



Jeb Bush
Governor

Department of Environmental Protection

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

Colleen M. Castille
Secretary

August 15, 2006

- CERTIFIED MAIL - RETURN RECEIPT REQUESTED -

Mr. Mark J. Hornick,
General Manager, Polk Power Station
Tampa Electric Company.
Post Office Box 111
Tampa, Florida 33601-0111

**RE: Tampa Electric Company – Polk Power Station
Modification to Conditions of Certification
DEP Case Number PA 92-32I
OGC Case Number 06-1344**

ORDER MODIFYING CONDITIONS OF CERTIFICATION

Dear Mr. Hornick:

On January 27, 1994, the Governor and Cabinet, sitting as the Siting Board, issued a final order approving certification for the Tampa Electric Company Polk Power Station Unit 1 electrical power plant site. That certification order approved the construction and operation of a 1,150 MW Integrated Coal-Gasification Combined Cycle power plant facility and associated facilities located at the Polk Power Station site in Polk County, Florida.

On December 30, 2004, the DEP issued DEP Permit No. 1050233-016-AV for the Polk Power Station. The Department has modified the conditions of Certification to incorporate this permit.

On or before June 30, 2006, all parties to the certification proceeding were provided with notice by certified mail of the Department's intent to modify the Conditions of Certification for this facility, along with a copy of the proposed Order Modifying Conditions of Certification. Additionally, on June 30, 2004, notice of the Department's intent to modify the Conditions of Certification for this facility was published on the Department's website. Those notices specified that pursuant to Section 403.516, F.S., and Rule 62-17.211, F.A.C., all parties to the certification proceeding have 45 days from the issuance of the notice by mail to such party's last address of record in which file a written objection to the modification; that failure of any of the parties to file a response will constitute a waiver of objection to the modification; and that any person who is not already a party to the certification proceeding and whose substantial interests will be

affected by the requested modification has 30 days from the date of publication of the public notice on the web site to object in writing.

No objections to the modification have been received by the Department. The Conditions of Certification for the TECo Polk Power Station Unit 1 are hereby modified as follows:

XIII. AIR

The construction and operation of Polk Power Station (Project) shall be in accordance with all applicable provisions of Chapter 62, F.A.C., and PSD Air Construction Permit PSD-FL-494 1050233-018-AC, and Title V Air Operation Permit 1050233-016-AV. Air Construction Permit 1050233-018-AC and Title V Air Operation Permit 1050233-016-AV are incorporated by reference herein as part of this Certification attached as Appendix II and Appendix III respectively. The provisions of both Air Construction Permit 1050233-018-AC and Title V Air Operation Permit 1050233-016-AV shall be conditions of this certification. The licensee shall comply with the substantive provisions and limitations set forth in Air Construction Permit 1050233-018-AC and Title V Air Operation Permit 1050233-016-AV as part of these Conditions of Certification, and as those provisions may be modified, amended, or renewed in the future by the Department. Such provisions shall be fully enforceable as conditions of this certification. Any violation of such provisions shall be a violation of these Conditions of Certification.

~~A. Phase 1 Construction and Operation~~

~~1. Unit When Firing Syngas or Fuel Oil~~

~~a. General~~

~~The following emission limitations reflect final BACT determinations for Phase I (integrated gasification, combined cycle (IGCC) combustion turbine and auxiliary equipment) of the project fired with syngas or fuel oil. BACT determinations for the remaining phases will be made upon review of supplemental applications. In addition to the foregoing, the Project shall comply with the following conditions of certification as indicated.~~

~~b. Heat Input~~

~~The maximum heat input to the IGCC combustion turbine (CT) shall neither exceed 1,755 MMBtu/hr while firing syngas, nor 1,765 MMBtu/hr while firing No. 2 fuel oil at an ambient temperature of 59° F. Heat input may vary depending on ambient conditions and the CT characteristics. Manufacturer's curves for~~

~~the heat input correction to other temperatures shall be provided to DEP for review 120 days after the Siting Board approval of the site certification. Subject to approval by the Department, the manufacturer's curves may be used to establish heat input rates over a range of temperatures for the purpose of compliance determination.~~

~~c. Hours of Operation~~

~~The IGCC unit in Phase I may operate continuously, i.e.,
8,760 hrs/year.~~

~~d. Fuel~~

~~Only syngas and low sulfur fuel oil shall be fired in the IGCC combustion turbine. Only low sulfur fuel oil shall be fired in the auxiliary boiler. The maximum sulfur content of the low sulfur fuel oil shall not exceed 0.05 percent by weight.~~

~~e. Auxiliary Boiler~~

~~The maximum heat input to the auxiliary boiler shall not exceed 120.0 MMBtu/hr when firing No. 2 fuel oil with 0.05 percent maximum sulfur content by weight. All fuel consumption must be continuously measured and recorded for the auxiliary boiler.~~

~~f. Fuel Consumption~~

~~Solid fuels input to the solid fuel gasification plant shall consist of coal or coal/petroleum coke blends containing a maximum of 60.0 percent petroleum coke by weight. The maximum input of solid fuels to the solid fuel gasification plant shall not exceed 2,325 tons per day, on a dry basis. The maximum weight of the petroleum coke blended shall not exceed 1,395 tons per day, on a dry basis. The maximum sulfur content of the blended fuel shall not exceed 3.5 percent by weight.~~

~~g. Fugitive Dust~~

~~Fugitive dust emissions during the construction period shall be minimized by covering or watering dust generation areas. Particulate matter emissions from the handling of solid fuels shall be controlled by enclosing all solid fuel storage, conveyors, and conveyor transfer points. Fugitive emissions shall be tested as specified in Condition No. XIII.A.1.j. Water sprays or chemical wetting agents and stabilizers shall be applied to uncovered storage piles, roads, handling equipment, etc., during dry periods and, as necessary, to all facilities to maintain an opacity of less than or equal to five percent~~

h. Emission Limits

(1) The maximum allowable emissions from the IGCC combustion turbine, when firing syngas and low sulfur fuel oil, in accordance with the BACT determination, shall not exceed the following:

EMISSIONS LIMITATIONS – 7F CT POST DEMONSTRATION PERIOD				
POLLUTANT	FUEL	BASIS_a	LB/HR*	TPY_b
NO _x	Oil	42 ppmvd**	311	N/A
	Syngas	25 ppmvd	220.25	1,032.9
VOC ^c	Oil	0.028	32 lb/MMBtu	N/A
	Syngas	0.0017	3 lb/MMBtu	38.5
CO	Oil	40 ppmvd	99	N/A
	Syngas	25 ppmvd	98	430.1
PM/PM ₁₀ ^d	Oil	0.009 lb/MMBtu	17	N/A
	Syngas	0.013 lb/MMBtu	17	74.5
Pb	Oil	5.30E-5 lb/MMBtu	0.101	N/A
	Syngas	2.41E-6 lb/MMBtu	0.0035	0.067
SO ₂	Oil	0.048 lb/MMBtu	92.2	N/A
	Syngas	0.17 lb/MMBtu	357	1563.7
Visible Emissions	Syngas	10 percent opacity		
	Oil	20 percent opacity		

(*) Emission limitations in lbs/hr are 30-day rolling averages except for NO_x while firing syngas, which as of July 1, 2003, is limited in ppmvd (at 15% oxygen) and complied with on a 30-day rolling average via CEMS. Pollutant emission rates may vary depending on ambient conditions and the CT characteristics. Manufacturer's curves for the emission rate correction to other temperatures at different loads shall be provided to DEP for review 120 days after the Siting Board approval of the site certification. Subject to approval by the Department, the manufacturer's curves may be used to establish pollutant emission rates over a range of temperatures for the purpose of compliance determination.

(**) The emission limit for NO_x is adjusted as follows for higher fuel-bound nitrogen contents up to a maximum of 0.030 percent by weight:

FUEL – BOUND NITROGEN (% by weight)	NO_x EMISSION LEVELS (ppmvd @ 15% O₂)
0.015 or less	42
0.020	44
0.025	46

0.030	48
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using the formula $STD = 0.0042 + F$ where:

STD = allowable NO_x emissions (% by volume at 15% O₂ and on a dry basis).

F = NO_x emission allowance for FBN defined by the following table:

FUEL – BOUND NITROGEN	
(% by weight)	F (NO _x % by volume)
$0 < N < 0.015$	0
$0.015 < N < 0.03$	$0.04 (N - 0.015)$

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

NO_x emissions are preliminary for the fuel oil specified in Condition III.A.1.d. The Permittee shall submit fuel bound nitrogen content data for the low-sulfur fuel oil prior to commercial operation to the Bureau of Air Regulation in Tallahassee, and on each occasion that fuel oil is transferred to the storage tanks from any other source to the Southwest District office in Tampa. The percent FBN (Z) following each delivery of fuel shall be determined by the following equation:

$$x(Y) + m(n) = (x+m)(Z)$$

where x = amount fuel in storage tank

Y = % FBN in storage tank

m = amount fuel added

n = % FBN of fuel added

Z = % FBN of composite

(a) — Syngas lb/MMBtu values based on heat input (HHV) to coal gasifier and includes emissions from H₂SO₄ plant thermal oxidizer. Pollutant concentrations in ppmvd are corrected to 15 percent oxygen.

(b) — Annual emission limits (TPY) based on 10 percent annual capacity factor firing fuel oil.

— Load (%) / 100 x hours of operation < 876 for fuel oil.

(c) — Exclusive of background concentrations.

(d) — Excluding sulfuric acid mist.

(2) The maximum allowable emissions from the IGCC combustion turbine, when firing syngas and No. 2 fuel oil during the three year demonstration period (until September 30, 1999), shall not exceed the following:

EMISSIONS LIMITATIONS – 7FCT			
POLLUTANT	FUEL	LB/HR*	TPY ^a
NO _x	Oil**	311	N/A
	Syngas	664.2	2,908.3
VOC ^b	Oil	32	N/A
	Syngas	3	38.5
CO	Oil	99	N/A
	Syngas	99	430.1
PM/PM ₁₀ ^c	Oil	17	N/A
	Syngas	17	74.5
Pb	Oil	0.101	N/A
	Syngas	0.023	0.13
SO ₂	Oil	92.2	N/A
	Syngas	518	2,269
Visible Emissions	Syngas	10 percent opacity	
	Oil	20 percent opacity	

(*) Emission limitations in lbs/hr are 30-day rolling averages.

(**) See Fuel-Bound Nitrogen adjustment in h.(1) above.

(3) The following turbine emissions, determined by BACT, are tabulated for PSD and inventory purposes:

ALLOWABLE EMISSIONS					
IGCC POST-DEMONSTRATION				IGCC 2-YEAR DEMONSTRATION	
POLLUTANT	FUEL	LB/HR	TPY ^a	LB/HR	TPY ^b
Sulfuric Acid ^c	Syngas	55	241	55	241
Inorganic Arsenic	Syngas	0.0006	0.019	0.08	0.35
Beryllium	Syngas	0.0001	0.0029	0.0001	0.0029
Mercury	Syngas	0.0034	0.017	0.025	0.11

(a) Based on baseload operations firing syngas, with emission rates equivalent to 100 percent CGCU operations; up to 10 percent annual capacity factor firing fuel oil.

(b) ~~Based on baseload operations firing syngas, with a maximum of 8,760 hrs/yr of HGU operations; up to 10 percent annual capacity factor firing fuel oil.~~

(c) ~~Sulfuric acid mist emissions assume a maximum of 0.05 percent sulfur in the fuel oil.~~

~~(4) Excess emissions from the turbine resulting from startup, shutdown, malfunction, or load change shall be acceptable 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 a longer duration. Best operating practices shall be documented in writing and a copy submitted to the Department along with the initial compliance test data. The document may be updated as needed with all updates submitted to the Department within thirty (30) days of implementation and shall include time limitations on excess emissions caused by turbine startup.~~

~~(5) After the demonstration period, Permittee shall operate the combustion turbine to achieve the lowest possible NOx emission limit but shall not exceed 25 ppmvd corrected to 15 percent oxygen and ISO conditions. Effective July 1, 2003, Licensee shall operate the combustion turbine to achieve the lowest possible NOx limit but shall not exceed 15 ppmvd corrected to 15 percent oxygen and ISO conditions.~~

~~(6) The combustion turbine will be operated for 12 to 18 months after the demonstration period (estimated to be from October 1, 1999 until April 1, 2001). During that period NOx emission testing will be performed on the turbine at a regular interval of every two (2) months. The Department shall be provided with a test protocol, including a time schedule, fifteen (15) days prior to the initial test. The Permittee will provide the Department the emission test results thirty (30) days after the test is performed. These results will not be used for compliance purposes. The Department shall be notified and the reasons provided if a scheduled test is delayed or canceled.~~

~~(7) One month after the test period ends (estimated to be by June 1, 2001), the Permittee will submit to the Department a NOx recommended BACT Determination as if it were a new source using the data gathered on this facility, other similar facilities and the manufacturer's research. The Department will make a determination on the BACT for NOx only and adjust the NOx emission limits accordingly.~~

~~(8) The Permittee shall maintain and submit to the Department, on an annual basis for a period of five years from the date the unit begins firing syngas produced from blends of petroleum coke and coal, CEMS data demonstrating that the operational changes did not result in a significant emissions increase of nitrogen oxides when compared to the past actual coal levels. The CEMS~~

~~data shall be of the periods when the unit is burning syngas produced from petcoke/coal blends containing a maximum amount of petcoke of up to 60 percent, by weight.~~

~~(9) The Permittee shall maintain and submit to the Department on an annual basis for a period of five years from the date the unit begins firing syngas produced from blends of petroleum coke and coal, CEMS data demonstrating that the operational changes did not result in a significant emissions increase of sulfur dioxide when compared to the past actual coal levels. The CEMS data shall be of the periods when the unit is burning syngas produced from petcoke/coal blends containing a maximum amount of petcoke of up to 60 percent, by weight.~~

~~(10) The Permittee shall maintain and submit to the Department on an annual basis for a period of five years from the date the unit begins firing syngas produced from blends of petroleum coke and coal, test results demonstrating that the operational changes did not result in a significant emissions increase of sulfuric acid mist when compared to the past actual coal levels. The sulfuric acid mist emissions shall be based on test results using EPA Method 8. The test shall be conducted when the unit is burning syngas produced from petcoke/coal blends containing a maximum amount of petcoke of up to 60 percent, by weight.~~

~~i. Auxiliary Boiler Operation~~

~~Normal operation of the auxiliary boiler shall be limited to a maximum of 3,000 hours per year. The auxiliary boiler may operate continuously (i.e., 8,760 hrs/yr) in the standby mode. The following emission limitations shall apply:~~

~~(1) NO_x emissions shall not exceed 0.10 lbs/MMBtu for oil firing.~~

~~(2) Sulfur dioxide emissions shall be limited by firing low sulfur fuel oil with a maximum sulfur content of 0.05 percent by weight.~~

~~(3) Visible emissions shall not exceed 20 percent opacity (6-minute average)(except for one six minute period per hour during which opacity shall not exceed 27 percent), while burning low sulfur fuel oil.~~

~~j. Performance Testing~~

~~Initial (1) compliance tests shall be performed on the turbine using both fuels and on the auxiliary boiler using fuel oil. The stack test for the turbine and the auxiliary boiler shall be performed with the sources operating at capacity~~

~~(maximum heat rate input for the tested operating temperature). Capacity is defined as 90 to 100 percent of rated capacity. If it is impracticable to test at capacity, sources may be tested at less than capacity; in this case subsequent source operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen (15) days for purposes of additional compliance testing to regain the rated capacity in the permit, with prior notification to the Department. Annual (A) compliance tests shall be performed on the turbine and the auxiliary boiler with the fuel(s) used for more than 400 hours in the preceding 12-month period. Tests for the applicable emission limitations shall be conducted using EPA reference methods in accordance with 40 CFR 60, Appendix A, as adopted by reference in Rule 62-297, F.A.C., and the requirements of 40 CFR 75:~~

~~(1) Combustion Turbine~~

~~(a) Reference Method 5B for PM (I, A, for oil only).~~

~~(b) Reference Method 8 for sulfuric acid mist (I, for oil only).~~

~~(c) Reference Method 9 for VE (I, A).~~

~~(d) Reference Method 10 for CO (I, A).~~

~~(e) Reference Method 20 for NO_x (I, A).~~

~~(f) Reference Method 18 for VOC (I, A).~~

~~(g) Trace elements of Lead (Pb), Beryllium (Be) and Arsenic (As) shall be tested (I, for oil only) using Emission Measurement Technical Information Center (EMTIC) Interim Test Methods. Method 104 for Beryllium (Be) may be used, Be and Pb may be determined from fuel analysis using either Method 7090 or 7091, and sample extraction using Method 3040 as described in the EPA solid waste regulations SW 846.~~

~~(h) ASTM D 2880-71 (or equivalent) for sulfur content of distillate oil (I, A).~~

~~(i) ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 for sulfur content of natural gas (I, and A if deemed necessary by DEP).~~

~~(j) Reference Method 22 for fugitive emissions (I, A).~~

~~(k) The owner or operator shall determine compliance with the solid fuel sulfur content standard of 3.5 percent, by weight, as~~

~~follows: using appropriate ASTM methods such as, ASTM D2013-72, ASTM D3177-75, and ASTM D4239-85, or latest ASTM edition methods. (1, A)~~

~~(2) Auxiliary Boiler~~

~~(a) Reference Method 9 for VE (1,A).~~

~~(b) ASTM D 2880-71 (or equivalent) for sulfur content of distillate oil (1,A).~~

~~(c) Reference Methods 7, 7A, 7C, 7D, or 7E for NO_x (1,A).~~

~~Other DEP approved methods may be used for compliance testing after prior departmental approval.~~

~~k. Sulfur Content of Fuel~~

~~The maximum sulfur content of the low sulfur fuel oil shall not exceed 0.05 percent by weight. Compliance shall be demonstrated in accordance with the requirements of 40 CFR 60.334 by testing for sulfur content of the fuel oil in the storage tanks once per day when firing oil. Testing for fuel oil heating value shall also be conducted on the same schedule.~~

~~l. Monitoring Requirements~~

~~(1) IGCC Combustion Turbine A continuous emission monitoring system (CEMS) shall be installed, operated, and maintained in accordance with 40 CFR 60, Appendix F, for the combined cycle unit to monitor nitrogen oxides and a diluent gas (CO₂ or O₂). The applicant shall request that this condition of certification be amended to reflect the Federal Acid Rain Program requirements of 40 CFR 75, if applicable, when those requirements become effective within the state.~~

~~(a) Each CEMS shall meet performance specifications of 40 FR 60, Appendix B.~~

~~(b) CEMS data shall be recorded and reported in accordance with Chapter 62-297, F.A.C., 40 CFR 60 and 40 CFR 75. The record shall include periods of startup, shutdown, and malfunction.~~

~~(c) A malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment to operate~~

~~in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.~~

~~(d) The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of all CEMS.~~

~~(e) For purposes of the reports required under this certification, excess emissions are defined as any calculated average emission concentration, as determined pursuant to Condition No. XIII.A.1.h.(4), herein, which exceeds the applicable emission limits in Condition No. XIII.A.1.h.(4).~~

~~(2) Auxiliary Boiler A CEM shall be installed, operated and maintained in accordance with 40 CFR 60, Appendix F, for the auxiliary boiler to monitor nitrogen oxides emissions and in accordance with 40 CFR 60.13 to monitor opacity.~~

~~(a) The CEMS shall meet the performance specifications of 40 CFR 60, Appendix B.~~

~~(b) CEMS data shall be recorded and reported in accordance with Rule 62-297.500, F.A.C., and 40 CFR 60. The record shall include periods of startup, shutdown and malfunction.~~

~~(c) A malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment to operate in a normal or unusual manner. Failures that are caused entirely or in part by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.~~

~~(d) The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the CEMS.~~

~~m. Notification, Reporting and Recordkeeping~~

~~To determine compliance with the syngas and fuel oil firing heat input limitation, the Permittee shall maintain daily records of syngas and fuel oil consumption for the turbine and the heating value for each fuel. All records shall be maintained for a minimum of five (5) years after the date of each record and shall be made available to representatives of the Department upon request.~~

~~Documentation verifying that the coal/petroleum coke blends input to the solid fuel gasification system have not exceeded the 60.0 percent (1,395 tons per day) maximum petroleum coke by weight limit and the blended fuel sulfur content of 3.5~~

~~percent by weight limit specified by Condition XIII.A.1.f, shall be maintained and submitted to the Department's Southwest District Office with each annual report.~~

~~The Permittee shall maintain and submit to the Department, on an annual basis for a period of five years from the date the unit begin firing syngas produced from blends of petroleum coke and coal, data demonstrating that the operational change associated with the use of petroleum coke did not result in a significant emission increase pursuant to Rule 62-210.200(12)(d), F.A.C.~~

~~n. Applicable Requirements~~

~~The project shall comply with all the applicable requirements of Chapter 62, F.A.C., and 40 CFR 60 Subparts A and GG. The requirements shall include:~~

~~(1) 40 CFR 60.7(a)(1) By postmarking or delivering notification of the start of construction no more than thirty (30) days after such date.~~

~~(2) 40 CFR 60.7(a)(2) By postmarking or delivering notification of the anticipated date of the initial startup of each turbine and the auxiliary boiler no more than sixty (60) days nor less than thirty (30) days prior to such date.~~

~~(3) 40 CFR 60.7(a)(3) By postmarking or delivering notification of the actual startup of each turbine and the auxiliary boiler within fifteen (15) days of such date.~~

~~(4) 40 CFR 60.7(a)(5) By postmarking or delivering notification of the date for demonstrating the CEMS performance no less than thirty (30) days prior to such date.~~

~~(5) 40 CFR 60.7(a)(6) By postmarking or delivering notification of the anticipated date for conducting the opacity observations no less than thirty (30) days prior to such date.~~

~~(6) 40 CFR 60.7(b) By initiating a recordkeeping system to record the occurrence and duration of any startup, shutdown or malfunction of a turbine and the auxiliary boiler, of the air pollution control equipment, and when the CEMS is inoperable.~~

~~(7) 40 CFR 60.7© By postmarking or delivering a quarterly excess emissions and monitoring system performance report within thirty (30) days of the end of each calendar quarter. This report shall contain the information specified in 40 CFR 60.7© and (d).~~

~~(8) 40 CFR 60.8(a) By conducting all performance tests within sixty (60) days after achieving the maximum turbine and boiler firing rates, but not more than one hundred eighty (180) days after the initial startup of each turbine and the auxiliary boiler.~~

~~(9) 40 CFR 60.8(d) By postmarking or delivering notification of the date of each performance test required by this permit at least thirty (30) days prior to the test date; and,~~

~~(10) 62-297.310, F.A.C. By providing stack sampling facilities for the combustion turbine and the auxiliary boiler.~~

~~All notifications and reports required by this specific condition shall be submitted to the Department's Air Program, within the Southwest District office. Performance test results shall be submitted within forty-five (45) days of completion of such test.~~

~~o. Submission of Reports~~

~~The following information shall be submitted to the Department's Bureau of Air Regulation within twelve (12) months of issuance of this permit:~~

~~(1) Description of the finally selected turbine and the auxiliary boiler to be installed at the facility. The description shall include the specific make and model numbers, and any changes in the proposed method of operation, fuels, emissions or equipment.~~

~~(2) Description of the CEMS selected. Description shall include the type of sensors, the manufacturer, and model number of the equipment.~~

~~(3) If construction has not commenced within eighteen (18) months of issuance of this certification, then the Permittee shall obtain from DEP a review and, if necessary, a modification of the BACT determination and allowable emissions for the unit(s) on which construction has not commenced [40 CFR 52.21@ (2)]. Units to be constructed or modified in later phases of the project will be reviewed and limitations revisited under the supplementary review process of the Power Plant Siting Act (PPSA).~~

~~p. Protocols~~

~~The following protocols shall be submitted to the Department's Air Program, within the Southwest District office, for approval:~~

~~(1) CEMS Protocol Within sixty (60) days of selection of the CEMS, but prior to the initial startup, a CEMS protocol describing the system, its installation, operating and maintenance characteristics and requirements. The Department shall approve the protocol provided that the system and the protocol meet the requirements of 40 CFR 60.13, 60.334, Appendix B and Appendix F. This condition of certification shall be amended to reflect the Federal Acid Rain Program requirements of 40 CFR 75 when those requirements become effective within the state.~~

~~(2) Performance Test Protocol At least ninety (90) days prior to conducting the initial performance tests required by this certification, the Permittee shall submit to the Department's Air Program, within the Southwest District office, a protocol outlining the procedures to be followed, the test methods and any differences between the reference methods and the test methods proposed to be used to verify compliance with the conditions of this certification. The Department shall approve the testing protocol provided that it meets the requirements of this certification.~~

~~q. Modifications~~

~~The Permittee shall give written notification to the Department when there is any modification to this facility. This notice shall be submitted sufficiently in advance of any critical date involved to allow sufficient time for review, discussion, and revision of plans, if necessary. Such notice shall include, but not be limited to, information describing the precise nature of the change; modifications to any emission control system; production capacity of the facility before and after the change; and the anticipated completion date of the change.~~

~~2. Petroleum Coke/Coal Blend Syngas Performance Testing for Unit 1~~

~~a. The permittee shall notify, in writing, the Department's BAR office, the Southwest District office, and the Siting Coordination Office at least 15 days prior to commencement of the baseline and the petcoke/coal blend performance tests. A written test result report shall be submitted to these offices within 45 days upon completion of the last test run. [PSD FL 194 Condition 1.]~~

~~b. The petcoke/coal blend performance tests shall commence on or before March 1, 2000, and be conducted for not more than 90 days. The tests shall be conducted based on the proposed testing protocol to establish steady state operation and to achieve a maximum (70%) blend. If, for any reasons, a steady state operation of 70% petroleum coke-coal blend, or less, is not achieved, or the testing at 70% petcoke blend, or less, presents any operational or environmental concerns, the testing shall be curtailed. The Department shall be immediately notified of the problems that have prevented steady state operations and what steps will be initiated to correct~~

~~the problem. All testing shall be concluded within 150 days of when petcoke is first introduced into Unit No. 1.~~

~~Estimated Date of Introduction of Fuel Blend: January 1, 2000. (Note: This is the date at which a run on Petcoke fuel blend may be commenced. It does not indicate that Unit 1 will run continuously from January 1 to June 1, 2000.)~~

~~Estimated Testing Schedule~~

Scenario: 55% Petcoke/45% Coal
Estimated date to begin testing: March 1, 2000
Scenario: 60% Petcoke/40% Coal (if 55% blend emissions are less than baseline)
Estimated date to begin testing: April 1, 2000
Scenario: 65% Petcoke/35% Coal (if 60% blend emissions are less than baseline)
Estimated date to begin testing: May 1, 2000
Scenario: 70% Petcoke/30% Coal (if 65% blend emissions are less than baseline)
Estimated date to begin testing: May 15, 2000

~~[PSD-FL-194 Condition 2]~~

~~c. Stack emissions from Unit No. 1 shall not exceed the following during baseline and petcoke/coal blend syngas performance tests (based on most stringent of present PSD Permit and Certification Conditions):~~

~~(1) Sulfur dioxide (SO₂) 357 pounds per hour on a 30-day rolling average.~~

~~(2) Nitrogen oxides (NO_x) 222.5 pounds per hour on a 30-day rolling average.~~

~~d. As burned fuel samples shall be collected and analyzed for the sulfur and nitrogen content throughout the petroleum coke-coal blend syngas and the baseline coal test periods. [PSD-FL-194 Condition 4.]~~

~~e. The performance test of the petcoke/coal blend syngas shall be limited to a maximum of 70% petcoke, by weight. The maximum weight of the petroleum coke burned during the petcoke/coal blend syngas performance tests shall not exceed 1628 tons per day, on a dry basis. [PSD-FL-194 Condition 5.]~~

~~f. The maximum sulfur content of the fuel shall not exceed 3.5 percent, by weight, during the baseline tests and the petroleum coke-coal blend tests. [PSD-FL-194 Condition 6.]~~

~~g. SO₂, NO_x and opacity emissions data shall be recorded using continuous emissions monitors (CEMS) during the baseline and the petcoke/coal~~

~~blend syngas tests. If the plant CEMS are used for these tests, these systems shall be quality assured pursuant to 40 CFR 60, Appendix F requirements. The data assessment report per 40 CFR 60, Appendix F, for the most recent cylinder gas audit (CGA) shall be submitted with the test report. In addition, stack tests shall be conducted for sulfuric acid mist during the baseline and petcoke/coal blend syngas tests. A satisfactory performance test for each baseline test and each petroleum coke-coal blend syngas shall consist of a minimum of three tests at three runs per test. [PSD-FL-194 Condition 7.]~~

~~h. The pollutant emission results from the petroleum coke/coal blend syngas performance tests shall be used to estimate "representative actual annual emissions" following an operational change per 62-210.200(12)(d), F.A.C., for comparison with actual emissions per 62-210.200(12)(a), F.A.C. The comparison will form the basis of a PSD applicability determination pursuant to 40 CFR 52.21. The results of baseline performance tests when firing coal will be used only to the extent that such information does not already exist or is insufficient to determine actual emissions. [PSD-FL-194 Condition 8.]~~

~~i. Performance tests shall be conducted using EPA Reference Methods, as contained in 40 CFR 60 (Standards of Performance for New Stationary Sources), or any other method approved by the Department, in writing, in accordance with Chapter 62-297, F.A.C. [PSD-FL-194 Condition 9.]~~

~~j. If additional time is needed, the permittee shall request an extension of time and provide the Department with documentation of the progress accomplished to date and shall identify the work required to complete the performance tests. [PSD-FL-194 Condition 10.]~~

~~k. Daily records (e.g., heat input, MW, fuel input rates, etc.) of IGCC operations while firing the petcoke/coal blend syngas (baseline) during the tests shall be required. [PSD-FL-194 Condition 11.]~~

~~l. The Southwest District office may conduct a Type I or II stack audit. [PSD-FL-194 Condition 12.]~~

~~m. Complete documentation (recording) of any firing of the petroleum coke-coal blend syngas shall be required (i.e., all CEMS records, testing results, materials utilized by weight, etc.) and kept on file for a minimum of five years. [PSD-FL-194 Condition 13.]~~

~~n. The authorized petroleum coke-coal blend syngas performance tests shall not result in the release of objectionable odors pursuant to Rule 62-296.320(2), F.A.C. [PSD-FL-194 Condition 14.]~~

~~o. Performance testing shall cease as soon as possible if Unit No. 1 operations are not in accordance with the conditions in this Site Certification. Performance testing shall not resume until appropriate measures to correct the problem(s) have been implemented. [PSD-FL 194 Condition 15.]~~

~~p. The performance tests for pollutant emissions shall be conducted under the direct supervision of a professional engineer registered in Florida. [PSD-FL 194 Condition 16.]~~

~~q. This Department action is only to authorize the petroleum coke-coal blend-syngas performance tests. Any firing of petroleum coke beyond the 90 days of testing within the 150 day period approved to conduct such tests will be deemed a violation of this Site Certification. [PSD-FL 194 Condition 17.]~~

~~r. The Southwest District office shall be immediately notified, in writing, upon completion of the final test. [PSD-FL 194 Condition 18.]~~

~~s. The testing series shall include emissions tests for each of the petroleum coke/coal blends syngas and pollutants with the source operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the capacity allowed this Site Certification PA 92-32 and Permit PSD-FL 194. If it is impracticable to test at permitted capacity, then the source may be tested at a lesser rate. However, the tests shall be conducted at capacities within 10 percent of each other and corrected to the same heat input basis. Furthermore, subsequent source operation with a petroleum coke-coal blend, if requested and approved by the Department, shall be limited to 110 percent of the tested capacity for that blend until new tests are conducted, which requires prior Department authorization. [PSD-FL 194 Condition 19.]~~

~~**B. Phase II Construction and Operation**~~

~~The following limitations pertain to the construction and operation of two nominal 165 MW General Electric P7241FA simple cycle, intermittent duty natural gas and No. 2 fuel-oil combustion turbine-electrical generators and two 114 foot stacks.~~

~~1. General and Administrative Requirements~~

~~a. 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 in a reasonable time. The department may extend the 18 month period upon a satisfactory showing that an extension is justified. [40 CFR 52.21@ (2); PSD-FL 263 Condition II.6.]~~

~~b. 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 in Atlanta, Georgia, and a copy to DEP's Bureau of Air Regulation in Tallahassee 24 months before the date on which a new unit begins serving as an electrical generator greater than 25 MW. [40 CFR 72; PSD-FL-263 Condition II.9.]~~

~~c. Application for Title V Permit: An application for a Title V operating permit pursuant to Chapter 62-213, F.A.C., must be submitted to DEP's Bureau of Air Regulation, and a copy to the Department's Southwest District. [Chapter 62-213, F.A.C.; PSD-FL-263 Condition II.10.]~~

~~d. Annual Reports: Pursuant to Rule 62-210.370(2), F.A.C., Annual Operation Reports, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. Annual operating reports shall be sent to the DEP's Southwest District by March 1st of each year. [Rule 62-210.370' PSD-FL-263 Condition II.12.]~~

~~e. Stack Testing Facilities: Stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C. [Rule 62-297.310; PSD-FL-263 Condition II.13.]~~

~~f. Quarterly Reports: Quarterly excess emissions reports, in accordance with 40 CFR 60.7(a)(7)(c) (1998 version), shall be submitted to DEP's Southwest District. [40 CFR 60.7; PSD-FL-263 Condition II.14.]~~

~~2. Emissions Units Specific Conditions~~

~~a. Applicable Standards and Regulations~~

~~(1) Unless otherwise indicated in these Conditions of Certification, the construction and operation of the subject emission units 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, 62-17, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296, and 62-297; and the applicable requirements of the Code of Federal Regulations Section 40, Parts 52, 60, 72, 73, and 75. [PSD-FL-263 Condition III.1.]~~

~~(2) The emissions units shall comply with all applicable requirements of 40 CFR 60, Subpart A, General Provisions, including:~~

~~40 CFR 60.7, Notification and Record keeping~~

~~40 CFR 60.8, Performance Tests~~

~~40 CFR 60.11, Compliance with Standards and Maintenance Requirements~~

- ~~40 CFR 60.12, Circumvention~~
- ~~40 CFR 60.13, Monitoring Requirements~~
- ~~40 CFR 60.19, General Notification and Reporting [PSD-FL-263 Condition III.3.]~~

~~(3) ARMS Emissions Unit 009. Direct Power Generation, consisting of a nominal 165 MW simple cycle combustion turbine electrical generator, shall comply with all applicable provisions of 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-2104.800(7)(b), F.A.C. The subpart GG requirement to correct test data to ISO conditions applies. [PSD-FL-263 Condition III.4.]~~

~~(4) ARMS Emissions Unit 010. Direct Power Generation, consisting of a nominal 165 MW simple cycle combustion turbine electrical generator, shall comply with all applicable provisions of 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-2104.800(7)(b), F.A.C. The subpart GG requirement to correct test data to ISO conditions applies. [PSD-FL-263 Condition III.5.]~~

~~(5) All notifications and reports required by the above specific conditions shall be submitted to the DEP's Southwest District. [PSD-FL-263 Condition III.6.]~~

~~b. General Operation Requirements~~

~~(1). Fuels: Only natural gas or maximum 0.5 percent sulfur fuel oil No. 2 or superior grade of distillate fuel oil shall be fired in this unit. [Applicant request, Rule 62-210.200, F.A.C. (Definitions—Potential Emissions)] (Note: The limitation of this specific condition is more stringent than the NSPS sulfur dioxide limitation and thus assures compliance with 40 CFR 60.333 and 60.334.) [PSD-FL-263 Condition III.7.]~~

~~(2). Combustion Turbine Capacity: The maximum heat input rates, based on the lower heating value (LHV) of each fuel to each unit at ambient conditions of 59°F temperature, 60% relative humidity, 100% load, and 14.7 psi pressure shall not exceed 1,600 million Btu per hour (mmBtu/hr) when firing natural gas, nor 1,800 mmBtu/hr when firing No. 2 or superior grade of distillate fuel oil. These maximum heat input rates will vary dependent upon ambient conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions or equations for corrections to other ambient conditions shall be provided to the Department of Environmental Protection (DEP) within 45 days of completing the initial compliance testing. [Design, Rule 62-210.200, F.A.C. (Definitions—Potential Emissions)] [PSD-FL-263 Condition III.8.]~~

~~(3). Unconfined Particulate Emissions: During the construction period, unconfined particulate emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [PSD-FL-263 Condition III.9.]~~

~~(4). Plant Operation Problems: If temporarily unable to comply with any of the conditions of these Conditions of Certification permit due to breakdown of equipment or destruction by fire, wind, or other cause, the owner or operator shall notify the DEP Southwest District as soon as possible, but at least within (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future recurrence; and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of these Conditions of Certification and regulations. [Rule 62-4.130, F.A.C.; PSD-FL-263 Condition III.10.]~~

~~(5). Operating Procedures: Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C.; PSD-FL-263 Condition III.11.]~~

~~(6). Circumvention: The owner or operator shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rules 62-210.650, F.A.C.; PSD-FL-263 Condition III.12.]~~

~~(7). Maximum allowable hours of operation for each unit are 4,380 hours per year on natural gas and 750 hours per year on fuel oil. [Rule 62-210.200, F.A.C., (Definitions – Potential Emissions), 62-212.400, F.A.C., (BACT Determination); PSD-FL-263 Condition III.13.]~~

~~c. Control Technology~~

~~(1) Dry low NOx (DLN) combustors shall be installed on the stationary combustion turbine to comply with the NOx emissions limits while firing natural gas. [Design, Rules 62-4.070 and 62-212.400, F.A.C. (BACT Determination); PSD-FL-263 Condition III.14.]~~

~~(2) A water injection system shall be installed for use when firing No. 2 or superior grade distillate fuel oil for control of NOx emissions. [Design, Rule 62-4.070 and 62-212.400, F.A.C.; PSD-FL-263 Condition III.15.]~~

(3) The permittee shall design these units to accommodate adequate testing and sampling locations for compliance with the applicable emission limits (per each unit) listed in Specific Conditions XIII.B.2.c.(4)–e.(1). [Rule 62-4.070, Rule 62-204.800, F.A.C. and 40 CFR 60.40a(b); PSD-FL-263 Condition III.16.]

(4) The permittee shall provide manufacturer's emissions performance versus load diagrams for the DLN and wet injection systems prior to their installation. DLN systems shall each be tuned upon initial operation to optimize emissions reductions consistent with normal operation and maintenance practices and shall be maintained to minimize NO_x emissions and CO emissions, consistent with normal operation and maintenance practices. Operation of the DLN systems in the diffusion-firing mode shall be minimized when firing natural gas. [Rule 62-4.070 and 62-210.650, F.A.C.; PSD-FL-263 Condition III.17.]

d. Emission Limits and Standards

(1) Following is a summary of the emission limits and required technology. Values for NO_x are corrected to 15% O₂ on a dry basis. These limits or their equivalents in terms of lb/hr or NSPS units, as well as the applicable averaging times, are followed by the applicable specific conditions [Rules 62-212.400, 62-204.800(7)(b) (Subpart GG), 62-210.200 (Definitions-Potential Emissions) F.A.C.; PSD-FL-263 Condition III.18.]

POLLUTANT	CONTROL TECHNOLOGY	EMISSION LIMIT
PM/PM ₁₀ , VE	Pipeline Natural Gas Good Combustion	10 Percent Opacity (gas or oil)
VOG	As Above	1.4 ppmvd (Gas) 3.5 ppmvd (FO)
CO	As Above	12 ppmvd (Gas) 20 ppmvd (FO)
SO ₂ and Sulfuric Acid Mist	Pipeline Natural Gas Low Sulfur Oil	2-gr S/100 ft ³ 0.05% S Fuel Oil
NO _x	DLN, WI for F.O., limited fuel oil usage	10.5 ppmvd (DLN) 42 ppmvd (FO)

(2) Nitrogen Oxides (NO_x) Emissions:

(a) While firing Natural Gas: The emission rate of NO_x in the exhaust gas shall not exceed 10.5 ppm @ 15% O₂ on a 24 hr block average as measured by the continuous emission monitoring system (CEMS). In addition, NO_x emissions calculated as NO₂ shall not exceed 59 pounds per hour (at ISO conditions)

~~and 9 ppmvd @15% O₂ to be demonstrated by the initial “new and clean” GE performance stack test. [Rule 62-212.400, F.A.C.]~~

~~Notwithstanding the applicable NO_x limit during normal operation, reasonable measures shall be implemented to maintain the concentration of NO_x in the exhaust gas at 9 ppmvd at 15% O₂ or lower. Any tuning of the combustors for Dry Low NO_x operation while firing gas shall result in initial subsequent NO_x concentrations of 9 ppmvd @15% O₂ or lower. [Rules 62-212.400 and 62-4.070, F.A.C.]~~

~~(b) While firing Fuel Oil: The concentration of NO_x in the exhaust gas shall not exceed 42 ppmvd at 15% O₂ on the basis of a 3-hr average as measured by the continuous emission monitoring system (CEMS). In addition, NO_x emissions calculated as NO₂ shall not exceed 319 lb/hr (at ISO conditions) and 42 ppmvd @15% O₂ to be demonstrated by stack test. [Rule 62-212.400, F.A.C.]~~

~~The permittee shall develop a NO_x reduction plan when the hours of oil firing reach the allowable limit of 750 hours per year equivalent hours. This plan shall include a testing protocol designed to establish the maximum water injection rate and the lowest NO_x emissions possible without affecting the actual performance of the gas turbine. The testing protocol shall set a range of water injection rates and attempt to quantify the corresponding NO_x emissions for each rate and noting any problems with performance. Based on the test results, the plan shall recommend a new NO_x emissions limiting standard and shall be submitted to the Department's Bureau of Air Regulation and Compliance Authority for review. If the Department determines that a lower NO_x emissions standard is warranted for oil firing, these Conditions of Certification shall be revised. (BACT Determination). [PSD-FL-263 Condition III.19.]~~

~~(3) Carbon Monoxide (CO) Emissions: During the first 12 months after initial start up, the concentration of CO in the stack exhaust gas shall exceed neither 15 ppmvd nor 48 lb/hr while firing gas (at ISO conditions) and neither 33 ppmvd nor 106 lb/hr while firing oil (at ISO conditions) based on stack test. Thereafter, these limits will be revised and lowered to 12 ppmvd and 38 lb/hr while firing gas (at ISO conditions) and 20 ppmvd and 65 lb/hr while firing oil (at ISO conditions). The permittee shall demonstrate compliance with these limits by stack test using EPA Method 10. [Rule 62-212.400, F.A.C.; PSD-FL-263 Condition III.20.]~~

~~(4) Volatile Organic Compounds (VOC) Emissions: The concentration of VOC in the stack exhaust gas with the combustion turbine operating on natural gas shall exceed neither 1.4 ppmvd nor 2.8 lb/hr (ISO conditions) and neither 3.5 ppmvd nor 7 lb/hr (ISO conditions) while operating on oil to be demonstrated by initial stack test using EPA Method 18, 25 or 25A. [Applicant Request; PSD-FL-263 Condition III.21.]~~

~~(5) Sulfur Dioxide (SO₂) emissions: SO₂ emissions shall be limited by firing pipeline natural gas (sulfur content less than 2 grains per 100 standard cubic foot) or by firing No. 2 or superior grade distillate fuel oil with a maximum 0.05 percent sulfur for 750 hours per year per unit. Emissions of SO₂ (at ISO conditions) shall not exceed 9.2 lb/hr (natural gas) and 98.1 lb/hr (fuel oil) as measured by applicable compliance methods described below. [40CFR60 Subpart GG and Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C.; PSD-FL-263 Condition III.22.]~~

~~(6) Visible Emissions (VE): VE emissions shall serve as a surrogate for PM/PM₁₀ emissions and shall not exceed 10 opacity. Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C.; PSD-FL-263 Condition III.23.]~~

~~e. Excess Emissions~~

~~(1) Excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period for other reasons unless specifically authorized by DEP for longer duration. Operation below 50% output shall be limited to 2 hours per unit cycle (breaker closed to breaker open). [PSD-FL-263 Condition III.24.]~~

~~(2) Excess emissions entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction, shall be prohibited pursuant to Rule 62-210.700, F.A.C. These emissions shall be included in the 24-hr average for NO_x. [PSD-FL-263 Condition III.25.]~~

~~(3) Excess Emissions Report: If excess emissions occur due to malfunction (for greater than 2 hours in a 24-hr period), the owner or operator shall notify DEP's Southwest District within (1) 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. Following the NSPS format, 40 CFR 60.7 Subpart A, periods of startup, shutdown, malfunction, shall be monitored, recorded, and reported as excess emissions when emission levels exceed the permitted standards listed in Specific Condition No. XIII.B.2.r. and s. [Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., and 40 CFR 60.7 (1998 version); PSD-FL-263 Condition III.26.]~~

~~f. Compliance Determination~~

~~(1) Compliance with the allowable emission limiting standards shall be determined within 60 days after achieving the maximum production rate, but not later than 180 days of initial operation of the unit, and annually thereafter~~

as indicated in these Conditions of Certification, by using the following reference methods as described in 40 CFR 60, Appendix A (1998 version), and adopted by reference in Chapter 62-204.800, F.A.C. [PSD-FL-263 Condition III.27.]

~~(2) Initial (I) performance tests (for both fuels) shall be performed on each unit while firing natural gas as well as while firing oil. Initial tests shall also be conducted after any modifications (and shake down period not to exceed 100 days after re-starting the CT) of air pollution control equipment such as change or tuning of combustors. Annual (A) compliance tests shall be performed during every federal fiscal year (October 1 – September 30) pursuant to Rule 62-297.310(7), F.A.C., on each unit as indicated. The following reference methods shall be used. No other test methods may be used for compliance testing unless prior DEP approval is received in writing.~~

~~(a) EPA Reference Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources" (I, A).~~

~~(b) EPA Reference Method 10, "Determination of Carbon Monoxide Emissions from Stationary Sources" (I, A).~~

~~(c) EPA Reference Method 20, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines." Initial test only for compliance with 40CFR60 Subpart GG and (I, A) short-term NO_x BACT limits (EPA reference Method 7E, "Determination of Nitrogen Oxides Emissions from Stationary Sources" or RATA test data may be used to demonstrate compliance for annual test requirements).~~

~~(d) EPA Reference Method 18, 25 and/or 25A, "Determination of Volatile Organic Concentrations." Initial test only. [PSD-FL-263 Condition III.28.]~~

~~(3) Continuous compliance with the NO_x emission limits: Continuous compliance with the NO_x emission limits shall be demonstrated with the CEM system based on the applicable averaging time of 24-hr block average (DLN). Based on CEMS data, a separate compliance determination is conducted at the end of each operating day and a new average emission rate is calculated from the arithmetic average of all valid hourly emission rates from the previous operating day. A valid hourly emission rate shall be calculated for each hour in which at least two NO_x concentrations are obtained at least 15 minutes apart. Valid hourly emission rates shall not include periods of start up, shutdown, or malfunction unless prohibited by 62-210.700 F.A.C. These excess emissions periods shall be reported as required in Conditions XIII.B.2.y. and z. [Rules 62-4.070 F.A.C., 62-210.700, F.A.C., 40 CFR 75 and BACT]~~

~~All continuous monitoring systems (CEMS) shall be in continuous operation except for breakdowns, repairs, calibration checks, and zero and span adjustments. These CEMS shall meet minimum frequency of operation requirements: one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data average. Although recorded, emissions during period of start-up, shutdown and malfunction are subject to the excess emissions conditions of these Conditions of Certification. [40CFR60.13; PSD-FL-263 Condition III.29.]~~

~~(4) Compliance with the SO₂ and PM/PM₁₀ emission limits: Notwithstanding the requirements of Rule 62-297.340, F.A.C., the use of pipeline natural gas, is the method for determining compliance for SO₂ and PM₁₀. For the purposes of demonstrating compliance with the 40 CFR 60.333 SO₂ standard, ASTM methods D4084-82 or D3246-81 (or equivalent) for sulfur content of gaseous fuel shall be utilized in accordance with the EPA-approved custom fuel monitoring schedule or natural gas supplier data may be submitted or the natural gas sulfur content referenced in 40 CFR 75 Appendix D may be utilized. However, the applicant is responsible for ensuring that the procedures in 40 CFR 60.335 or 40 CFR 75 are used when determination of fuel sulfur content is made. 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 pursuant to 40 CFR 60.335(e) (1998 version). [PSD-FL-263 Condition III.30.]~~

~~(5) Compliance with CO emission limit: An initial test for CO shall be conducted concurrently with the initial NO_x test, as required. The initial NO_x and CO test results shall be the average of three valid one-hour runs. Annual compliance testing for CO may be conducted at less than capacity when compliance testing is conducted concurrent with the annual RATA testing for the NO_x CEMS required pursuant to 40 CFR 75. [PSD-FL-263 Condition III.31.]~~

~~(6) Compliance with the VOC emission limit: An initial test is required to demonstrate compliance with the VOC emission limit. Thereafter, the CO emission limit and periodic tuning data will be employed as surrogate and no annual testing is required. [PSD-FL-263 Condition III.32.]~~

~~(7) Testing procedures: Testing of emissions shall be conducted with the combustion turbine operating at permitted capacity. 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). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. In this case, subsequent operation is limited by adjusting the entire heat input vs. ambient temperature curve downward by an increment equal to the~~

~~difference between the maximum permitted heat input (corrected for ambient temperature) and 110 percent of the value reached during the test until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity. Procedures for these tests shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapters 62-204 and 62-297, F.A.C. [PSD-FL-263 Condition III.33.]~~

~~(8) Test Notification: The DEP's Southwest District shall be notified, in writing, at least 30 days prior to the initial performance tests and at least 15 days before annual compliance test(s). [PSD-FL-263 Condition III.34.]~~

~~(9) Special Compliance Tests: The DEP may request a special compliance test pursuant to Rule 62-297.310(7), F.A.C., when, after investigation (such as complaints, increased visible emissions, or questionable maintenance of control equipment), there is reason to believe that any applicable emission standard is being violated. [PSD-FL-263 Condition III.35.]~~

~~(10) Test Results: Compliance test results shall be submitted to the DEP's Southwest District no later than 45 days after completion of the last test run. [Rule 62-297.310(8), F.A.C.; PSD-FL-263 Condition III.36.]~~

~~g. Notification, Reporting, And Recordkeeping~~

~~(1) Records: All measurements, records, and other data required to be maintained by TEC shall be recorded in a permanent form and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These records shall be made available to DEP representatives upon request. [PSD-FL-263 Condition III.37.]~~

~~(2) Compliance Test Reports: A test report indicating the results of the required compliance tests shall be filed as per Condition No.36 above. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8), F.A.C. [PSD-FL-263 Condition III.38.]~~

~~h. Monitoring Requirements~~

~~(1) Continuous Monitoring System: The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxides emissions from each CT in accordance with the requirements of 40 CFR 75. Upon request from EPA or DEP, the CEMS emission~~

~~rates for NOx on each CT shall be corrected to ISO conditions to demonstrate compliance with the NOx standards established in 40 CFR 60.332. [Rules 62-4.130, 62-4.160(8), 62-210.700, 62-204.800, F.A.C, 40 CFR 75 and 40CFR60.7]. [PSD FL-263 Condition III.39.]~~

~~(2) CEMS for reporting excess emissions: Excess Emissions and Monitoring System Performance Reports shall be submitted as specified in 40 CFR 60.7©. CEM monitor downtime shall be calculated and reported according to the requirements of 40 CFR 60.7©(3) and 40CFR 60.7(d)(2). Periods when NOx emissions (ppmvd @ 15% oxygen) are above the standards, listed in Specific Conditions No XIII.B.2.r. and s., shall be provided to the DEP Southwest District within one working day (verbally) followed up by a written explanation not later than three (3) working days (alternatively by facsimile). [PSD FL-263 Condition III.40.]~~

~~(3) CEMS in lieu of Water to Fuel Ratio: The NOx CEMS shall be used in lieu of the water/fuel monitoring system for reporting excess emissions in accordance with 40 CFR 60.334©(1), Subpart GG (1998 version). The calibration of the water/fuel monitoring device required in 40 CFR 60.335©(2) (1998 version) will be replaced by the 40 CFR 75 certification tests of the NOx CEMS. [PSD FL-263 Condition III.41.]~~

~~(4) Continuous Monitoring Certification and Quality Assurance Requirements: The monitoring devices shall comply with the certification and quality assurance, and any other applicable requirements of Rule 62-297.520, F.A.C., 40 CFR 60.13, including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7(a)(5), or 40 CFR Part 75. Quality assurance procedures must conform to all applicable sections of 40 CFR 60, Appendix F, or 40 CFR 75. The monitoring plan, consisting of data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location shall be provided to the DEP Emissions Monitoring Section Administrator and EPA for review no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62. [PSD FL-263 Condition III.42.]~~

~~(5) Natural Gas Monitoring Schedule: A custom fuel monitoring schedule pursuant to 40 CFR 75 Appendix D for natural gas may be used in lieu of the daily sampling requirements of 40 CFR 60.334(b)(2) provided the following requirements are met:~~

~~(a) The permittee shall apply for an Acid Rain permit within the deadlines specified in 40 CFR 72.30.~~

~~(b) The permittee shall submit a monitoring plan, certified by signature of the Designated Representative, that commits to using a primary~~

~~fuel of pipeline supplied natural gas (sulfur content less than 20 gr/100 scf pursuant to 40 CFR 75.11(d)(2)).~~

~~(c) Each unit shall be monitored for SO₂ emissions using methods consistent with the requirements of 40 CFR 75 and certified by the USEPA. This custom fuel monitoring schedule will only be valid when pipeline natural gas is used as a primary fuel. If the primary fuel for these units is changed to a higher sulfur fuel, SO₂ emissions must be accounted for as required pursuant to 40 CFR 75.11(d). [PSD-FL-263 Condition III.43.]~~

~~(6) Fuel Oil Monitoring Schedule: The following monitoring schedule for No. 2 or superior grade fuel oil shall be followed: For all bulk shipments of No. 2 fuel oil received at this facility an analysis which reports the sulfur content and nitrogen content of the fuel shall be provided by the fuel vendor. The analysis shall also specify the methods by which the analyses were conducted and shall comply with the requirements of 40 CFR 60.335(d). [PSD-FL-263 Condition III.44.]~~

~~(7) Determination of Process Variables:~~

~~(a) The permittee shall operate and maintain equipment and/or instruments necessary to determine process variables, such as process weight input or heat input, when such data is needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.~~

~~(b) Equipment and/or instruments used to directly or indirectly determine such process variables, including devices such as belt scales, weigh 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 [Rule 62-297.310(5), F.A.C; PSD-FL-263 Condition III.45.]~~

~~C. Phase III Construction and Operation~~

~~The following limitations pertain to the construction and operation of Units 4 & 5, two nominal 165 MW General Electric P7241(FA) simple cycle, natural gas combustion turbine-electrical generators to be used for peaking purposes. In accordance with PSD-FL-363, the units will be restricted to 4380 hours per year of operation. The construction of Units 4 & 5 shall be in conformance to the applicable Conditions of Certification contained herein and in conformance to DEP Permit PSD-FL-363 attached hereto as Appendix F.~~

Any party to the this Order has a right to seek judicial review of it pursuant to Section 120.68, Florida Statutes by filing a Notice of Appeal, pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Protection in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, Tallahassee, Florida 32399-3000, and by filing a copy of the Notice of Appeal, accompanied by the applicable filing fees, with the appropriate District Court of Appeal. The Notice of Appeal must be filed within thirty days from the date this Order is filed with the Clerk of the Department of Environmental Protection.

Executed in Tallahassee, Florida.

Hamilton S. Oven
Hamilton S. Oven, P.E.
Administrator
Siting Coordination Office

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

Linda Korakows 8-16-06
Clerk Date