of this part, time periods specified in days shall be measured in calendar days, even if the word "calendar" is absent, unless otherwise specified in an applicable requirement.
  - (b) For the purposes of this part, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be delivered or postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery agreed to by the permitting authority, is acceptable.
  - (c) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.



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- (d) If an owner or operator of an affected facility in a State with delegated authority is required to submit periodic reports under this part to the State, and if the State has an established timeline for the submission of periodic reports that is consistent with the reporting frequency(ies) specified for such facility under this part, the owner or operator may change the dates by which periodic reports under this part shall be submitted (without changing the frequency of reporting) to be consistent with the State's schedule by mutual agreement between the owner or operator and the State. The allowance in the previous sentence applies in each State beginning 1 year after the affected facility is required to be in compliance with the applicable subpart in this part. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.
- (f)(1)(i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (f)(2) and (f)(3) of this section, the owner or operator of an affected facility remains strictly subject to the requirements of this part.
- (ii) An owner or operator shall request the adjustment provided for in paragraphs (f)(2) and (f)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in this part.
- (2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.
- (3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.
- (4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.
- [40 CFR 60.19]

**FIGURE 1--SUMMARY REPORT--GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE**

[Note: This form is referenced in 40 CFR 60.7, Subpart A-General Provisions]

Pollutant (Circle One): SO<sub>2</sub>    NOx    TRS    H<sub>2</sub>S    CO    Opacity

Reporting period dates: From \_\_\_\_\_ to \_\_\_\_\_

Company: \_\_\_\_\_

Emission Limitation: \_\_\_\_\_

Address: \_\_\_\_\_

Monitor Manufacturer and Model No.: \_\_\_\_\_

Date of Latest CMS Certification or Audit: \_\_\_\_\_

Process Unit(s) Description: \_\_\_\_\_

Total source operating time in reporting period <sup>1</sup>: \_\_\_\_\_

Emission data summary <sup>1</sup>	CMS performance summary <sup>1</sup>
1. Duration of excess emissions in reporting period due to:	1. CMS downtime in reporting period due to:
a. Startup/shutdown .....	a. Monitor equipment malfunctions .....
b. Control equipment problems .....	b. Non-Monitor equipment malfunctions .....
c. Process problems .....	c. Quality assurance calibration .....
d. Other known causes .....	d. Other known causes .....
e. Unknown causes .....	e. Unknown causes .....
2. Total duration of excess emissions .....	2. Total CMS Downtime .....
3. [Total duration of excess emissions] x (100) / [Total source operating time] .....	3. [Total CMS Downtime] x (100) / [Total source operating time] .....
_____ % <sup>2</sup>	_____ % <sup>2</sup>

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

<sup>2</sup> For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted.

*Note: On a separate page, describe any changes since last quarter in CMS, process or controls.*

I certify that the information contained in this report is true, accurate, and complete.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**APPENDIX GC**  
GENERAL PERMIT CONDITIONS [RULE 62-4.160, F.A.C.]

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- G.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.
- G.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 or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and 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 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.
- G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment 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.
- G.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.
- G.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 auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- G.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 and 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.
- G.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.
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**APPENDIX GC**  
GENERAL PERMIT CONDITIONS [RULE 62-4.160, F.A.C.]

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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.

- G.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.
- G.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.
- G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, 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.
- G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.
- G.13 This permit also constitutes:
- (a) Determination of Best Available Control Technology (X);
  - (b) Determination of Prevention of Significant Deterioration (X); and
  - (c) Compliance with New Source Performance Standards (X).
- G.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 or 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:
    - 1. The date, exact place, and time of sampling or measurements;
    - 2. The person responsible for performing the sampling or measurements;
    - 3. The dates analyses were performed;
    - 4. The person responsible for performing the analyses;
    - 5. The analytical techniques or methods used; and
    - 6. The results of such analyses.
- G.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.

Florida Department of  
Environmental Protection

Memorandum

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TO: Clair Fancy *aozine*  
THRU: Al Linero *aozine*  
FROM: Joe Kahn *JK*  
DATE: January 12, 2001  
SUBJECT: Florida Power Corporation  
Hines Energy Complex Power Block 2  
Siting Certification PA92-335A  
1050234-004-AC, PSD-FL-296

Attached for approval and signature is the intent to issue for Florida Power Corporation's Hines Power Block 2 project. The draft permit is to authorize the construction of Power Block 2 at the existing Hines Energy Complex. Power Block 2 will consist of two nominal 170 MW Siemens Westinghouse 501 FD CTs, two unfired HRSGs and one steam electric turbine, with a total nominal generating capacity of approximately 530 MW. Natural gas is the primary fuel, with very low sulfur distillate fuel oil as a backup fuel. The project is subject to PSD and BACT for PM/PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>2</sub>, SAM, CO and VOC. Generally BACT is dry low NO<sub>x</sub> combustion with SCR. Ammonia slip is limited to 5 ppmvd on gas and 9 ppmvd on oil. Total fuel oil consumption is limited for both CTs to the equivalent of 720 hours of operation per CT. The project is subject to the Power Plant Siting Act.

I recommend your approval and signature.

January 12, 2001 is day 47 of the 90 day timeclock.

Attachments

/jk