



Jeb Bush
Governor

Department of Environmental Protection

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

DEP06-1085

Colleen M. Castille
Secretary

July 20, 2006

- CERTIFIED MAIL - RETURN RECEIPT REQUESTED -

Frederick F. Haddad, Jr.
Vice President, Power Resources
Orlando Utilities commission
500 South Orange Avenue
Orlando, Florida 32802

RE: Orlando Utilities Commission
Curtis H. Stanton Energy Center, PA 81-14F
OGC No. 06-1531

FINAL ORDER MODIFYING CONDITIONS OF CERTIFICATION

Dear Mr. Haddad:

On October 1, 2004, February 15, 2005, and September 23, 2005 respectively, the Department published notices of its intent to issue Air Operation Permit 0950137-006-AV, Air Construction Permit 0950137-008-AC, and Air Construction Permit 0950137-009-AC. On December 30, 2004, the Department issued Air Operation Permit 0950137-006-AV; on March 3, 2005, the Department issued Air Construction Permit 0950137-008-AC and, on February 9, 2006, the Department issued Air Construction Permit 0950137-009-AC for Stanton Energy Center. Pursuant to 403.516 (1) (b)., Florida Statutes ("F.S."), the Department may modify specific Conditions of a site Certification which are inconsistent with the terms of any federally delegated or approved permit. Such modification(s) may be made without further notice if the matter has been previously noticed under the requirements for any federally delegated or approved permit program. The Conditions of Certification for the Stanton Energy Center are hereby modified as follows:

VI. AIR

A. Permits

The Permittee shall apply for and obtain a revision to any Department issued PSD or Title V permit in accordance with Department Rules in Chapter 620-4.030, Florida Administrative Code, before beginning construction of any planned substantial modifications to the permitted facility. A revised permit shall be obtained before

construction begins except as provided in the applicable portions of Chapter 62-4.030, F.A.C.

B. Construction Existing Units

The construction and operation of all existing units (Units 1,2, A and auxiliary) at the Curtis H. Stanton Energy Center (CHSEC) steam electric power plant site shall be in accordance with all applicable provisions of Chapter 62, Florida Administrative Code including all requirements of the State of Florida State Implementation Plan and approved Title V permit program where applicable. and the following conditions of certification: The current Title V Air Operation Permit (0950137-006-AV) is incorporated by reference herein as part of this Certification attached as Appendix I. In addition, the construction and operation of the units shall be in accordance with 40 CFR Part 60, especially for opacity, NO_x, and SO₂ during periods of startup, shutdown, and malfunction; and the provisions of PSD permits FL-084 and FL-313 and of Air Construction Permits 0950137-008-AC and 0950137-009-AC, incorporated by reference herein as part of this Certification and attached as Appendix 2 and 3 respectively. The provisions of the Title V Air Operation Permit and of the Air Construction Permits shall be conditions of this certification. The licensee shall comply with the substantive provisions and limitations set forth in the Title V Air Operation Permit and the Air Construction Permits 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

C. Emissions Limitations New Units (Unit B – RESERVED)

~~1. The proposed steam generating station shall be constructed and operated in accordance with the capabilities and specifications of the application including, for Unit 1, a 474 (gross), and Unit 2, a 474 (gross) megawatt generating capacity and the 4286 MMBtu/hr heat input rate for each steam generator. For the purpose of calculating mass stack emissions, based on a maximum heat input of 4136 million Btu per hour, stack emissions from CHSEC Unit 1 shall not exceed the following when burning coal:~~

~~a. SO₂ 1.2 lb/million Btu heat input, maximum two hour average, and 1.14 lb/MMBtu maximum three hour average;~~

~~b. NO_x 0.60 lb. per million Btu heat input, 30 day rolling average;~~

hour;

~~_____ d. Visible emissions – 20% opacity (6 minute average, except one 6 minute period per hour of not more than 27% opacity).~~

~~_____ 2. Based on a maximum heat input of 4286 million Btu per hour, stack emissions from Unit 2 shall not exceed the following when burning coal:~~

~~_____ a.~~

SO₂	lb/million Btu heat input
30 – day rolling average	0.25
24 – hour emission rate	0.67
3 – hour emission rate	0.85

~~_____ b.~~

NO_x	lb/million Btu heat input
30 – day rolling average	0.17

~~_____ c.~~

PM/PM₁₀	lb/million Btu heat input	
	lb/MMBtu	lb/hr
PM	0.02	85.7
PM ₁₀	0.02	85.7

~~_____ d. CO – 0.15 lb/million Btu heat input, 643 lb/hour.~~

~~_____ e. VOC – 0.015 lb/million Btu heat input, 64 lb/hour.~~

~~_____ f. H₂SO₄ – 0.033 lb/million Btu heat input 140 lb/hour~~

~~_____ g. Be – 5.2 x 10⁻⁶ lb/million Btu heat input, 0.022 lb/hour.~~

~~_____ h. Hg – 1.1 x 10⁻⁵ lb/million Btu heat input, 0.046 lb/hour.~~

~~_____ i. Pb – 1.5 x 10⁻⁴ lb/million Btu heat input, 0.64 lb/hour.~~

~~_____ j. Fluorides – 4.2 x 10⁻⁴ lb/million Btu heat input, 1.8 lb/hour.~~

~~3. The height of the boiler exhaust stack for CHSEC Units 1 & 2 shall not be less than 550 ft. above grade.~~

~~4. Particulate emissions from the coal, lime and limestone handling facilities:~~

~~a. All conveyors and conveyor transfer points will be enclosed to preclude PM emissions (except those directly associated with the coal stacker/reclaimer or emergency stockout, and the limestone stockout for which enclosure is operationally infeasible).~~

~~b. Inactive coal storage piles will be shaped, compacted and oriented to minimize wind erosion.~~

~~c. Water sprays or chemical wetting agents and stabilizers will be applied to storage piles, handling equipment, etc. during dry periods and as necessary to all facilities to maintain an opacity of less than or equal to 5 percent, except when adding, moving or removing coal from the coal pile, which would be allowed no more than 20%.~~

~~d. Limestone day silos and associated transfer points will be maintained at negative pressures during filling operations with the exhaust vented to a control system. Lime will be handled with a totally enclosed pneumatic system. Exhaust from the lime silos during filling will be vented to a collector system.~~

~~e. The fly ash handling system (including transfer and silo storage) will be totally enclosed and vented (including pneumatic system exhaust) through fabric filters; and~~

~~f. Any additional coal, lime, and limestone handling facilities for Stanton Unit 2 will be equipped with particulate control systems equivalent to those for Stanton Unit 1.~~

~~5. Particulate emissions from bag filter exhausts from the following facilities shall be limited to 0.02 gr./acf: coal, lime, limestone and flyash handling systems excluding those facilities covered by II/I.A.3.c above. A visible emission reading of 5% opacity or less may be used to establish compliance with this emission limit. A visible emission reading greater than 5% opacity will not create a presumption that the 0.02 gr./acf emission limit is being violated. However, a visible emission reading greater than 5% opacity will require the permittee to perform a stack test for particulate emissions, as set forth in condition VI.D.~~

~~6. Compliance with opacity limits of the facilities listed in Condition VI.C. will be determined by EPA referenced method 9 (Appendix A, 40 CFR 60).~~

~~7. Construction shall reasonably conform to the plans and schedule given in the original application or the supplemental application.~~

~~8. The permittee shall report any delays in construction and completion of the project which would delay commercial operation by more than 90 days to the DEP Central District office in Orlando.~~

~~9. Reasonable precautions to prevent fugitive particulate emissions during construction shall be to coat the roads and construction sites used by contractors, and to regrass or water areas of disturb soils.~~

~~10. Coal shall not be burned in the unit unless the electrostatic precipitator and limestone scrubber and other air pollution control devices are operating as designed except as provided under 40 CFR Part 60, Subpart Da.~~

~~11. Except as noted herein, the fuel oil to be fired in Stanton Units 1 & 2 and the auxiliary boiler shall be primarily "new oil" which means an oil which has been refined from crude oil and has not been used. On-site generated lubricating oil and used fuel oil which meets the requirements of 40 CFR 266.40 may also be burned.~~

~~a. The quality of the No. 2 fuel oil used by the auxiliary boiler shall not contain more than 0.5% sulfur by weight and cause the allowable emission limits listed in the following table to be exceeded. Such emissions may be calculated in accordance with AP-42.~~

Allowable Emission Limits	
Pollutant	lb/MMBtu
PM	0.015
SO ₂	0.51
NO _x	0.16
Visible emissions	Maximum 20% Opacity

~~b. Landfill gas from the Orange County Landfill may be burned in Unit No. 1 and Unit No. 2 to the extent that quantities are available provided that all emission limits contained in condition VI.C.1. for Unit 1 and Condition VI.C.2. for Unit 2 are met.~~

~~c. Natural gas as supplied by commercial pipeline may be burned in Unit No. 1 and Unit No. 2 to the extent that quantities are available provided that all emission limits contained in Condition VI.C.1. for Unit 1 and Condition VI.C.2. for Unit 2 are met.~~

~~12. The flue gas scrubber shall be put into service during normal~~

~~operational startup, and shut down when No. 6 fuel oil is being burned. The No. 6 fuel oil shall not contain more than 1.5% sulfur by weight.~~

~~13. No fraction of flue gas shall be allowed to bypass the FGD system to reheat the gases exiting from the FDG system, except that bypass shall be allowed during startup and shutdown.~~

~~14. All fuel oil and coal shipments received shall have an analysis for sulfur content, ash content, and heating value either documented by the supplier or determined by analysis. Coal sulfur content shall be determined and recorded on a daily basis. Records of all the analysis shall be kept for public inspection for a minimum of two years after the data is recorded.~~

~~15. Within 90 days of commencement of operations, the applicant will determine and submit to FDER the pH level range in the scrubber reaction tank that correlates with the specified limits for SO₂ in the flue gas. Moreover, the applicant is required to operate a continuous pH meter equipped with an upset alarm to ensure that the operator becomes aware when the pH level of the scrubber reaction tank falls out of this range. The pH monitor can also act as a backup in the event of malfunction of the continuous SO₂ monitor. The value of the scrubber pH may be revised at a later date provided notification to FDER is made demonstrating the emission limit is met. Further, if compliance data show that higher FGD performance is necessary to maintain the emission limit, a different pH value will be determined and maintained.~~

~~16. The applicant will comply with all requirements and provisions of the New Source Performance standard for electric utility steam generating units (40 CFR 60 Part Da).~~

~~17. The Licensee shall submit to the Department at least 120 days prior to start of construction of the NOx control system, copies of technical data pertaining to the selected NOx control system. These data, if applicable to the technology chosen by the Licensee, should include but not be limited to design efficiency, guaranteed efficiency, emission rates, low rates, reagent injection rates, or types of catalysts. The Department may, upon review of these data, disapprove the use of any such device or system if the Department determines the selected control device or system to be inadequate to meet the emission limits specified in I.b. above. Such disapproval shall be issued within 90 days of receipt of the technical data.~~

~~18. Concrete Batch Plant~~

~~a. For the operation of a Vince Hagan Company Model HSM-10250C-400 concrete batch plant with cement and fly ash storage silos, emissions generated during pneumatic drilling of storage silos will be controlled by two Vince Hagan Company Model ES-268B baghouses, one on each silo, with 268 square feet of cloth filtration area. A water spray ring will be used to control emissions during truck~~

loading.

~~_____ b. _____ Visible emissions from concrete batching plants, silos, hoppers and other storage or conveying equipment shall not exceed 5% opacity (Rule 62-296.414(1), F.A.C.).~~

~~_____ c. _____ The initial and subsequent compliance tests for visible emissions on the particulate matter control equipment shall be conducted using DEP Method 9 in accordance with Rule 62-297.401(9)(c), F.A.C. The initial and subsequent compliance tests for visible emissions on the storage piles shall be conducted using EPA Method 22 in accordance with Rule 62-297.401(22), F.A.C., and 40 CFR 60, appendix A. The Department's Central District office shall be notified in writing at least 15 days prior to the compliance test in accordance with Rule 62-297.310(7)a)9, F.A.C. The test reports shall be submitted to the Department's Central District office no later than 45 days after the last sampling run of each test is completed in accordance with Rule 62-297.310(8)(b), F.A.C.~~

~~_____ d. _____ The visible emissions test observation period shall include the period during which the highest opacity can reasonably be expected to occur. For the storage silos, this is expected to be the last 30 minutes of filling.~~

~~_____ e. _____ Testing of emissions must be accomplished while filling the cement and fly ash storage silos within $\pm 10\%$ of the permitted capacity of 27 tons per hour. A compliance test submitted at operating rates less than 90% of the permitted capacity will automatically constitute an amended permit at the lesser rate. Failure to submit the input rates and actual operating conditions may invalidate the test (Rule 62-297.310(8)(c), F.A.C.).~~

~~_____ f. _____ Permitted hours of operation are up to 20 hrs/day, seven days per week, and not to exceed 4,200 hrs/year.~~

~~_____ g. _____ All reasonable precautions shall be taken to prevent and control generation of unconfined emissions of particulate matter in accordance with the provision in rule 62-296.320(4), F.A.C. These provisions are applicable to any source, including, but not limited to, vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrial related activities such as loading, unloading, storing and handling. Reasonable precautions shall include the use of water sprinklers to prevent and control fugitive particulates from plant grounds and aggregate storage piles and the use of the water spray ring at the truck loadout.~~

~~_____ D. _____~~ **Air Monitoring Program**

~~_____ 1. _____ A flue gas oxygen meter shall be installed for Stanton Unit 2 to~~

~~continuously monitor a representative sample of the flue gas. The oxygen monitor shall be used with automatic feedback or manual controls to continuously maintain air/fuel ratio parameters at an optimum. The flue gas manufacturing oxygen monitor shall be calibrated and operated according to established procedures as approved by DEP. The document "Use of Flue Gas Oxygen Meter as BACT for Combustion Controls" may be used as a guide.~~

~~2. The permittee shall install and operate continuous monitoring devices for Stanton Unit 2 main boiler exhaust for sulfur dioxide, nitrogen oxides, oxygen, and opacity. The monitoring devices shall meet the applicable requirements of Section 62-296.405(1)(f), F.A.C., and 40 CFR 60.47a. The opacity monitor may be placed in the ductwork between the electrostatic precipitator and the FGD scrubber.~~

~~3. The permittee shall maintain a daily log of the amounts and types of fuel used. The log shall be kept for inspection for at least two years after the data is record. Fuel analysis data including sulfur content, ash content, and heating values shall be determine on an as received basis and kept for two years.~~

~~4. The permittee shall provide stack sampling facilities as required by Rule 62-297.310(6), F.A.C.~~

~~E. Stack Testing~~

~~1. Within 60 calendar days after achieving the maximum capacity at which unit 2 will be operated, but no later than 180 operating days after initial startup, the permittee shall conduct performance tests for particulates, SO₂, NO_x, and visible emissions during formal operations near ($\pm 10\%$) 4286 MMBtu/hr heat input and furnish the Department a written report the results of such performance tests within 45 days of completion of the tests. The performance test will be conducted in accordance with the provisions of 40 CFR 60.46a and 48a.~~

~~2. Compliance with emission limitation standards mentioned in specific condition No. VI.B. shall be demonstrated during the initial performance test using appropriate EPA Methods, as 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), or any method as proposed by the Applicant and approved by the Department, in accordance with F.A.C. Rule 62-297.~~

EPA Method	For Determination Of
1	Selection of sample site and velocity traverses.
2	Stack gas flow rate when converting concentration to or from mass emission limits.

3	Gas analysis when needed for calculation of molecular weight or percent O ₂ .
4	Moisture contents when converting stack velocity to dry volumetric flow rate for use in converting concentrations in dry gases to or from mass emission limits.
5	Particulate matter concentration and mass emissions.
201 or 201A	PM ₁₀ emissions.
6, 6C, or 19	Sulfur dioxide emissions from stationary sources.
7, 7C, or 19	Nitrogen oxide emissions from stationary sources.
9	Visible emission determination of opacity. – At least three one hour runs to be conducted simultaneously with particulate testing for the emissions from dry scrubber/baghouse, and ash handling building baghouse. – At least one lime truck unloading into the lime silo (from start to finish).
10	Carbon monoxide emissions from stationary sources.
12 or 101A	Lead concentration from stationary sources.
13A or 13B	Fluoride emissions from stationary sources.
18, 25, 25A or 25B	Volatile organic compounds concentration.
101A or 108	Mercury emissions.
104	Beryllium emission rate and associated moisture content.

~~3. The permittee shall provide 30 days written notice of the performance tests for continuous emission monitors or 10 working days written notice for stack tests in order to afford the Department the opportunity to have an observer present.~~

~~4. Stack tests for particulates NO_x and SO₂ and visible emissions shall be performed annually.~~

~~F. Reporting~~

~~1. For Stanton Unit 2, a summary in the EPA format of stack continuous monitoring data, fuel usage and fuel analysis data shall be reported to the Department's Central District Office and to the Orange County Environmental Protection Department on a quarterly basis commencing with the start of commercial operation in accordance with 40 CFR, Part 60, Section 60.7, and 60.49a.~~

~~2. Beginning one month after certification, the permittee shall submit to the Department a quarterly status report briefly outlining progress made on engineering and design and purchase of major pieces of air pollution control equipment. All reports and information required to be submitted under this condition shall be submitted to the Siting Coordination Office, Department of Environmental Protection, 2600 Blair Stone Road MS 48, Tallahassee, 32399-2400.~~

~~**G. Malfunction or Shutdown**~~

~~In the event of a prolonged (thirty days or more) equipment malfunction or shut down of air pollution control equipment, operation may be allowed to resume or continue to take place under appropriate Department order, provided that the Licensee demonstrates such operation will be in compliance with all applicable ambient air quality standards and PSD increments. During such malfunction or shutdown, the operation of Stanton Unit 2 shall comply with all other requirements of this certification and all applicable state and federal emission standard not affected by the malfunction or shutdown which is the subject of the Department's order. Exceedances produced by operational conditions for more than two hours due to upsets in air pollution control systems as a result of start up, shutdown, or malfunctions as defined by 40 CFR 60 need not be reported as specified in Condition IV.D. Identified operational malfunctions which do not stop operation but prevent compliance with emission limitations shall be reported to DEP as specified in Condition IV.D.~~

~~**H. Open Burning**~~

~~Open burning in connection with initial land clearing shall be in accordance with chapter 62-256, F.A.C., Chapter 51-2, F.A.C., Uniform Fire Code Section 33.101 Addendum, and any other applicable County regulation.~~

~~Any burning of construction generated material, after initial land clearing, that is allowed to be burned in accordance with Chapter 62-256, F.A.C., shall be approved by the DEP Central District Office in conjunction with the Division of Forestry and any other County regulations that may apply. Burning shall not occur unless approved by the jurisdictional agency or if the Department or the Division of Forestry has issued a ban on burning due to fire safety conditions or due to air pollution conditions.~~

~~**I. Combined Cycle Unit A**~~

~~For Combined Cycle Unit A Permittee shall comply with all limitations, restrictions, and conditions contained in PSD permit number PSD-FL-313. The PSD~~

~~permit is included in and made part of these Conditions of Certification as follows:~~

~~_____ 1. _____ Emissions Units~~

~~_____ This permit addresses the following emissions units:~~

EMISSION UNIT	SYSTEM	EMISSION UNIT DESCRIPTION
025	Power Generation	One nominal 170 Megawatt Gas Combustion Turbine Electrical Generator configured as a combined cycle unit, complete with supplementary fired HRSG
026	Power Generation	One nominal 170 Megawatt Gas Combustion Turbine Electrical Generator configured as a combined cycle unit, complete with supplementary fired HRSG
027	Water Cooling	One 10 cell mechanical draft Cooling Tower
028	Fuel Storage	One 1,680,000 Gallon Distillate Fuel Oil Storage Tank

~~_____ 2. _____ Regulatory Classification~~

~~_____ The facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 tons per year (TPY).~~

~~_____ This facility is within an industry (fossil fuel fired steam electric plant) included in the list of the 28 Major Facility Categories per Table 62-212.400-1, 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). Pursuant to Table 62-212.400-2, this facility modification results in emissions increases greater than 40 TPY of SO₂ and NO_x, 25/15 TPY of PM/PM₁₀, 100 TPY of CO and 40 TPY of VOC's. These pollutants require review per the PSD rules and a determination for Best Available Control Technology (BACT) per Rule 62-212.400, F.A.C.~~

~~_____ This project is subject to the applicable requirements of Chapter 403, Part II, F.S., Electric Power Plant and Transmission Line Siting. [Chapter 403.503(12), F.S., Definitions]~~

~~_____ Based on the Title V permit, this facility is not currently a major source of hazardous air pollutants (HAPs). This facility is subject to certain Acid Rain~~

~~provisions of Title IV of the Clean Air Act.~~

~~3. Relevant Documents:~~

~~The documents listed below are the basis of the permit. They are specifically related to this permitting action, but are not incorporated into this permit. These documents are on file with the Department.~~

~~Application received on January 22, 2001.~~

~~Letter from Fish & Wildlife Service dated February 9, 2001.~~

~~Additional information received from applicant on May 1, 2001.~~

~~Department's Intent to Issue and Public Notice Package dated May 17, 2001.~~

~~Department's Draft Permit and Draft BACT determination dated May 17, 2001.~~

~~Letter from EPA Region IV dated xx/xx/01.~~

~~Site Certification for the Stanton A Combined Cycle addition dated xx/xx/01~~

~~Department's Final Determination and Best Available Control Technology Determination issued concurrently with this Final Permit.~~

~~4. General And Administrative Requirements~~

~~**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 (BAR), Florida Department of Environmental Protection (FDEP), at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 and phone number (850) 488-0114. All documents related to reports, tests, and notifications should be submitted to the DEP Central District Office, 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767 and phone number 407/894-7555.~~

~~**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.]~~

~~**Terminology:** The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.~~

~~**Forms and Application Procedures:** 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. [Rule 62-210.900, F.A.C.]~~

~~**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. [Chapters 62-210 and 62-212, F.A.C.]~~

~~**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. [40 CFR 52.21(r)(2)]~~

~~**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 baseload 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.]~~

~~**Permit Extension:** The permittee, for good cause, may request that this PSD permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit. In conjunction with extension of the 18-month periods to commence or continue construction, or extension of the December 31, 2004 permit expiration date, the permittee may be required to demonstrate the adequacy of any previous determination of best available control technology for the source. [Rule 62-4.080, 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 to the DEP's Bureau of Air Regulation in Tallahassee 24 months before the date on which the new unit begins serving an electrical generator (greater than 25 MW). [40 CFR 72]~~

~~**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 the DEP's Bureau of Air Regulation, and a copy to the Department's Central District Office. [Chapter 62-213, F.A.C.]~~

~~**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.]~~

~~**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 Central District Office by March 1st of each year.~~

~~**Stack Testing Facilities:** Stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C.~~

~~**Quarterly Reports:** Quarterly excess emission reports, in accordance with 40 CFR 60.7 (a)(7) (c) (1998 version), shall be submitted to the DEP's Central District Office.~~

~~5. Applicable Standards And Regulations~~

~~Unless otherwise indicated in this permit, the construction and operation of the subject emission unit(s) 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.~~

~~**NSPS Requirements:** Each combustion turbine (CT) shall comply with all applicable requirements of 40 CFR 60, adopted by reference in Rule 62-204.800(7)(b), F.A.C.~~

~~**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), and 40 CFR 60.19 (General Notification and Reporting Requirements).~~

~~_____ **Subpart GG, Standards of Performance for Stationary Gas Turbines;** see attached *Appendix GG*.~~

~~_____ Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations. [Rule 62-210.300, F.A.C.]~~

~~_____ These emission units shall comply with all applicable requirements of 40CFR60, Subpart A, General Provisions including:~~

~~_____ 40CFR60.7, Notification and Recordkeeping~~

~~_____ 40CFR60.8, Performance Tests~~

~~_____ 40CFR60.11, Compliance with Standards and Maintenance Requirements~~

~~_____ 40CFR60.12, Circumvention~~

~~_____ 40CFR60.13, Monitoring Requirements~~

~~_____ 40CFR60.19, General Notification and Reporting requirements~~

~~_____ ARMS Emissions Units 025 and 026. Direct Power Generation, each consisting of a nominal 170 megawatt combustion turbine-electrical generator, shall comply with all applicable provisions of 40CFR60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(7)(b), F.A.C. The Subpart GG requirement to correct test data to ISO conditions applies. However, such correction is not used for compliance determinations with the BACT standard(s). Additionally, each Emissions Unit consists of a supplementally fired heat recovery steam generator equipped with a natural gas fired 533 MMBTU/hr duct burner (LHV) and combined with a nominal 300 MW steam electrical generators. These shall comply with all applicable provisions of 40CFR60, Subpart Da, Standards of Performance for Electric Utility Steam Generating Units Which Construction is Commenced After September 18, 1978, adopted by reference in Rule 62-204.800(7), F.A.C.~~

~~_____ ARMS Emission Unit 027. Cooling Tower, an unregulated emission unit. The Cooling Tower is not subject to a NESHAP because chromium-~~

based chemical treatment is not used.

~~ARMS Emission Unit 028. Fuel Storage Tank, consisting of a 1,680,000-gallon distillate fuel storage tank. The storage tank is subject to 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction or Modification Commenced After July 23, 1984.~~

~~All notifications and reports required by the above specific conditions shall be submitted to the DEP's Central District Office.~~

~~6. General Operation Requirements~~

~~**Fuels:** Only pipeline natural gas or (up to) 1000 hours per year of 0.05% distillate fuel oil shall be fired in each CT emissions unit. Only natural gas shall be fired in each duct burner. [Applicant Request, Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]~~

~~**Combustion Turbine Capacity:** The maximum heat input rates to each CT/HRSG shall not exceed 2,402 million Btu per hour (MMBtu/hr) when firing natural gas with duct burner firing and power augmentation. The maximum heat input rates to each CT/HRSG shall not exceed 2,068 million Btu per hour (MMBtu/hr) when firing fuel oil. These maximum heat input rates shall not be exceeded under any condition, regardless of ambient conditions or combustion turbine characteristics. Manufacturer's curves corrected for ISO 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)]~~

~~**Heat Recovery Steam Generator equipped with Duct Burner:** The maximum heat input rate of the natural gas fired duct burner shall not exceed 533 MMBtu/hour (LHV) at any temperature or under any scenario. [Applicant Request, Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]~~

~~**Unconfined Particulate Emissions:** During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary.~~

~~**Plant Operation - Problems:** If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the DEP Central District office 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 this permit and the regulations. [Rule 62-4.130, F.A.C.]~~

~~**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.]~~

~~**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.]~~

~~**Maximum allowable hours** of operation for each CT/HRSG Emissions Unit are 8760 hours per year while firing natural gas. Fuel oil firing is permitted for 1000 hours during any consecutive 12-month period in each CT. [Applicant Request, Rule 62-210.200, F.A.C. (Definitions – Potential Emissions)]~~

~~**Simple Cycle Operation:** The plant may not be operated without the use of the SCR system except during periods of startup and shutdown.~~

~~7. Control Technology~~

~~Dry Low NO_x (DLN) combustors and water injection capability shall be installed on each stationary combustion turbine. The permittee shall install a selective catalytic reduction system to comply with the NO_x and ammonia limits listed in Specific Condition 21. Additionally, space shall be provided for the installation of oxidation catalysts. [Design, Rules 62-4.070 and 62-212.400, F.A.C.]~~

~~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 No. 21 through 25. [Rule 62-4.070, Rule 62-204.800, F.A.C., and 40 CFR 60.40a(b)]~~

~~Drift eliminators shall be installed on the cooling tower to reduce PM/PM₁₀ emissions. A certification following installation (and prior to startup) shall be submitted that the drift eliminators were installed and that the installation is capable of meeting 0.002-gallons/100 gallons recirculation water flowrate.~~

~~8. Emission Limits And Standards~~

~~Nitrogen Oxides (NO_x) Emissions:~~

~~The concentration of NO_x in the stack exhaust gas, with the combustion turbine operating on natural gas shall not exceed 3.5 ppmvd @15% O₂ on a 3-hr block average. This limit shall apply whether or not the unit is operating with duct burner on and/or in power augmentation mode. Compliance shall be determined by the continuous emission monitor (CEMS). [BACT Determination]~~

~~The emissions of NO_x in the stack exhaust gas, with the combustion turbine operating on fuel oil shall not exceed 10.0 ppmvd @15% O₂ on a 3-hr block average. Compliance shall be determined by the continuous emission monitor (CEMS). [BACT Determination]~~

~~Emissions of NO_x from the duct burner shall not exceed 0.1 lb/MMBtu, which is more stringent than the NSPS (see Specific Condition 30 for compliance procedures). [Applicant Request, Rule 62-4.070 and 62-204.800(7), F.A.C.]~~

~~The concentration of ammonia in the exhaust gas from each CT/HRSG shall not exceed 5.0 ppmvd @15% O₂. The compliance procedures are described in Specific Conditions 29 and 45. [BACT, Rules 62-212.400 and 62-4.070, F.A.C.]~~

~~**Carbon Monoxide (CO) Emissions:** Emissions of CO in the stack exhaust gas (at ISO conditions) with the combustion turbine operating on natural gas shall not exceed 17 ppmvd @15% O₂ on a 24-hr block average to be demonstrated by CEMS; and neither 14 ppmvd @15% O₂ with the CT operating on fuel oil on a 24-hr block average to be demonstrated by CEMS. These limits shall also be demonstrated by annual stack test using EPA Method 10 or through annual RATA testing. Within 24 months of the date of completion of initial testing, the applicant shall either have installed oxidation catalyst in each CT/HRSG or forfeit its right to do so with the pre-determined (BACT) emission limits specified below. [BACT, Rule 62-212.400, F.A.C.]~~

~~In the event that an oxidation catalyst is installed for any reason in either CT/HRSG pair within 24 months of the date of completion of initial testing, the limits for CO and VOC shall be 5 ppmvd and 3 ppmvd (respectively) to be demonstrated by stack testing during power augmentation and duct burner firing (I, A). [BACT]~~

~~**Volatile Organic Compounds (VOC) Emissions:** Emissions of VOC in the stack exhaust gas (baseload at ISO conditions) with the combustion turbine operating on gas shall exceed neither 2.7 ppmvd @15% O₂ with the CT firing fuel oil and neither 6.3 ppmvd @15% O₂ with the CT firing natural gas (with maximum duct burner firing and operating in power augmentation mode); to be demonstrated by initial stack tests using EPA Method 18, 25 or 25A. [BACT, Rule 62-212.400, F.A.C.]~~

~~_____ **Sulfur Dioxide (SO₂) emissions:** SO₂ emissions shall be limited by firing pipeline natural gas (sulfur content not greater than 1.5 grains per 100 standard cubic foot) and up to 1000 hours per consecutive 12-month period of 0.05% sulfur fuel oil. Compliance with these fuel limits in conjunction with implementation of the attached Appendix GG will demonstrate compliance with the applicable NSPS SO₂ emissions limitations from the duct burner and the combustion turbine. Note: This will effectively limit the combined SO₂ emissions for EU-025 and EU-026 to approximately 134 tons per year. [BACT, 40CFR60 Subpart GG and Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C.]~~

~~_____ **PM/PM₁₀ and Visible emissions (VE):** VE emissions shall not exceed 10 percent opacity from the stack in use. [BACT, Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C.]~~

~~_____ **9. Excess Emissions**~~

~~_____ **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 except during a "cold start-up" to combined cycle plant operation. During cold start-up to combined cycle operation, up to four hours of excess emissions are allowed. Cold start-up is defined as a startup to combined cycle operation following a complete shutdown lasting at least 72 hours. Operation below 50% output per turbine shall otherwise be limited to 2 hours in any 24-hour period. [BACT, Rule 62-210.700, F.A.C.]~~

~~_____ **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 3-hr average for NO_x and the 24-hr average for CO.~~

~~_____ **Excess Emissions Report:** If excess emissions occur for more than two hours due to malfunction, the owner or operator shall notify DEP's Central District office 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. Pursuant to the New Source Performance Standards, all excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. Following this format, 40 CFR 60.7, and using the monitoring methods listed in Specific Conditions 41 through 45, 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. 21 through 25. [Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., and 40 CFR 60.7 (1998 version)].~~

~~10. Compliance Determination~~

~~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 this permit, 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.~~

~~Initial (I) performance tests shall be performed by the deadlines in Specific Condition 29. Initial tests shall also be conducted after any replacement of the major components of the air pollution control equipment (and shake down period not to exceed 100 days after re-starting the CT), such as replacement of SCR catalyst or addition of oxidation catalyst (or change of combustors, if specifically requested by the DEP on a case-by-case basis). 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 these units 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. Where initial tests only are indicated, these tests shall be repeated prior to renewal of each operation permit.~~

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

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

~~EPA Reference Method 20, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines" (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 requirement) shall be conducted a) while firing natural gas with maximum duct burner heat input as well as maximum power augmentation and b) while firing fuel oil at the maximum heat input; Initial test for compliance with 40CFR60 Subpart GG; Initial (only) NO_x compliance test for the duct burners (Subpart Da) shall be accomplished via testing with duct burners "on" as compared to "off" and computing the difference.~~

~~EPA Reference Method 18, 25 and/or 25A, "Determination of Volatile Organic Concentrations." Initial test only.~~

~~EPA Method 0011 or CARB Method 430 shall be utilized to evaluate the emissions of formaldehydes on each CT/Duct Burner as per the table below. A full report including all test results, analyses and applicant's MACT Determination shall be forwarded to the Bureau of Air Regulation in Tallahassee within~~

the same time constraints identified in Specific Condition G.29.

OPERATING MODE	TEST PROTOCOL	TPY CALCULATION
Maximum CT output Natural Gas; Duct Burner firing at maximum output	CARB Method 430 or EPA Method 0011	(6760/2000) times measured Lb/Hour Formaldehyde
Maximum CT output Natural Gas; Duct Burner firing and Power Augmentation implemented, both at max. output	CARB Method 430 or EPA Method 0011	(1000/2000) times measured Lb/Hour Formaldehyde
Maximum output, Fuel Oil	CARB Method 430 or EPA Method 0011	(1000/2000) times measured Lb/Hour Formaldehyde

~~Note: Results of the sampling method(s) identified above shall be blank corrected. For Method 0011, a minimum sample volume of 30 cubic feet shall be collected. To improve test precision, there shall be two co-located trains for each test. A minimum of 3 runs per CT/Duct Burner shall constitute a test.~~

~~Method CTM-027 for ammonia slip (I, A) to be completed simultaneously with NO_x compliance testing.~~

~~The applicant shall calculate and report the ppmvd ammonia slip (@ 15% O₂) at the measured lb/hr NO_x emission rate as a means of compliance with the BACT standard. The applicant shall also be capable of calculating ammonia slip at the Department's request, according to Specific Condition 45.~~

~~**Continuous compliance with the CO and NO_x emission limits:** Continuous compliance with the CO and NO_x emission limits shall be demonstrated by the CEM system on the specified hour average basis. Based on CEMS data, a separate compliance determination is conducted at the end of each period and a new average emission rate is calculated from the arithmetic average of all valid hourly emission rates from the previous period. Specific Condition 41 further describes the CEM system requirements. Excess emissions periods shall be reported as required in Condition 28. [Rules 62-4.070 F.A.C., 62-210.700, F.A.C., 40 CFR 75 and BACT]~~

~~**Compliance with the SO₂ and PM/PM₁₀ emission limits:** For the purposes of demonstrating compliance with the 40 CFR 60.333 SO₂ standard, the applicant is responsible for ensuring that the procedures outlined in attached Appendix GG are complied with.~~

~~**Compliance with CO emission limit:** An initial and annual test for CO shall be conducted at 100% capacity with the duct burners off. The NO_x and CO test results shall be the average of three valid one-hour runs. Annual RATA testing for the CO and NO_x CEMS shall be required pursuant to 40 CFR 75.~~

~~**Compliance with the VOC emission limit:** An initial test is required to demonstrate compliance with the VOC emission limit. Thereafter, the CO emission limit will be employed as a surrogate and no annual testing is required [see Specific Condition 22 for exception].~~

~~_____~~ **Testing procedures:** Unless otherwise specified, 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). 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.

~~_____~~ **Test Notification:** The DEP's Central District office shall be notified, in writing, at least 30 days prior to the initial performance tests and at least 15 days before annual compliance tests.

~~_____~~ **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, odors or questionable maintenance of control equipment), there is reason to believe that any applicable emission standard is being violated.

~~_____~~ **Test Results:** Compliance test results shall be submitted to the DEP's Central District office no later than 45 days after completion of the last test run. [Rule 62-297.310(8), F.A.C.].

~~_____~~ 11. ~~Notification, Reporting, And Recordkeeping~~

~~_____~~ **Records:** All measurements, records, and other data required to be maintained by the applicant 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.

~~_____~~ The applicant will be required to maintain records indicating the daily hours of operation of each CT/HRSG unit. These records shall specify which type of fuel is being combusted and the records shall be available for review at the site. Each calendar month, a compilation of the hours of operation for each CT/HRSG unit combusting fuel oil shall be made and totalized for the most recent consecutive 12-month period. Each AOR submitted by the applicant shall include a compilation of each consecutive 12-month period during the preceding calendar year.

~~_____~~ **Compliance Test Reports:** 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.

~~_____~~ **Continuous Monitoring System:** The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the emissions of NO_x and CO from these emissions units, and the Carbon Dioxide (CO₂) content of the flue gas at the location where NO_x 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_x and CO established in this permit. Compliance with the emission limits for NO_x shall be based on a 3-hour block average. The 3-hour block average shall be calculated from 3 consecutive hourly average emission rate values. Compliance with the emission limits for 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 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_x monitor shall be certified and operated in accordance with the following requirements. The NO_x 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 specified within this permit, missing data shall not be substituted. Instead the block average shall be determined using the remaining hourly data in the 3-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_x monitor shall be performed using EPA Method 20 or 7E, of Appendix A of 40 CFR 60. The NO_x 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% O₂.~~

~~_____ The CO monitor and CO₂ 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 CO₂ 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 Central 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 CO monitor shall be a dual range monitor. The span for the lower range shall not be greater than 20 ppm, and the span for the upper range shall not be greater than 100 ppm, as corrected to 15% O₂. The RATA tests required for the CO₂ monitor shall be performed using EPA Method 3B, of Appendix A of 40 CFR 60.~~

~~NO_x, CO and CO₂ emissions data shall be recorded by the CEM system during episodes of startup, shutdown and malfunction. NO_x and CO emissions data recorded during these episodes may be excluded from the block average calculated to demonstrate compliance with the emission limits specified within this permit. 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 72 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 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 Central 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].

____ **Continuous Monitoring System Reports:** 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 40CFR75. 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 Bureau of Ambient Monitoring & Mobile Sources (BAMMS) as well as the EPA for review no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62.

____ **Determination of Process Variables:** 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. No later than 90 days prior to operation, the permittee shall submit for the Department's approval a list of process variables that will be measured to comply with this permit condition.

____ 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.]

____ **Subpart Da Monitoring and Recordkeeping Requirements:** The permittee shall comply with all applicable requirements of this Subpart [40CFR60, Subpart Da].

____ **Selective Catalytic Reduction System (SCR) Compliance**

Procedures:

~~_____ An annual stack emission test for nitrogen oxides and ammonia from the CT/HRSG pair shall be simultaneously conducted while operating in the power augmentation mode with the duct burner on as defined in Specific Condition 21. The ammonia injection rate necessary to comply with the NO_x standard shall be established and reported during the each performance test.~~

~~_____ The SCR shall operate at all times that the turbine is operating, except during turbine start-up and shutdown periods, as dictated by manufacturer's guidelines and in accordance with this permit.~~

~~_____ The permittee shall install and operate an ammonia flow meter to measure and record the ammonia injection rate to the SCR system of the CT/HRSG set. It shall be maintained and calibrated according to the manufacturer's specifications.~~

~~_____ During the stack test, the permittee (at each tested load condition) shall determine and report the ammonia flow rate required to meet the emissions limitations. During NO_x CEM downtimes or malfunctions, the permittee shall operate at the ammonia flow rate, which was established during the last stack test.~~

~~_____ Ammonia emissions shall be calculated continuously using inlet and outlet NO_x concentrations from the SCR system and ammonia flow supplied to the SCR system. The calculation procedure shall be provided with the CEM monitoring plan required by 40CFR Part 75. The following calculation represents one means by which the permittee may demonstrate compliance with this condition:~~

~~_____ Ammonia slip @ 15%O₂ = (A - (BxC/1,000,000)) x (1,000,000/B) x D,
where:~~

~~_____ A = ammonia injection rate (lb/hr) / 17 (lb/lb.mol)~~

~~_____ B = dry gas exhaust flow rate (lb/hr) / 29 (lb/lb.mol)~~

~~_____ C = change in measured NO_x (ppmv@15%O₂) across catalyst~~

~~_____ D = correction factor, derived annually during compliance testing by comparing actual to tested ammonia slip~~

~~_____ The calculation along with each newly determined correction factor shall be submitted with each annual compliance test. Calibration data ("as found" and "as left") shall be provided for each measurement device utilized to make the ammonia emission measurement and submitted with each annual compliance test.~~

~~_____ Upon specific request by the Department, a special re-test shall occur as described in the previous conditions concerning annual test requirements, in order to demonstrate that all NO_x and ammonia slip related permit limits can be~~

complied with.

~~12. 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.]~~

~~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_x 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_x 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:~~

Fuel-bound nitrogen (percent by weight)	F (NO_x percent by volume)
N ≤ 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 are approximately 10.0 for natural gas and 10.6 for fuel oil. The equivalent emission standards are 108 and 102 ppmvd at 15% oxygen. The emissions standards of this permit are 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.~~

~~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.~~

~~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 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 NO_x CEMS shall be used to demonstrate compliance with the NO_x limits of this permit. For purposes of complying with the sulfur content monitoring requirements of this rule, the owner or operator shall obtain a monthly report from the vendor indicating the sulfur content of the natural gas being supplied from the pipeline for each month of operation.~~

[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: ~~NO_x emissions monitoring by CEM system shall substitute for the requirements of paragraph (c)(1) because a NO_x monitor is required to demonstrate compliance with the standards of this permit. Data from the NO_x monitor shall be used to determine "excess emissions" for purposes of 40 CFR 60.7 subject to the conditions of the permit.~~

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

~~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 percent 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 provided 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_x) shall be computed for each run using the following equation:~~

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

where:

NO_x = emission rate of NO_x at 15 percent O₂ and ISO standard ambient conditions, volume percent.

NO_{x0} = observed NO_x 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.

Ho = observed humidity of ambient air, g H₂O/g air.

e = transcendental constant, 2.718.

Ta = ambient temperature, °K.

Department requirement: ~~The owner or operator is not required to have the NO_x monitor continuously correct NO_x emissions concentrations 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_x monitor shall be used to demonstrate compliance with the BACT NO_x 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 NO_x 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_x 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_x monitor. The span value specified in the permit shall be used instead of that specified in paragraph (c)(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: ~~The permit specifies sulfur testing methods and allows 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 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 the permit meet or exceed the requirements of this rule and will ensure compliance with this rule.]~~

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. Owen

Hamilton S. Owen, P.E.

Administrator

Siting Coordination Office

FILING AND ACKNOWLEDGMENT

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

Deise Cunningham 7/21/06
Clerk Date