JEA
Brandy Branch Generating Station

Title V Air Operation Permit

Revision Application

May 2005

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May 20, 2005

Trina L. Vielhauer, Chief
Bureau of Air Regulation
Division of Air Resource Management
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: JEA Brandy Branch Generating Station Title V Permit Revision Application

Dear Ms. Vielhauer:

On behalf of JEA, enclosed please find an original and four (4) copies of a Title V permit revision application for the Brandy Branch Generating Station. This permit application also includes requests for minor changes to the facility construction permits. Please see the application support document for a more detailed description of the requested changes associated with the application. JEA will also be requesting a change to the allowable emissions during startup and shutdown, as well as their definition, after JEA obtains additional information from GE and is able to work with DEP personnel to reach a mutually acceptable method for dealing with startup and shutdown emissions.

If you have any questions, please contact Bert Gianazza, P.E. of JEA at (904) 665-6247.

Sincerely,

Bob Holmes

Bob Holmes
Air Quality Scientist
BLACK & VEATCH

Enclosure[s]

cc: Bert Gianazza, P.E., JEA

JEA Brandy Branch Generating Station
Title V Revision Application

1.0 INTRODUCTION

This Title V Permit revision application is for the Brandy Branch Generating Station located in the rural Western portion of Duval County approximately 1 mile northeast of Baldwin, Florida. The Brandy Branch Generating Station consists of one simple cycle combustion turbine and two combined cycle combustion turbines with supplemental duct firing. Ancillary equipment includes a mechanical draft cooling tower and fuel oil storage tanks.

The primary purpose of this application is to include the combined cycle combustion turbines in the facility's Title V permit. As required by Florida Administrative Code regulations, JEA has prepared this Title V Operating Permit Revision Application on the forms provided by the Florida Department of Environmental Protection (FDEP). Supplementary Attachments are included to support the information contained in the application forms. This application also serves as a construction permit revision application in that some minor changes to the existing construction permits for this facility are requested as part of this application.

The facility is currently operating under Title V Operation Permit Number 0310485-005-AV. The facility also holds Construction Permit No. PSD-FL-267 (0310485-001-AC), a modification to Construction Permit No. PSD-FL-267 dated January 18, 2005, Construction Permit No. PSD-FL-310 (0310485-003-AC) and modifications to Construction Permit No. PSD-FL-310 dated June 5, 2003 and May 17, 2004. Construction Permit No. PSD-FL-267 was issued to cover the installation of three simple cycle combustion turbines (Units 1, 2, and 3) and the installation of two fuel oil storage tanks. The January 18, 2005 modification to Construction Permit No. PSD-FL-267 allowed for normal operation to include operation down to 62 gross megawatts when firing natural gas. Construction Permit No. PSD-FL-310 was issued to cover the conversion of Combustion Turbine Unit 2 and Combustion Turbine Unit 3 from simple cycle to combined cycle units with supplementary duct firing and allowed for the installation of one mechanical draft cooling tower. The June 5, 2003 modification to Construction Permit No. PSD-FL-310 allowed for installation of larger duct burners in the heat recovery steam generators (HRSGs) of Unit 2 and Unit 3. The May 17, 2004 modification to Construction Permit No. PSD-FL-310 allowed for operational flexibility associated with the option of using a lower sulfur fuel oil (0.0065 percent sulfur by weight) in all three of the combustion turbines.

2.0 APPLICATION REVIEW POINTS

To assist in the Title V revision process, we are presenting what we perceive to be the major points that will arise in processing the revision application and any requested changes to existing permit conditions. These review points are presented below and, where appropriate, a summary of how each is addressed in the permit application.

1. The two facility diesel fuel storage tanks are no longer subject to the *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.* This New Source Performance Standard (NSPS) is found at 40 Code of

Federal Regulations (CFR) Part 60 Subpart Kb. This NSPS was revised on October 15, 2003. Under this revision, the NSPS does not apply to storage vessels with a maximum true vapor pressure less than 3.5 kilopascals. Prior to this revision, the two (2) fuel oil storage tanks were only subject to the requirement to maintain records of the date of construction, the material storage capacity, and the type of the material stored. Pursuant to Rule 62-210.300(3) the tanks are exempt from construction permit requirements and pursuant to Rule 62-213.430(6) the tanks are considered insignificant activities for Title V permitting purposes. Therefore, with this application it is requested that the conditions from Section III, Subsection B of the existing Title V permit not be carried over to the Title V renewal permit and the appropriate changes be made to Air Construction Permit PSD-FL-267.
Addressed in application: The fuel oil storage tanks are listed in Attachment F (List of Insignificant Activities) to the application forms.

2. The three combustion turbines are all subject to NSPS Subpart GG, *Standards of Performance for Stationary Gas Turbines*. This NSPS was revised on July 8, 2004. This revision affects some of the NSPS requirements applicable to the Brandy Branch combustion turbines. Per 60.334(h)(2), The owner or operator must monitor the nitrogen content of the fuel combusted in the turbine, if the owner or operator claims an allowance for fuel bound nitrogen. JEA is not claiming an allowance for fuel bound nitrogen, and as such, the requirement to monitor fuel bound nitrogen is no longer required. Also, per 60.334(h)(3) "...the owner or operator may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in 60.331(u), regardless of whether an existing custom schedule approved by the Administrator for Subpart GG requires such monitoring. The owner or operator shall use one of the following sources of information to make the required demonstration: (i) The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less..." A tariff sheet is included in Attachment P of the application forms which specifies that the natural gas shall contain not more than ten grains of total sulfur per one hundred cubic feet of gas. Therefore, per 60.334(h)(3) JEA elects not to monitor the total sulfur content of gaseous fuels. Based on these revisions to NSPS Subpart GG, it is requested that the following changes be made as part of the Title V revision process:
   a. Removal of Condition A.21 of Permit No. 0310485-005-AV.
   b. Modify Condition A.24 of Permit No. 0310485-005-AV to remove the requirement that the fuel shipment analysis report include fuel nitrogen content, as a NOx allowance for fuel-bound nitrogen will not be applied and an F-value of zero is accepted.
   c. Removal of the natural gas monitoring schedule included as Condition A.25 of Permit No. 0310485-005-AV.
   d. Removal of Application Standards and Regulations Condition 31 of Permit No. PSD-FL-310. With the aforementioned changes to NSPS Subpart GG and the submittal of the natural gas tariff sheet in Attachment P of this application, this condition is no longer needed.
   e. Except for the bulleted item for fuel oil monitoring, removal of Application Standards and Regulations Condition 42 of Permit No. PSD-FL-310. The basis for this condition was that it could be used in lieu of the daily sampling requirements of 40 CFR 60.334(b)(2). Because daily sampling of the natural gas is no longer required under the revised NSPS Subpart GG, this condition can be removed from Permit No. PSD-FL-310 and should not be transferred to the revised Title V permit. The requirement for an

analysis showing the sulfur content of each bulk shipment of No. 2 or superior grade fuel oil should remain in the permit and be carried over to the Title V revision permit. JEA recommends changing the wording of this condition to remove the stipulation that the fuel oil analysis must be provided by the fuel vendor. As long as the appropriate analysis methods are used, it should not matter if the analysis is provided by the vendor or if the facility has the analysis done.

3. In accordance with the current FDEP permitting philosophy for combustion turbine projects, JEA is requesting that the PM/PM_{10} lb/hr emission limits be removed from the revised Title V permit and associated permit conditions in the respective construction permits be modified to reflect this. Emissions of PM/PM_{10} are minimized by the firing of natural gas, low sulfur fuel oil or very low sulfur fuel oil. Minimal emissions of PM/PM_{10} are ensured by the use of visible emission standards and visible emission testing.
   By this request, JEA is requesting that the following be removed from Condition 24 of the Applicable Standards and Regulations Section of Permit No. PSD-FL-310:
   "PM/PM_{10} emissions from each combustion turbine and HRSG train shall not exceed 22.02 lb/hr at 100% output firing natural gas with the duct burner on and 62.1 lb/hr at 100% load output firing fuel oil to be demonstrated by opacity."
   By this request, JEA is requesting that the following be removed from Condition A.14 of Section III, Subsection A of Permit No. 0310485-005-AV:
   "Particulate matter emissions shall not exceed 9.0 lb/hr (front catch) while firing natural gas and 17.0 lb/hr (front catch) while firing fuel oil as indicated by opacity."

4. CAM Plans: Units 1, 2 and 3 all include water injection for NO_x control when firing fuel oil. Units 2 and 3 include the use of SCR for NO_x control when firing either natural gas or fuel oil. These units all include a NO_x emissions limit and have uncontrolled NO_x emissions greater than 100 tons per year and as such fit the general applicability requirements of 40 CFR 64.2(a) for requiring a Compliance Assurance Monitoring (CAM) plan. However, each of these units include continuous emissions monitoring systems (CEMS) to monitor NO_x emissions. Consistent with past FDEP CAM determinations and in accordance with 40 CFR 64.2(b)(1)(vi), because each of Units 1, 2 and 3 will include the requirement that CEMS be used as a continuous compliance determination method as part of their Title V permit, the requirements of Part 64 are not applicable to the NO_x emission limits. Therefore, the CAM plan requirements of 40 CFR Part 64 are not applicable to Units 1, 2 or 3 and CAM plans are not required for this Title V Revision application.

5. It is requested that where reporting is required to be sent to multiple agencies that, if acceptable, the permit conditions be changed to require that submittals only be required to be submitted to the City of Jacksonville Environmental Resource Management Department (ERMD), formerly the Regulatory and Environmental Services Department (RESD). The exception to this request is the submittal of Annual Operating Reports (AORs) that are submitted electronically only to the FDEP office in Tallahassee. This request applies to the following specific conditions in current facility permits:
   a. Condition 12 of the Applicable Standards and Regulations section of Permit No. PSD-FL-310 (0310485-003-AC) requires that the annual operating report (AOR) be submitted to both the DEP's Northeast District Office as well as RESD (now ERMD). JEA requests that the permit require that the AOR only be submitted to FDEP, since the AOR reporting system is set up such that reports are submitted electronically to FDEP. Also, it

appears that the reference for this condition should be Rule 62-210.370(3), F.A.C. instead of Rule 62-210.370(2), F.A.C.

b. Condition I.A.45 of Permit No. 0310485-005-AV requires that test reports be filed with the Department's Northeast District Office, while Condition I.A.51 requires that compliance test results be to RESD (now ERMD).

6. VOC emission limits included in PSD-FL-267 were not included in Title V Permit No. 0310485-005-AV. JEA recommends that the VOC limits be removed from PSD-FL-267 or that these limits be included in the revised Title V permit.

7. In the May 17, 2004 revision to Permit No. PSD-FL-310, as part of the modification to Condition 14.B, it is indicated that the maximum hours of operation for Unit 1 is 8,760 hours per year. However, Unit 1 operation was previously limited to 4,750 hours per year and the application for the May 17, 2004 permit revision did not address increased operating hours for Unit 1. JEA recommends that the revised Title V permit include a condition to limit Unit 1 operation to 4,750 hours per year.

8. In the January 18, 2005 modification to permit No. PSD-FL-267, specific condition 26 of the Applicable Standards and Regulations Section was modified to allow for normal operation to include operation down to 62 gross megawatts when firing natural gas. JEA requests that the revised permit language from this permit modification be included in the revised Title V permit. The third sentence of Condition A.15 of Permit No. 0310485-005-AV should read as follows "Operation below 50% output while firing fuel oil (and below 62 gross megawatts while firing natural gas) shall be limited to 2 hours per unit cycle (breaker closed to breaker open)."

9. JEA is requesting a number of changes to permit language regarding monitoring requirements. These changes, along with the justification for each are as follows.

Permit 0310485-005-AV Condition A.5

From:

A.5. Capacity. The nominal maximum heat input rates, based on the lower heating value (LHV) of each fuel to each Unit (1-3) at ambient conditions of 59°F temperature, 60% relative humidity, 100% load, and 14.7 psi pressure shall not exceed 1,623 million Btu per hour (MMBtu/hr) when firing natural gas, nor 1,822 MMBtu/hr when firing No. 2 or superior grade of distillate fuel oil. These maximum heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions or equations for correction to other ambient conditions shall be provided to the Department of Environmental Protection (DEP) within 45 days of completing the initial compliance testing.

{Permitting note: The heat input limitations have been placed in the permit to identify the capacity of each emissions unit is conducted within 90-100 percent of the emissions unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead, the owner or operator is expected to determine heat input whenever emission testing is required, to demonstrate at what percentage of the rated capacity that the unit was tested. Rule 62-297.310(5), F.A.C.,

included in this permit, requires measurement of the process variables for emission tests. Such heat input determination may be based on measurements of fuel consumption by various methods (including but not limited to) fuel flow metering or tank drop measurements, using the heat value of the fuel determined by the fuel vendor or the operator to calculate average hourly heat input during the test.}

To:

A.5. Capacity. The nominal maximum heat input rates to each Unit (1-3) are 1,623 million Btu per hour (MMBtu/hr) when firing natural gas or 1,822 MMBtu/hr when firing No. 2 or superior grade of distillate fuel. The nominal values are based on the lower heating value (LHV) of each fuel at ambient conditions of 59°F, 60% relative humidity, 100% load, and 14.7 psi pressure. The maximum heat input to the units will vary depending upon ambient conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions or equations for correction to other ambient conditions shall be provided to the Department of Environmental Protection (DEP) within 45 days of completing the initial compliance testing.

{Permitting note: The nominal maximum heat input values have been placed in the permit to identify that the capacity of each emissions unit is conducted within 90-100 percent of the emissions unit's rated capacity (or to limit future operation to 110 percent of the test load). Regular record keeping is not required for heat input. Instead, the owner or operator is expected to determine heat input whenever emission testing is required, to demonstrate at what percentage of the rated capacity that the unit was tested. Rule 62-297.310(5), F.A.C., included in this permit, requires measurement of the process variables for emission tests. Such heat input determination may be based on measurements of fuel consumption by various methods (including but not limited to) fuel flow metering or tank drop measurements, using the heat value of the fuel determined by the fuel vendor or the operator to calculate average hourly heat input during the test.}

Justification:

The "maximum heat input" would be more appropriately expressed as a nominal value primarily for establishing emission testing conditions. As the permit condition expresses, the maximum heat input will vary in accordance with the operating conditions. While variable, the heat input is reasonably bounded by the constraints of turbines so no "limit" is necessary. The permitting note also states that no record keeping is required for heat input, suggesting that it was never envisioned as a traditional limit.

Permit 0310485-005-AV Condition A.11

From:

A.11. Nitrogen Oxides (NO_X).

When NO_X monitoring data are not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate any specified average time.

While firing Natural Gas. The emission rate of NO_X in the exhaust gas shall not exceed 69.3 lb/hr (at ISO conditions) on a 24 hr block average as measured by the continuous emission monitoring system (CEMS). In addition, NO_X emissions calculated as NO_2 (at ISO conditions) shall not exceed 10.5 ppmvd @15% O_2 to be demonstrated by annual stack test. Note: Basis for lb/hr limit is 10.5 ppmvd @ 15% O_2, full load.

While firing Fuel Oil. The concentration of NO_X in the exhaust gas shall not exceed 42 ppmvd at 15% O_2 on the basis of a 3 hr average as measured by the continuous emission monitoring system (CEMS). In addition, NO_X emissions calculated as NO_2 (at ISO conditions) shall not exceed 42 ppmvd @15% O_2 to be demonstrated by stack test.

...

To:

A.11. Nitrogen Oxides (NO_X).

While firing Natural Gas. The emission rate of NO_X in the exhaust gas shall not exceed 69.3 lb/hr on a 24 hr block average as measured by the continuous emission monitoring system (CEMS). In addition, NO_X emissions calculated as NO_2 shall not exceed 10.5 ppmvd @15% O_2 as demonstrated by an annual stack test. Note: Basis for lb/hr limit is 10.5 ppmvd @ 15% O_2, full load.

While firing Fuel Oil. The concentration of NO_X in the exhaust gas shall not exceed 42 ppmvd at 15% O_2 on the basis of a 3 hr average as measured by the continuous emission monitoring system (CEMS). In addition, NO_X emissions calculated as NO_2 (at ISO conditions) shall not exceed 42 ppmvd @15% O_2 as demonstrated by a stack test.

...

Justification:

The stipulation that Part 75 missing data substitution should be used to calculate NO_X averages under the permit is incongruous with the concept of compliance determinations. It also puts condition A.11 in conflict with condition A.31 that states that averages should be based on *valid* data.

Only valid data can be used for determining compliance with an emissions standard. If data are invalid or missing, a compliance determination simply cannot be made. To suggest that substitute data should be used to calculate averages for compliance purposes is potentially tantamount to implying a violation without credible evidence. The Part 75 missing data substitution provisions represent a conservative scheme to fill in periods when data are unavailable specifically for allowance tracking purposes. The values represent "made up" numbers that inherently have no place in determining compliance with permit limits and should not be included in any block compliance average.

Removing the missing data requirement from Condition A.11 will make PSD-FL-267 consistent with PSD-FL-310 for Units 2 and 3. In response to potential concerns regarding data availability, it should be realized that, while the values should not be used for compliance purposes, the conservative nature of the Part 75 missing data provisions will serve to motivate sources to maintain reasonable monitor availabilities. If the monitor availability falls, the missing data substitution will become more punitive, costing the source more NO_X allowances under the pending Clean Air Interstate Rule. The potential allowance impact will serve as a natural incentive to keep the monitor data availability high both for Part 75 as well as compliance determination purposes.

The ISO condition correction equation in Subpart GG of 40 CFR Part 60 only applies to NO_X emissions from diffusion flame burners. It was compiled based on turbine manufacturer data from the 1970s. It was not developed for nor does it apply to current low NO_X burner technology. It does not apply to low NO_X burner technology used with the units firing natural gas. The specification that the emissions be expressed "at ISO conditions" should, therefore, be eliminated for the natural gas NO_X limit.

Permit 0310485-005-AV Condition A.12

From:

A.12. Carbon Monoxide (CO). The concentration of CO in the exhaust gas when firing natural gas shall not exceed 15 ppmvd when firing natural gas and 20 ppmvd when firing fuel oil as measured by EPA Method 10. CO emissions (at ISO conditions) shall not exceed 48.0 lb/hr (when firing natural gas) and 65.0 lb/hr (when firing fuel oil) as indicated by EPA Method 10.

...

To:

A.12. Carbon Monoxide (CO). The concentration of CO in the exhaust gas when firing natural gas shall not exceed 15 ppmvd when firing natural gas and 20 ppmvd when firing fuel oil as measured by EPA Method 10. CO emissions shall not exceed 48.0 lb/hr (when firing natural gas) and 65.0 lb/hr (when firing fuel oil) as indicated by EPA Method 10.

...

Justification:

The ISO condition correction equation in Subpart GG of 40 CFR Part 60 only applies to NO_X emissions. It was never intended to apply to CO emissions, so the "at ISO conditions" specification should, therefore, be eliminated.

PSD-FL-310 Permit - Section III-Emission Unit(s) Specific Condition No. 41

From:

41. Continuous Monitoring System: ...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...

To:

41. Continuous Monitoring System: ...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 an algorithm based on fuel characteristics and stack CO_2 (or O_2) measurements to calculate the moisture content in the exhaust gas 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...

Justification:

Stack moisture is principally a function of the hydrogen/carbon ratio of the fuel and the amount of excess combustion air. Given this, the moisture concentration in the exhaust

will be a function primarily of whether the unit is combusting oil or gas and either the stack O_2 (or CO_2 since the two are interrelated). An algorithm based on the typical ultimate analysis for each fuel, F-factor and O_2 or CO_2 concentration should be more accurate than a curve derived from manual stack test data since it will reflect the actual excess air, which can vary with ambient conditions.

PSD-FL-310 Permit - Section III-Emission Unit(s) Specific Condition No. 41

From:

41. Continuous Monitoring System: ...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% O_2...

To:

41. Continuous Monitoring System: ...The NO_X monitor shall be a dual range monitor. The span values for the NO_X monitor will be determined in accordance with section 2.1.2 in Appendix A of 40 CFR Part 75...

Justification:

Section III-Emission Unit(s) Specific Condition No. 41 states that the upper range of the NO_x monitor shall not be greater than 30 ppm NO_x, as corrected to 15% O_2. This is incorrect. The upper range of the NO_x monitor should be set to either 200 or 300 ppm NO_x, which is typical for these types of sources. Since the analyzer span and range values are already prescribed under Part 75, no additional specification is necessary.

PSD-FL-310 Permit - Section III-Emission Unit(s) Specific Condition No. 41

From:

41. Continuous Monitoring System: ... 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% O_2...

To:

41. Continuous Monitoring System: ... 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 be set as appropriate to reflect the level of CO emissions seen during unit startup. ...

Justification:

Section III-Emission Unit(s) Specific Condition No. 41 states that the upper range of the CO monitor shall not be greater than 100 ppm CO, as corrected to 15% O_2. This is incorrect. The upper range of the CO monitor should be set anywhere from 1,200-5,000 ppm, depending upon the level of CO emissions seen during unit startup, which is typical for these types of sources.

PSD-FL-310 Permit - Section III-Emission Unit(s) Specific Condition No. 41

From:

41. Continuous Monitoring System: ... The CO monitor and CO_2 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 CO_2 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 RESD and the Department's Northeast District Office. ... The RATA tests required for the CO_2 monitor shall be performed using EPA Method 3B, of Appendix A of 40 CFR 60. ...

To:

41. Continuous Monitoring System: ... The CO monitor and CO_2 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 Specifications 4 and 4A. The CO_2 monitor shall be certified and maintained pursuant to 40 CFR 75. Quality assurance procedures for the CO monitor 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 RESD and the Department's Northeast 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 RATA tests required for the CO_2 monitor shall be performed using EPA Method 3A or 3B, of Appendix A of 40 CFR 60. ...

Justification:

Section III-Emission Unit(s) Specific Condition No. 41 states that the CO_2 monitor shall be certified (and maintained) pursuant to 40 CFR Part 60, Appendix B, Performance Specification 3. However, note that since the NO_x CEMS utilizes diluent data to determine NO_x lb/mmBtu emission rates, the CO_2 monitor is subject to the requirements of 40 CFR Part 75. This requirement should reference 40 CFR Part 75 instead of 40 CFR Part 60 (which is now permitted per the July 2004 revisions to Subpart GG). In addition, CO_2 testing should be performed using either Method 3A or 3B, and not just Method 3B.

PSD-FL-310 Permit - Section III-Emission Unit(s) Specific Condition No. 41

From:

45. 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 firing natural gas and operating with the duct burner on as defined in Specific Condition 20. The ammonia injection rate necessary to comply with the NO_X standard shall be established and reported during each annual 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 continuously 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:

$$\text{Ammonia slip @ } 15\%O_2 = (A-(BxC/1{,}000{,}000)) \times (1{,}000{,}000/B) \times D,$$

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%O_2) 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 RESD or 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.

To:

45. 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 firing natural gas and operating with the duct burner on as defined in Specific Condition 20. The ammonia injection rate necessary to comply with the NO_X standard shall be established and reported during each annual performance test.

Stack emission tests for nitrogen oxides and ammonia from the CT/HRSG pair shall be used to correlate the ratio of actual measured to theoretically calculated ammonia slip using the following equation:

$D = (\text{Ammonia slip@ } 15\%O_2) / [(A-(BxC/10^6)) \times (10^6/B)]$, where:

A= actual 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 (ppmdv@15%O_2) across catalyst

D = correction factor, derived during compliance testing by comparing actual to calculated ammonia slip

The maximum allowable ammonia injection rates for both oil and gas will be calculated using the following equation:

$A_{max} = (S_{max} / D + C_{max}) \times (B_{max} / 10^6)$, where:

A_{max} = maximum allowable ammonia injection rate

S_{max} = maximum ammonia slip (5 ppm @ 15%O_2 for gas; 9 ppm @ 15% O_2 for oil)

B_{max} = maximum dry gas exhaust flow rate (lb/hr) / 29 (lb/lb.mol)

C_{max}= maximum potential NO_X differential across catalyst (10.5 ppmdv @ 15% O_2 for gas and 42 ppmdv @ 15% O_2 for oil or tested value, if higher)

D = correction factor, derived during compliance testing by comparing actual to calculated ammonia slip

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.

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. The maximum allowable ammonia injection rate for gas and/or oil may also be redetermined based on the results of subsequent annual compliance testing at the source's option or upon specific request by RESD or the Department.

Justification:

In theory, an estimate of the ammonia slip should be possible based on the ammonia injection rate and differential NO_X concentration across the SCR using the equation included in Condition 45. However, the approach is tenuous because of uncertainty concerns. While there are other concerns, the principle issue relates to the fact that the calculation is based on determining the relatively small difference between the ammonia injection rate and NO_X differential on a molar basis. Because, comparatively, the values are rather large, any uncertainty in the injection rate (or aqueous NH_3 concentration) and inlet or outlet NO_X concentration will have a significant impact on the calculated slip value.

As a practical matter, a permit limit for ammonia slip is not necessary. A source has an inherent incentive to limit the ammonia injection to minimize the reagent cost but, more importantly, since the over injection can foul the catalyst. Notwithstanding, an alternative way to limit the ammonia slip is to establish a maximum ammonia injection rate. The maximum ammonia injection rate would supplement the inherent control incentive and would help highlight potential problems with the catalyst or CEMS

Under the revised condition, a source can calculate the maximum injection rate based on the NO_X differential measured across catalyst during the most recent compliance test or based on the limits in the previous permit prior to the installation of the SCR and the conversion of the units to combined cycle. Specific Condition 29 will be revised to indicate that the unit will be deemed in compliance with the ammonia slip limit if the ammonia injection rate is less than the maximum allowable ammonia injection rate.

PSD-FL-310 Permit - Section III-Emission Unit(s) Specific Condition No. 29

From:

29. ... The applicant shall calculate and report the ppmvd ammonia slip (@ 15% O_2) 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.

To:

29. ... The applicant shall record the ammonia injection rate on a continual basis. Excluding periods of startup or shutdown, the ammonia slip will be deemed in compliance with the ammonia slip limit defined in Condition 20 if the 3-hour average ammonia injection rate is less than or equal to the maximum ammonia injection rate determined in accordance with Condition 45. If the 3-hour average ammonia injection rate exceeds the maximum ammonia injection rate (for that fuel), the source shall test to verify that the actual ammonia slip does not exceed the limit in Condition 20.

Justification:

See previous justification for modification to Condition 45.

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit for a proposed project:

- subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.

Air Operation Permit – Use this form to apply for:

- an initial federally enforceable state air operation permit (FESOP); or
- an initial/revised/renewal Title V air operation permit.

Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option) – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: JEA	
2. Site Name: Brandy Branch Generating Station	
3. Facility Identification Number: 0310485	
4. Facility Location...: Street Address or Other Locator: JEA Brandy Branch Generating Station City: Baldwin City County: Duval Zip Code: 32234	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: N. Bert Gianazza, P.E.
2. Application Contact Mailing Address... Organization/Firm: JEA Street Address: 21 West Church Street City: Jacksonville State: FL Zip Code: 32202-3139
3. Application Contact Telephone Numbers... Telephone: (904) 665-6247 ext. Fax: (904) 665-7376
4. Application Contact Email Address: giannb@jea.com

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Project Number(s):	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

APPLICATION INFORMATION

Purpose of Application

This application for air permit is submitted to obtain: (Check one)

Air Construction Permit

☒ Air construction permit.

Air Operation Permit

☐ Initial Title V air operation permit.

☒ Title V air operation permit revision.

☐ Title V air operation permit renewal.

☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.

☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

☒ Air construction permit and Title V permit revision, incorporating the proposed project.

☐ Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

☒ I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

The primary purpose of this application is to incorporate the facility modifications encompassed in Construction Permit No. PSD-FL-310 (combined cycle conversion project) and subsequent modifications to this construction permit into the facility Title V Permit as a revision to Title V Permit No. 3010485-005-AV. This application also includes requested changes to Title V Permit No. 3010485-005-AV and the associated construction permits and requested changes to Construction Permit No. PSD-FL-310. These requested changes are detailed in the application support document. Therefore, while there is no actual construction associated with this application, the box indicating that the application is for concurrent processing of construction permit and Title V operating permit revisions is checked.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
001	Unit 1 – 170 MW Simple Cycle Combustion Turbine		
002	Unit 2 – 170 MW Combined Cycle Combustion Turbine with Supplementary Fired HRSG		
003	Unit 3 - 170 MW Combined Cycle Combustion Turbine with Supplementary Fired HRSG		
007	Mechanical Draft Cooling Tower		

Application Processing Fee

Check one: ☐ Attached - Amount: $_____ ☒ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
   Mr. James M. Chansler, P.E., D.P.A., Vice President, Operations and Maintenance

2. Owner/Authorized Representative Mailing Address...
   Organization/Firm: JEA
   Street Address: 21 West Church Street
   City: Jacksonville State: FL Zip Code: 32202

3. Owner/Authorized Representative Telephone Numbers...
   Telephone: (904) 665-4433 ext. Fax: (904) 665-7990

4. Owner/Authorized Representative Email Address:

5. Owner/Authorized Representative Statement:

   I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.

James M. Chansler — Signature

5/17/05 — Date

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name:
   Mr. James M. Chansler, P.E., D.P.A., Vice President, Operations and Maintenance

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):
   - ☐ For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.
   - ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.
   - ☒ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.
   - ☐ The designated representative at an Acid Rain source.

3. Application Responsible Official Mailing Address...
   Organization/Firm: JEA
   Street Address: 21 West Church Street
   City: Jacksonville State: Florida Zip Code: 32202

4. Application Responsible Official Telephone Numbers...
   Telephone: (904) 665-4433 ext. Fax: (904) 665-7990

5. Application Responsible Official Email Address:

6. Application Responsible Official Certification:

   I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

   James M. Chansler
   Signature

   5/17/05
   Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: N. Bert Gianazza
   Registration Number: 38640
2. Professional Engineer Mailing Address...
   Organization/Firm: JEA
   Street Address: 21 West Church Street
   City: Jacksonville State: FL Zip Code: 32202
3. Professional Engineer Telephone Numbers...
   Telephone: (904) 665-6247 ext. Fax: (904) 665-7376
4. Professional Engineer Email Address: giannb@jea.com
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

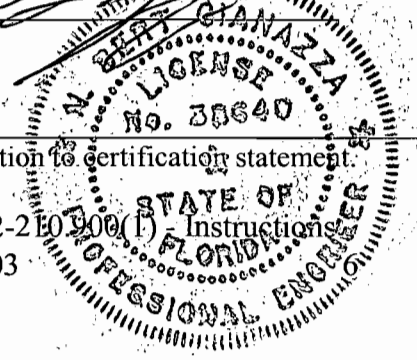
(4) If the purpose of this application is to obtain an air construction permit (check here ☐, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☒, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☒, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature

Date 5/17/05

(seal)



* Attach any exception to certification statement.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 17 East (km) 408.81 North (km) 3354.38		2. Facility Latitude/Longitude...: Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
3. Governmental Facility Code: 4	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4911
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: N. Bert Gianazza, P.E. – Environmental Services
2. Facility Contact Mailing Address... Organization/Firm: JEA Street Address: 21 West Church Street City: Jacksonville State: FL Zip Code: 32202
3. Facility Contact Telephone Numbers: Telephone: (904) 665-6247 ext. Fax: (904) 665-7376
4. Facility Contact Email Address: giannb@jea.com

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I. that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
4. Facility Primary Responsible Official Email Address:

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. ☐ Small Business Stationary Source	☐ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☒ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☐ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☒ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☐ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
NOX	A	N
CO	A	N
VOC	B	N
SO2	A	Y
PM	A	N
PM10	A	N

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility Wide Cap [Y or N]? (all units)	3. Emissions Unit ID No.s Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap
SO2	N	Units 2 and 3			

7. Facility-Wide or Multi-Unit Emissions Cap Comment:
Combined maximum 576 actual plus equivalent hours of fuel oil firing for the two combined cycle combustion turbines (Units 2 and 3) per consecutive 12-month period while firing 0.05% sulfur, by weight, fuel oil. Combined maximum 1,478 actual plus equivalent hours of fuel oil firing for the two combined cycle combustion turbines (Units 2 and 3) per consecutive 12-month period while firing lower sulfur fuel oil (0.0065% sulfur, by weight). Actual and equivalent hours are defined in Permit No. PSD-FL-310 (PA00-43) condition 14.B. and 14.C as modified on May 17, 2004.

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. A ☐ Previously Submitted, Date:
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. B ☐ Previously Submitted, Date:
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. C ☐ Previously Submitted, Date:

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location:
   ☐ Attached, Document ID:_____ ☒ Not Applicable (existing permitted facility)
2. Description of Proposed Construction or Modification:
   ☒ Attached, Document ID: Attach. D
3. Rule Applicability Analysis:
   ☒ Attached, Document ID: Attach. E
4. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
   ☐ Attached, Document ID:_____ ☐ Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable
6. Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable
7. Ambient Impact Analysis (Rule 62-212.400(5)(d), F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(5)(h)5., F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):
    ☐ Attached, Document ID:_____ ☒ Not Applicable

FACILITY INFORMATION

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
   ☐ Attached, Document ID: ☐ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities (Required for initial/renewal applications only):
   ☒ Attached, Document ID:Attach. F ☐ Not Applicable (revision application)

2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought):
   ☒ Attached, Document ID:Attach. G
   ☐ Not Applicable (revision application with no change in applicable requirements)

3. Compliance Report and Plan (Required for all initial/revision/renewal applications):
   ☒ Attached, Document ID:Attach. H
   Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.

4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only):
   ☐ Attached, Document ID:_____
   ☐ Equipment/Activities On site but Not Required to be Individually Listed
   ☐ Not Applicable

5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only) :
   ☐ Attached, Document ID:_____ ☐ Not Applicable

6. Requested Changes to Current Title V Air Operation Permit:
   ☒ Attached, Document ID:Attach. I ☐ Not Applicable

Additional Requirements Comment

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: Unit 1 – 170 MW Simple Cycle Combustion Turbine

3. Emissions Unit Identification Number: 001

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A		4-20-2001	49	☒ Yes ☐ No

9. Package Unit:
Manufacturer: General Electric Model Number: GE PG7241 FA

10. Generator Nameplate Rating: 170 MW

11. Emissions Unit Comment: This emission unit is a GE PG7241 FA combustion turbine. Unless otherwise noted, Unit information throughout the application is based on baseload, ISO conditions (59°F). This application is for revision of Title V Operation Permit No. 0310485-005-AV to include an additional operating segment consisting of firing lower sulfur fuel oil (0.0065% sulfur) in this emissions unit and associated conditions, as permitted under Construction Permit No. PSD-FL-310 and a May 17, 2004 modification to Construction Permit No. PSD-FL-310. Per a January 18, 2005 modification of Construction permit No. PSD-FL-267, it is requested that condition A.15 of Operating Permit No. 0310485-005-AV be modified to allow for normal operation to include operation down to 62 gross megawatts when firing natural gas. The third sentence of Condition A.15 should read as follows: "Operation below 50% output while firing fuel oil (and below 62 gross megawatts while firing natural gas) shall be limited to 2 hours per unit cycle (breaker closed to breaker open)."

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Low NOx Burner Technology (two-stage combustor): For natural gas firing the use of dry low NOx burner technology to control NOx emissions.

   Water Injection: Used to limit NOx emissions by lowering the combustion temperature through the use of water injection. This will be used for fuel oil firing

2. Control Device or Method Code(s): 205 (natural gas firing), 28 (fuel oil firing)

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1.	Maximum Process or Throughput Rate:		
2.	Maximum Production Rate:		
3.	Maximum Heat Input Rate:	1,736 million Btu/hr (LHV)	(natural gas firing)
		1,935 million Btu/hr (LHV)	(Fuel Oil Firing)
4.	Maximum Incineration Rate:	pounds/hr	
		tons/day	
5.	Requested Maximum Operating Schedule:		
	natural gas	24 hours/day	7 days/week
	firing	52 weeks/year	4,750 hours/year
	Fuel oil	16 hours/day	7 days/week
	firing	52 weeks/year	750 hours/year
	Lower sulfur fuel	24 hours/day	7 days/week
	oil firing	52 weeks/year	750 hours/year

6. Operating Capacity/Schedule Comment:
The maximum heat input (mmBtu/hr) given in Permit No. 0310485-005-AV, based on the lower heating value (LHV) of each fuel, at ambient conditions of 59°F temperature, 60% relative humidity, 100% load and 14.7 psi pressure, are as follows:
natural gas firing: 1,623
Fuel oil firing: 1,822
These maximum heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. The heat input rates are included in the permit only for purposes of determining capacity during performance tests. Continuous compliance with these rates is not required. The maximum projected heat input rates are with operation at an ambient temperature of 20°F and are as follows.
natural gas firing @ 20F, 100% load = 1,736 (LHV)
Fuel oil firing @20F, 100% load = 1,935 (LHV)

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: Item No. 23 on Plot Plan	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: Single stack		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: V	6. Stack Height: 90 feet	7. Exit Diameter: 18.0 feet
8. Exit Temperature: 1,116 °F	9. Actual Volumetric Flow Rate: 2,393,300 acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 408.835 North (km): 3354.491	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Exit temperature and flow rate are for operation of the combustion turbine on natural gas at an ambient temperature of 59°F and operation at 100% load.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 3

1. Segment Description (Process/Fuel Type): Simple cycle combustion turbine burning natural gas. This unit is allowed to operate on natural gas for the entire year (i.e. 8,760 hours per year) per the May 17, 2004 modification of Permit No. PSD-FL-310.		
2. Source Classification Code (SCC): 2-01-002-01	3. SCC Units: Million Cubic Feet Burned	
4. Maximum Hourly Rate: 1.99 (approx.)	5. Maximum Annual Rate: 8,870 (approx.)	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 869 (LHV)
10. Segment Comment: Approximate fuel use rate calculations: (heat input at LHV)/(fuel LHV) = hourly rate (1,736 mmBtu/hr)/(869 mmBtu/million scf) = 1.99 million scf/hour [(1,623 mmBtu/hr)/(869 mmBtu/million scf)]x(4,750 hr/yr) = 8,870 million scf/yr Approximate fuel use rates are provided for informational purposes only and do not constitute limits. Actual fuel use rates are a function of the fuel heating value and the emission unit operating conditions. Hourly maximum rates are at 20°F ambient temperature. Maximum annual rates are based on 100 percent load operation at 59°F ambient temperature.		

Segment Description and Rate: Segment 2 of 3

1. Segment Description (Process/Fuel Type): Simple cycle combustion turbine burning 0.05% sulfur No. 2 distillate fuel oil. The maximum allowable hours of fuel oil firing for Unit 1 is 750 hours per consecutive 12-month period.		
2. Source Classification Code (SCC): 2-01-001-01	3. SCC Units: Thousand Gallons Burned	
4. Maximum Hourly Rate: 14.8 (approx.)	5. Maximum Annual Rate: 10,431 (approx.)	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.05	8. Maximum % Ash:	9. Million Btu per SCC Unit: 131 (LHV)
10. Segment Comment: Approximate fuel use rate calculations: (heat input at LHV)/(fuel LHV) = hourly rate (1,935 mmBtu/hr)/(131 mmBtu/kgal) = 14.8 kgal/hour [(1,822 mmBtu/hr)/(131 mmBtu/kgal)] x (750 hr/yr) = 10,431 kgal/yr Approximate fuel use rates are provided for informational purposes only and do not constitute limits. Actual fuel use rates are a function of the fuel heating value and the emission unit operating conditions. Hourly maximum rates are at 20°F ambient temperature. Maximum annual rates are based on 100 percent load operation at 59°F ambient temperature.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 3 of 3

1. Segment Description (Process/Fuel Type): Simple cycle combustion turbine burning lower sulfur fuel oil (0.0065% sulfur, by weight). The proposed maximum allowable hours of lower sulfur fuel oil firing for Unit 1 is 750 hours per consecutive 12-month period.		
2. Source Classification Code (SCC): 2-01-001-01	3. SCC Units: Thousand Gallons Burned	
4. Maximum Hourly Rate: 14.8 (approx.)	5. Maximum Annual Rate: 10,431 (approx.)	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.0065	8. Maximum % Ash:	9. Million Btu per SCC Unit: 131 (LHV)
10. Segment Comment: Approximate fuel use rate calculations: (heat input at LHV)/(fuel LHV) = hourly rate (1,935 mmBtu/hr)/(131 mmBtu/kgal) = 14.8 kgal/hour [(1,822 mmBtu/hr)/(131 mmBtu/kgal)] x (750 hr/yr) = 10,431 kgal/yr Approximate fuel use rates are provided for informational purposes only and do not constitute limits. Actual fuel use rates are a function of the fuel heating value and the emission unit operating conditions. Hourly maximum rates are at 20°F ambient temperature. Maximum annual rates are based on 100 percent load operation at 59°F ambient temperature.		

Segment Description and Rate: Segment of _____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
NOX	**205**	**028**	**EL**
CO			**EL**
VOC			**NS**
SO2			**WP**
PM			**EL**
PM10			**NS**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: NOX	2. Total Percent Efficiency of Control:
3. Potential Emissions: 338 lb/hour 257.85 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 0

8. Calculation of Emissions:
Hourly NO_x emission rates for simple cycle operation:
Natural gas = 69.3 lb/hr (at ISO conditions) on a 24-hour block average basis
Fuel oil = 338 lb/hr @ 20°F
Potential annual emissions:
natural gas = 69.3 lb/hr
Fuel oil = 318 lb/hr @ 59°F
This emissions unit is permitted to operate up to 4,750 hours per year of total operation and 750 hours per year when firing fuel oil. Under this scenario, worst-case annual NO_x emissions are with 4,000 hours per year of operation on natural gas and 750 hours per year of operation on fuel oil.
Annual emissions = [(69.3 lb/hr) x (4,000 hr/yr) + (318 lb/hr) x (750 hr/yr)] / (2,000 lb/ton) = 257.85 ton/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
The hourly NO_x emissions rate with operation on natural gas is from Permit No. 0310485-005-AV and is based on a 24-hour block average as measured by the CEMS. The hourly emissions rate with operation on fuel oil are based on the permitted limit of 42 ppmvd @15% O_2 on a 3-hour average and are given for informational purposes only and do not constitute limits. The annual potential emissions are given for informational purposes only and do not constitute limits.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 10.5 ppmvd @ 15% O_2 while firing natural gas	4. Equivalent Allowable Emissions: 69.3 lb/hour 164.6 tons/year
5. Method of Compliance: Annual stack test	
6. Allowable Emissions Comment (Description of Operating Method): Requirement of Permit No. 0310485-005-AV. NO_x calculated as NO_2 (at ISO conditions). The pound per hour and ton per year equivalent emissions rates are given for informational purposes only and do not constitute limits.	

Allowable Emissions Allowable Emissions 2 of 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 69.3 lb/hr (at ISO conditions) 24-hr block average while firing natural gas	4. Equivalent Allowable Emissions: 69.3 lb/hour 164.6 tons/year
5. Method of Compliance: CEMS	
6. Allowable Emissions Comment (Description of Operating Method): Requirement of Permit No. 0310485-005-AV. The ton per year equivalent emissions rate is given for informational purposes only and does not constitute a limit.	

Allowable Emissions Allowable Emissions 3 of 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 42 ppmvd at 15% O_2 while firing fuel oil	4. Equivalent Allowable Emissions: 338 lb/hour 119.3 tons/year
5. Method of Compliance: Demonstrated by the CEMS on a 3-hr average basis. Demonstrated by stack test with NO_x emissions calculated as NO_2 (at ISO conditions)	
6. Allowable Emissions Comment (Description of Operating Method): Requirement of Permit No. 0310485-005-AV. The pound per hour and ton per year equivalent emissions rates are given for informational purposes only and do not constitute limits.	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 4 of 4

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 75 ppmvd @ 15% O_2	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: CEMS	
6. Allowable Emissions Comment (Description of Operating Method): Rule: 40 CFR 60.332 of Subpart GG – Standards of Performance for Stationary Gas Turbines. Note: 75 ppm @ 15% O_2 is based on the equation in 40 CFR 60.332(a)(1). Assumes no NO_x emissions allowance for fuel bound nitrogen.	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control:
3. Potential Emissions: 65 lb/hour 120.38 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 0

8. Calculation of Emissions:
Hourly CO emission rates for simple cycle operation:
Natural gas = 48.0 lb/hr (at ISO conditions)
Fuel oil = 65.0 lb/hr (at ISO conditions)
Potential annual emissions:
This emissions unit is permitted to operate up to 4,750 hours per year of total operation and 750 hours per year when firing fuel oil. Under this scenario, worst-case annual CO emissions are with 4,000 hours per year of operation on natural gas and 750 hours per year of operation on fuel oil.
Annual emissions = [(48 lb/hr) x (4,000 hr/yr) + (65 lb/hr) x (750 hr/yr)] / (2,000 lb/ton) = 120.38 ton/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
Hourly emission rates are from Permit No. 0310485-005-AV. The potential annual emissions rate is given for informational purposes only and does not constitute a limit.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 15 ppmvd whiling firing natural gas	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: EPA Method 10	
6. Allowable Emissions Comment (Description of Operating Method): Requirement of Permit No. 0310485-005-AV. Applies when firing natural gas.	

Allowable Emissions Allowable Emissions 2 of 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 48.0 lb/hr (ISO Conditions) while firing natural gas	4. Equivalent Allowable Emissions: 48 lb/hour 114.0 tons/year
5. Method of Compliance: EPA Method 10	
6. Allowable Emissions Comment (Description of Operating Method): Requirement of Permit No. 0310485-005-AV. Applies when firing natural gas. The ton per year equivalent emissions rate is given for informational purposes only and does not constitute a limit.	

Allowable Emissions Allowable Emissions 3 of 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 20 ppmvd while firing fuel oil	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: EPA Method 10	
6. Allowable Emissions Comment (Description of Operating Method): Requirement of Permit No. 0310485-005-AV. Applies when firing fuel oil.	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 4 of 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 65.0 lb/hr (ISO Conditions) when firing fuel oil	4. Equivalent Allowable Emissions: 65 lb/hour 24.4 tons/year
5. Method of Compliance: EPA Method 10	
6. Allowable Emissions Comment (Description of Operating Method): Requirement of Permit No. 0310485-005-AV. Applies when firing fuel oil. The ton per year equivalent emissions rate is given for informational purposes only and does not constitute a limit.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control:
3. Potential Emissions: 3.0 lb/hour 6.73 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 5

8. Calculation of Emissions:
Hourly VOC emission rates for simple cycle operation:
Natural gas = 3.0 lb/hr @ 20°F and 2.80 @ 59°F
Fuel oil = 3.0 lb/hr @ 20°F and 3.0 lb/hr @ 59°F
Potential annual emissions:
This emissions unit is permitted to operate up to 4,750 hours per year of total operation and 750 hours per year when firing fuel oil. Under this scenario, worst-case annual VOC emissions are with 4,000 hours per year of operation on natural gas and 750 hours per year of operation with fuel oil.
Annual emissions = [(2.8 lb/hr) x (4,000 hr/yr) + (3 lb/hr) x (750 hr/yr)] / (2,000 lb/ton) = 6.73 ton/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
Annual potential emission calculations are based on operation at 100% load and 59°F ambient temperature. The potential hourly and annual emissions are for informational purposes only and do not constitute limits.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: SO2	2. Total Percent Efficiency of Control:
3. Potential Emissions: 104.30 lb/hour 58.23 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 0

8. Calculation of Emissions:
Hourly SO_2 emission rates for simple cycle operation:
Natural gas = 11.4 lb/hr @ 20°F and 10.7 lb/hr @ 59°F (2 gr sulfur/100 scf)
Fuel oil (0.05% sulfur) = 104.30 lb/hr @ 20°F and 98.21 lb/hr @ 59°F
Lower sulfur fuel oil (0.0065% sulfur) = 13.56 lb/hr @ 20°F and 12.77 lb/hr @ 59°F
Potential annual emissions:
This emissions unit is permitted to operate up to 4,750 hours per year of total operation and 750 hours per year when firing fuel oil. Under this scenario, worst-case annual SO_2 emissions are with 4,000 hours per year of operation on natural gas and 750 hours per year of operation with 0.05 percent sulfur fuel oil.
Annual emissions = [(10.7 lb/hr) x (4,000 hr/yr) + (98.21 lb/hr) x (750 hr/yr)] / (2,000 lb/ton) = 58.23 ton/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
Emission rates are based on permitted fuel sulfur concentrations. The potential hourly and annual emissions are for informational purposes only and do not constitute limits.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: Use of pipeline grade natural gas	4. Equivalent Allowable Emissions: 11.4 lb/hour 25.4 tons/year
5. Method of Compliance: Natural gas supplier tariff sheet	
6. Allowable Emissions Comment (Description of Operating Method): The pound per hour and ton per year equivalent emissions rates are given for informational purposes only and do not constitute limits.	

Allowable Emissions Allowable Emissions 2 of 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.05% sulfur, by weight, in the fuel oil	4. Equivalent Allowable Emissions: 104.3 lb/hour 36.8 tons/year
5. Method of Compliance: Fuel analysis	
6. Allowable Emissions Comment (Description of Operating Method): The pound per hour and ton per year equivalent emissions rates are given for informational purposes only and do not constitute limits.	

Allowable Emissions Allowable Emissions 3 of 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0065% sulfur, by weight, in the lower sulfur fuel oil	4. Equivalent Allowable Emissions: 13.6 lb/hour 4.8 tons/year
5. Method of Compliance: Fuel analysis	
6. Allowable Emissions Comment (Description of Operating Method): The allowable fuel sulfur level given in Field 3 is for the lower sulfur fuel oil. The pound per hour and ton per year equivalent emissions rates are given for informational purposes only and do not constitute limits.	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 4 of 4

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.8% sulfur, by weight, in the fuel oil	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: Fuel analysis	
6. Allowable Emissions Comment (Description of Operating Method): Rule: NSPS 40 CFR 60.334(b) Subpart GG – Standards of Performance for Stationary Gas Turbines	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control:
3. Potential Emissions: 34 lb/hour 48.75 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 0

8. Calculation of Emissions:
Hourly PM emission rates for simple cycle operation:
Natural gas = 18 lb/hr
Fuel oil = 34 lb/hr
Potential annual emissions:
This emissions unit is permitted to operate up to 4,750 hours per year of total operation and 750 hours per year when firing fuel oil. Under this scenario, worst-case annual PM emissions are with 4,000 hours per year of operation on natural gas and 750 hours per year of operation on fuel oil.
Annual emissions = [(18 lb/hr) x (4,000 hr/yr) + (34 lb/hr) x (750 hr/yr)] / (2,000 lb/ton) = 48.75 ton/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
Hourly emissions given in Permit No. 0310485-005-AV are 9.0 lb/hr for natural gas firing and 17.0 lb/hr for fuel oil firing and are for front half catch only. Total (front and back half catch) emission estimates shown in Fields 3 and 8 above, are based on the assumption that total PM emissions equal twice the front half catch value. The potential emissions shown in fields 3 and 8 are given for informational purposes only and do not constitute limits. By this permit application, in accordance with recent FDEP permitting of combustion turbines, JEA is requesting that the pound per hour PM emission limits for Unit 1 be removed from PSD Permit No. PSD-FL-267 and the renewed Title V permit, with PM emissions instead being handled with fuel specification requirements (use of natural gas and low or very low sulfur fuel oil) and opacity requirements.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 9.0 lb/hr (front half catch only) while firing natural gas	4. Equivalent Allowable Emissions: 9 lb/hour 21.4 tons/year
5. Method of Compliance: Use of pipeline grade natural gas and as indicated by opacity	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions level given in Field 3 applies when firing the emissions unit on natural gas. The allowable emissions and method of compliance are from Permit No. 0310485-005-AV. See note in Field 9 of F1 of this Section and the application support document for a discussion on a request to remove numerical PM emission limits from the revised Title V permit and associated construction permits. The ton per year equivalent allowable emissions rate is given for informational purposes only and does not constitute a limit.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 17.0 lb/hr (front half catch only) while firing fuel oil	4. Equivalent Allowable Emissions: 17 lb/hour 6.4 tons/year
5. Method of Compliance: Use of low (0.05% sulfur) or very low sulfur (0.0065% sulfur) fuel oil and as indicated by opacity.	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions level given in Field 3 applies when firing the emissions unit on fuel oil. The allowable emissions and method of compliance are from Permit No. 0310485-005-AV. See note in Field 9 of F1 of this Section and the application support document for a discussion on a request to remove numerical PM emission limits from the revised Title V permit and associated construction permits. The ton per year equivalent allowable emissions rate is given for informational purposes only and does not constitute a limit.	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM10	2. Total Percent Efficiency of Control:
3. Potential Emissions: 34 lb/hour 48.75 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 0

8. Calculation of Emissions:
Hourly emissions for simple cycle operation (assumes all PM is PM_{10}):
Natural gas = 18 lb/hr
Fuel oil = 34 lb/hr
Potential annual emissions:
This emissions unit is permitted to operate up to 4,750 hours per year of total operation and 750 hours per year when firing fuel oil. Under this scenario, worst-case annual PM_{10} emissions are with 4,000 hours of operation on natural gas and 750 hours of operation on fuel oil.
Annual emissions = [(18 lb/hr) x (4,000 hr/yr) + (34 lb/hr) x (750 hr/yr)] / (2,000 lb/ton) = 48.75 ton/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
It is assumed that all PM emissions are PM_{10}. Hourly PM emissions given in Permit No. 0310485-005-AV are 9.0 lb/hr for natural gas firing and 17.0 lb/hr for fuel oil firing and are for front half catch only. Total (front and back half catch) emission estimates as shown above are based on the assumption that total PM/PM_{10} emissions equals twice the front half catch value. The potential emissions shown in fields 5 and 8 are given for informational purposes only and do not constitute limits. By this permit application, in accordance with recent FDEP permitting of combustion turbines, JEA is requesting that the pound per hour PM emission limits for Unit 1 be removed from PSD Permit No. PSD-FL-267 and the renewed Title V permit, with PM emissions instead being handled with fuel specification requirements (use of natural gas and low or very low sulfur fuel oil) and opacity requirements.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: 10% Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Reference Method 9	
5. Visible Emissions Comment: This visible emissions limit is included in Permit No. 0310485-005-AV. Per Permit No. 0310485-005-AV excess emissions resulting from startup, shutdown, or malfunction are permitted provided that best operational practices are adhered to and the period of excess emissions are minimized.	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 2

1. Parameter Code: EM	2. Pollutant(s): NOX
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: TECO Model Number: 42CHL	Serial Number: 42C-67847-358
5. Installation Date: 05/28/2001	6. Performance Specification Test Date: 05/28/2001
7. Continuous Monitor Comment: Rule: 62-204.800	

Continuous Monitoring System: Continuous Monitor 2 of 2

1. Parameter Code: O2	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☒ Other
4. Monitor Information... Manufacturer: Servomex Model Number: 1440C	Serial Number: 1519
5. Installation Date: 05/28/2001	6. Performance Specification Test Date: 05/28/2001
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. B ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. J ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. K ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. L ☐ Previously Submitted, Date _____
   ☐ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. M ☐ Previously Submitted, Date _____
   ☐ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Previously Submitted, Date: 11/16/04
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known):_____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Not Applicable

   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID:_____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☒ Attached, Document ID: Attach. G
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☒ Attached, Document ID: Attach. N ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☒ Certificate of Representation (EPA Form No. 7610-1)
      ☒ Copy Attached, Document ID:Attach. O
   ☒ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☒ Attached, Document ID:Attach. O
      ☐ Previously Submitted, Date:_____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Not Applicable

Additional Requirements Comment

Attachment P contains the natural gas tariff sheet for the facility

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: Unit 2 – One nominal 170 MW Gas Combustion Turbine-Electrical Generator configured as a combined cycle unit, complete with supplementary fired HRSG

3. Emissions Unit Identification Number: 002

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	10/15/02	11/27/04	49	☒ Yes ☐ No

9. Package Unit:
Manufacturer: General Electric Model Number: GE PG7241 FA

10. Generator Nameplate Rating: 170 MW

11. Emissions Unit Comment: This emission unit is a GE PG7241 FA combustion turbine with supplemental duct burner firing. Natural gas is the primary fuel and fuel oil is the back-up fuel. This permit application seeks to include construction covered under Construction permit No. PSD-FL-310 and modifications to Permit No. PSD-FL-310 dated June 5, 2003 and May 17, 2004 in a revision to Operation Permit No. 0310485-005-AV.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Dry Low-NOx (DLN) Combustor.

   Water Injection during fuel oil firing.

   Selective Catalytic Reduction (SCR).

2. Control Device or Method Code(s): 205, 028, 065

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1.	Maximum Process or Throughput Rate:		
2.	Maximum Production Rate:		
3.	Maximum Heat Input Rate:	1,911 (HHV) million Btu/hr	(Natural gas firing)
		2,060 (HHV) million Btu/hr	(Fuel oil firing)
	Duct Burner	170 (HHV) million Btu/hr	(Natural gas firing)
4.	Maximum Incineration Rate:	pounds/hr	
		tons/day	
5.	Requested Maximum Operating Schedule:		
	For natural gas firing:	24 hours/day	7 days/week
	CT and duct burner	52 weeks/year	8,760 hours/year
	For 0.05% sulfur fuel	16 hours/day	7 days/week
	oil firing:	52 weeks/year	576 hours/year
	For lower sulfur fuel	24 hours/day	7 days/week
	oil (0.0065% S) firing:	52 weeks/year	1,478 hours/year

6. Operating Capacity/Schedule Comment:
The heat input rates are a function of operating parameters and ambient conditions. The rates given in Field 3 are from Permit No. PSD-FL-310 and the June 5, 2003 modification to Permit No. PSD-FL-310 and are based on the higher heating value (HHV) of each fuel. The heat input rates are included in the permit only for purposes of determining capacity during performance tests. Continuous compliance with these rates is not required.
Under permit number PSD-FL-310, the permitted annual operating rate while firing 0.05 percent sulfur fuel oil is 576 hours per year for unit 2 and unit 3 combined.
Under the May 17, 2004 modification to Permit Number PSD-FL-310, the permitted annual operating rate while firing 0.0065 percent sulfur fuel oil is 1,478 hour per year for Unit 2 and Unit 3 combined with no short-term operational limits.

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: ID #23 on Plot Plan	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: One 190-foot vertical cylindrical exhaust stack associated with the CT/HRSG		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A		
5. Discharge Type Code: V	6. Stack Height: 190 feet	7. Exit Diameter: 18.0 feet
8. Exit Temperature: 204 °F	9. Actual Volumetric Flow Rate: 1,009,200 acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: 790,100 dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 408.774 North (km): 3354.531	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Exit temperature and flow rate are with operation of the combustion turbine at 100 percent load on natural gas with the duct burner firing and at an ambient temperature of 59°F.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 4

1. Segment Description (Process/Fuel Type): Combustion turbine operating in combined cycle mode on natural gas. This unit is allowed to operate on natural gas for the entire year (i.e. 8,760 hours per year).		
2. Source Classification Code (SCC): 2-01-002-01	3. SCC Units: Million Cubic Feet Burned	
4. Maximum Hourly Rate: 1.98 (approx.)	5. Maximum Annual Rate: 16,200 (approx.)	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 965 (HHV)
10. Segment Comment: Approximate fuel use rate calculations: (heat input at HHV)/(fuel HHV) = hourly rate (1,911 mmBtu/hr)/(965 mmBtu/million scf) = 1.98 million scf/hour [(1,785 mmBtu/hr)/(965 mmBtu/million scf)]x(8,760 hr/yr) = 16,204 million scf/yr Approximate fuel use rates are provided for informational purposes only and do not constitute limits. Actual fuel use rates are a function of the fuel heating value and the emission unit operating conditions.		

Segment Description and Rate: Segment 2 of 4

1. Segment Description (Process/Fuel Type): Combustion turbine operating in combined cycle mode on No. 2 distillate fuel oil. The maximum allowable hours of fuel oil firing for Unit 2 and Unit 3 combined is 576 hours per consecutive 12-month period (Permit No. PSD-FL-310).		
2. Source Classification Code (SCC): 2-01-001-01	3. SCC Units: Thousand Gallons Burned	
4. Maximum Hourly Rate: 14.8 (approx.)	5. Maximum Annual Rate: 8,040 (approx.)	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.05	8. Maximum % Ash:	9. Million Btu per SCC Unit: 139 (HHV)
10. Segment Comment: Approximate fuel use rate calculations: (heat input at HHV)/(fuel HHV) = hourly rate (2,060 mmBtu/hr)/(139 mmBtu/kgal) = 14.82 kgal/hour [(1,939 mmBtu/hr)/(139 mmBtu/kgal)]x(576 hr/yr) = 8,035 kgal/yr The maximum annual rate is based on the assumption that combined Unit 2 and Unit 3 maximum allowable hours of fuel oil firing are all used in Unit 2. Actual fuel use rates are a function of the fuel heating value and the emission unit operating conditions. Approximate fuel use rates are provided for informational purposes only and do not constitute limits.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 3 of 4

1. Segment Description (Process/Fuel Type): Combustion turbine operating in combined cycle mode on lower sulfur fuel oil (0.0065% sulfur, by weight). The maximum allowable hours of lower sulfur fuel oil firing for Unit 2 and Unit 3 combined is 1,478 hours per consecutive 12-month period.		
2. Source Classification Code (SCC): 2-01-001-01	3. SCC Units: Thousand Gallons Burned	
4. Maximum Hourly Rate: 14.8 (approx.)	5. Maximum Annual Rate: 20,620 (approx.)	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.0065	8. Maximum % Ash:	9. Million Btu per SCC Unit: 139 (HHV)
10. Segment Comment: Approximate fuel use rate calculations: (heat input at HHV)/(fuel HHV) = hourly rate (2,059 mmBtu/hr)/(139 mmBtu/kgal) = 14.81 kgal/hour [(1,939 mmBtu/hr)/(139 mmBtu/kgal)]x(1,478 hr/yr) = 20,618 kgal/yr The maximum annual rate is based on the assumption that combined Unit 2 and Unit 3 maximum allowable hours of lower sulfur fuel oil firing are all used in Unit 2. Actual fuel use rates are a function of the fuel heating value and the emission unit operating conditions. Approximate fuel use rates are provided for informational purposes only and do not constitute limits.		

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type): Duct burner operating on natural gas.		
2. Source Classification Code (SCC):	3. SCC Units: Million Cubic Feet Burned	
4. Maximum Hourly Rate: 0.18 (approx.)	5. Maximum Annual Rate: 1,540 (approx.)	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 965 (HHV)
10. Segment Comment: Approximate fuel use rate calculations: (heat input at HHV)/(fuel HHV) = hourly rate Maximum hourly rate = (170 mmBtu/hr)/(965 mmBtu/mmscf) = 0.176 mmscf/hr Maximum annual rate = (0.176 mmscf/hr) x (8,760 hr/yr) = 1,543 mmscf/yr Fuel use rates are a function of operating conditions. Approximate fuel use rates are provided for informational purposes only and do not constitute limits.		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
NOX	**065**	**205, 028**	**EL**
CO			**EL**
VOC			**EL**
SO2			**WP**
PM			**EL**
PM10			**EL**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: NOX	2. Total Percent Efficiency of Control:
3. Potential Emissions: 119.37 lb/hour 137.47 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 5

8. Calculation of Emissions:

Highest hourly emissions for combined cycle operation:
Natural gas = 24.95 lb/hr @ 20°F (w/out duct burner) and 23.92 @ 59°F (with duct burner)
Fuel oil = 119.37 lb/hr max @ 20°F and 112.41 lb/hr @ 59°F (w/out duct burner)
Potential annual emissions:
Potential annual emissions are based on operation at 100% load and 59°F and the maximum allowable hours of lower sulfur fuel oil (0.0065% sulfur) firing for Unit 2 and Unit 3 combined of 1,478 hours per consecutive 12-month period. For this calculation, it is assumed that the allowable hours of fuel oil firing are evenly split between Unit 2 and Unit 3. Therefore, worst-case annual NOx emissions are with 739 hours of operation on the lower sulfur fuel oil and 8,021 hours of operation on natural gas.
Annual emissions = [(23.92 lb/hr) x (8,021 hr/yr) + (112.41 lb/hr) x (739 hr/yr)] / (2,000 lb/ton) = 137.47 ton/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

The potential hourly and annual emissions are for informational purposes only and do not constitute limits. If all of the Unit 2 and Unit 3 combined allowable hours of fuel oil firing were used in Unit 2, the annual potential emissions would be greater than shown. However, the annual potential emissions for Unit 3 would then decrease by an equal amount.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 3.5 ppmvd @15% O_2 on a 3-hour block avg	4. Equivalent Allowable Emissions: 25 lb/hour 109.5 tons/year
5. Method of Compliance: CEMS	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions level in Field 3 applies when firing natural gas. The allowable emissions level is BACT and is found in Permit No. PSD-FL-310. The pound per hour and ton per year equivalent emissions rates are given for informational purposes only and do not constitute limits.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 15.0 ppmvd @15% O_2 on a 3-hour block average	4. Equivalent Allowable Emissions: 119.4 lb/hour 41.5 tons/year
5. Method of Compliance: CEMS	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions level in Field 3 applies when firing fuel oil. The allowable emissions level is BACT and is found in Permit No. PSD-FL-310. The pound per hour and ton per year equivalent emissions rates are given for informational purposes only and do not constitute limits.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control:
3. Potential Emissions: 72.43 lb/hour 245.13 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 5

8. Calculation of Emissions:
Highest hourly emissions for combined cycle operation:
Natural gas = 62.57 lb/hr @ 95°F and 54.87 lb/hr @ 59°F (with duct burner)
Fuel oil = 72.43 lb/hr @ 20°F and 67.86 lb/hr @ 59°F (w/out duct burner)
Potential annual emissions:
Potential annual emissions are based on operation at 100% load and 59°F and the maximum allowable hours of lower sulfur fuel oil (0.0065% sulfur) firing for Unit 2 and Unit 3 combined of 1,478 hours per consecutive 12-month period. For this calculation, it is assumed that these hours of operation are evenly split between Unit 2 and Unit 3. Therefore, worst-case annual CO emissions are with 739 hours of operation on the lower sulfur fuel oil and 8,021 hours of operation on natural gas.
Annual emissions = [(54.87 lb/hr) x (8,021 hr/yr) + (67.86 lb/hr) x (739 hr/yr)] / (2,000 lb/ton) = 245.13 ton/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
The potential hourly and annual emissions are for informational purposes only and do not constitute limits. If all of the Unit 2 and Unit 3 combined allowable hours of fuel oil firing were used in Unit 2, the annual potential emissions would be greater than shown. However, the annual potential emissions for Unit 3 would then decrease by an equal amount.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 14 ppmvd @15% O_2 on a 24-hour block average	4. Equivalent Allowable Emissions: 72.4 lb/hour 245.1 tons/year
5. Method of Compliance: CEMS	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions level in Field 3 applies when firing natural gas or fuel oil. The allowable emissions level is BACT and is found in Permit No. PSD-FL-310. The pound per hour and ton per year equivalent emissions rates are given for informational purposes only and do not constitute limits.	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM/PM10	2. Total Percent Efficiency of Control:
3. Potential Emissions: 62.1 lb/hour 103.32 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:

8. Calculation of Emissions:
Highest hourly emissions for combined cycle operation:
Natural gas = 22.02 lb/hr @ 95°F and 20.04 lb/hr @ 59°F (with duct burner)
Fuel oil = 62.1 lb/hr (w/out duct burner)
Potential annual emissions:
Potential annual emissions are based on operation at 100% load and 59°F and the maximum allowable hours of lower sulfur fuel oil (0.0065% sulfur) firing for Unit 2 and Unit 3 combined of 1,478 hours per consecutive 12-month period. For this calculation, it is assumed that these hours of operation are evenly split between Unit 2 and Unit 3. Therefore, worst-case annual PM/PM_{10} emissions are with 739 hours of operation on the lower sulfur fuel oil and 8,021 hours of operation on natural gas.
Annual emissions = [(20.04 lb/hr) x (8,021 hr/yr) + (62.1 lb/hr) x (739 hr/yr)] / (2,000 lb/ton) = 103.32 ton/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment: Hourly emissions are given in Permit No. PSD-FL-310 and the June 5, 2003 modification to Permit No. PSD-FL-310. The potential annual emissions are for informational purposes only and do not constitute limits. If all of the Unit 2 and Unit 3 combined allowable hours of fuel oil firing were used in Unit 2, the annual potential emissions would be greater than shown. However, the annual potential emissions for Unit 3 would then decrease by an equal amount. By this permit application, in accordance with recent FDEP permitting of combustion turbines, JEA is requesting that the pound per hour PM emission limits for Unit 2 be removed from PSD Permit No. PSD-FL-310 and that PM emission limits not be included in the revised Title V permit, with the PM emissions instead being handled with fuel specification standards (use of natural gas and low or very low sulfur fuel oil) and an opacity standard.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 22.02 lb/hr	4. Equivalent Allowable Emissions: 22.0 lb/hour 96.4 tons/year
5. Method of Compliance: Compliance demonstrated by opacity	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions rate in Field 3 applies when firing natural gas. The allowable emissions and method of compliance are from Permit No. PSD-FL-310 and the June 5, 2003 modification to Permit No. PSD-FL-310. See note in Field 9 of F1 of this Section and the application support document for a discussion of a request to remove numerical PM/PM_{10} emission limits from Construction Permit No. PSD-FL-310 and not include such limits in the revised Title V permit. The ton per year equivalent emissions rate is given for informational purposes only and does not constitute a limit.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 62.1 lb/hr	4. Equivalent Allowable Emissions: 62.1 lb/hour 22.9 tons/year
5. Method of Compliance: Compliance demonstrated by opacity	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions rate in Field 3 applies when firing fuel oil. The allowable emissions and method of compliance are found in Permit No. PSD-FL-310. See note in Field 9 of F1 of this Section and the application support document for a discussion of a request to remove numerical PM/PM_{10} emission limits from Construction Permit No. PSD-FL-310 and not include such limits in the revised Title V permit. The ton per year equivalent emissions rate is given for informational purposes only and does not constitute a limit. For the tons per year equivalent emissions rate, it is assumed that the allowable annual hours of fuel oil firing operation for Unit 2 and Unit 3 combined are evenly split between Unit 2 and Unit 3.	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: SO2	2. Total Percent Efficiency of Control:
3. Potential Emissions: 109.35 lb/hour 64.39 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:

8. Calculation of Emissions:

Highest hourly emissions for combined cycle operation:
Natural gas (2 grains sulfur per 100 scf) = 12.2 lb/hr @ 20°F (w/out duct burner) and 11.70 lb/hr @ 59°F (with duct burner)
Fuel oil (0.05% sulfur) = 109.35 lb/hr @ 20°F and 102.97 lb/hr @ 59°F (w/out duct burner)
Lower sulfur fuel oil (0.0065% sulfur) = 14.22 lb/hr @ 20°F and 13.39 @ 59°F
Potential annual emissions:
Worst case potential annual emissions are based on operation at 100% load and 59°F and the maximum allowable hours of 0.05% sulfur fuel oil firing for Unit 2 and Unit 3 combined of 576 hours per consecutive 12-month period. It is assumed that these hours of operation are evenly split between Unit 2 and Unit 3. Therefore, worst-case annual SO_2 emissions are with 288 hours of operation on 0.05% sulfur fuel oil and 8,472 hours of operation on natural gas.
Annual emissions = [(11.70 lb/hr) x (8,472 hr/yr) + (102.97 lb/hr) x (288 hr/yr)] / (2,000 lb/ton) = 64.39 ton/yr
Note that potential annual SO_2 emissions are less with the lower sulfur fuel oil (0.0065% sulfur) operating scenario.

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

The potential hourly and annual emissions are for informational purposes only and do not constitute limits. If all of the Unit 2 and Unit 3 combined allowable hours of fuel oil firing were used in Unit 2, the annual potential emissions would be greater than shown. However, the annual potential emissions for Unit 3 would then decrease by an equal amount.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: Use of pipeline natural gas	4. Equivalent Allowable Emissions: 12.2 lb/hour 51.2 tons/year
5. Method of Compliance: Natural gas supplier tariff sheet	
6. Allowable Emissions Comment (Description of Operating Method): The pound per hour and tons per year equivalent emissions rates are given for informational purposes only and do not constitute limits.	

Allowable Emissions Allowable Emissions 2 of 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.05% sulfur, by weight, in the fuel oil	4. Equivalent Allowable Emissions: 109.4 lb/hour 14.8 tons/year
5. Method of Compliance: Fuel analysis	
6. Allowable Emissions Comment (Description of Operating Method): The pound per hour and tons per year equivalent emissions rates are given for informational purposes only and do not constitute limits. For the tons per year equivalent emissions rate, it is assumed that the allowable annual hours of fuel oil firing operation for Unit 2 and Unit 3 combined are evenly split between Unit 2 and Unit 3.	

Allowable Emissions Allowable Emissions 3 of 4

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0065% sulfur, by weight, in the lower sulfur fuel oil	4. Equivalent Allowable Emissions: 14.2 lb/hour 4.9 tons/year
5. Method of Compliance: Fuel analysis	
6. Allowable Emissions Comment (Description of Operating Method): The fuel sulfur level given in Field 1 represents the alternate operating scenario allowed per the May 17, 2004 revision to Permit No. PSD-FL-310. The pound per hour and tons per year equivalent emissions rates are given for informational purposes only and do not constitute limits. For the tons per year equivalent emissions rate, it is assumed that the allowable annual hours of fuel oil firing operation for Unit 2 and Unit 3 combined are evenly split between Unit 2 and Unit 3.	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 4 of 4

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.8% sulfur, by weight, in the fuel oil	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: Fuel analysis	
6. Allowable Emissions Comment (Description of Operating Method): Rule: NSPS 40 CFR 60.334(b) Subpart GG – Standards of Performance for Stationary Gas Turbines	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control:
3. Potential Emissions: 7.68 lb/hour 19.08 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:

8. Calculation of Emissions:
Maximum hourly emissions:
Natural gas = 6.81 lb/hr @ 95°F and 4.05 lb/hr @ 59°F (with duct burner)
Fuel oil = 7.68 lb/hr @ 59°F (w/out duct burner) (permit limit)
Potential annual emissions:
Potential annual emissions are based on the maximum allowable hours of fuel oil firing for Unit 2 and Unit 3 combined with lower sulfur fuel oil (0.0065% sulfur) of 1,478 hours per consecutive 12-month period with these hours of operation evenly split between Unit 2 and Unit 3. Therefore, worst-case annual VOC emissions are with 739 hours of operation on the lower sulfur fuel oil and 8,021 hours of operation on natural gas.
Annual emissions = [(4.05 lb/hr) x (8,021 hr/yr) + (7.68 lb/hr) x (739 hr/yr)] / (2,000 lb/ton) = 19.08 ton/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
The potential annual emissions are for informational purposes only and do not constitute limits. If all of the Unit 2 and Unit 3 combined allowable hours of fuel oil firing were used in Unit 2, the annual potential emissions would be greater than shown. However, the annual potential emissions for Unit 3 would than decrease by an equal amount.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 6.81 lb/hr	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: EPA Method 18, 25 or 25A; CO CEMS as a surrogate	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions rate in Field 3 applies when firing natural gas. The allowable emissions rate is found in Permit No. PSD-FL-310 and the June 5, 2003 modification to Permit No. PSD-FL-310.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 7.68 lb/hr	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: EPA Method 18, 25 or 25A; CO CEMS as a surrogate	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions rate in Field 3 applies when firing fuel oil. The allowable emissions rate is found in Permit No. PSD-FL-310.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: This visible emissions limit is included in Permit No. PSD-FL-310. Per Construction Permit No. PSD-FL-310 excess emissions resulting from startup, shutdown, or malfunction are permitted provided that best operational practices are adhered to and the period of excess emissions are minimized.	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 3

1. Parameter Code: EM	2. Pollutant(s): NOX
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: TECO Model Number: 42CLS	Serial Number: 42CLS-78405-389
5. Installation Date: 12/15/2004	6. Performance Specification Test Date: 12/15/2004
7. Continuous Monitor Comment: Rule: 40 CFR 60 and 40 CFR Part 75. Use of CEMS is required by Construction Permit No. PSD-FL-310.	

Continuous Monitoring System: Continuous Monitor 2 of 3

1. Parameter Code: EM	2. Pollutant(s): CO
3. CMS Requirement:	☐ Rule ☒ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Use of CEMS is required by Construction Permit No. PSD-FL-310.	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 3 of 3

1. Parameter Code: CO2	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: CAI Model Number: 100	Serial Number: PO3048
5. Installation Date: 12/15/2004	6. Performance Specification Test Date: 12/15/2004
7. Continuous Monitor Comment: Use of CEMS is required by Construction Permit No. PSD-FL-310.	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. B ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. J ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. K ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. L ☐ Previously Submitted, Date _____
   ☐ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. M ☐ Previously Submitted, Date _____
   ☐ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Previously Submitted, Date: 1/14/05
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known):_____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Not Applicable

   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☒ Attached, Document ID: Attach. G
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☒ Attached, Document ID: Attach. N ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☒ Certificate of Representation (EPA Form No. 7610-1)
      ☒ Copy Attached, Document ID:Attach. O
   ☒ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☒ Attached, Document ID:Attach. O
      ☐ Previously Submitted, Date:_____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Not Applicable

Additional Requirements Comment

Attachment P contains the natural gas tariff sheet for the facility.
Attachment Q Contains the Unit 2 and Unit 3 CT performance curve.

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: Unit 3 – One nominal 170 MW Gas Combustion Turbine-Electrical Generator configured as a combined cycle unit, complete with supplementary fired HRSG

3. Emissions Unit Identification Number: 003

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	10/15/02	11/27/04	49	☒ Yes ☐ No

9. Package Unit:
Manufacturer: General Electric Model Number: GE PG7241 FA

10. Generator Nameplate Rating: 170 MW

11. Emissions Unit Comment: This emission unit is a GE PG7241 FA combustion turbine with supplemental duct burner firing. Natural gas is the primary fuel and fuel oil is the back-up fuel. This permit application seeks to include construction covered under Construction permit No. PSD-FL-310 and modifications to Permit No. PSD-FL-310 dated June 5, 2003 and May 17, 2004 in a revision to Operation Permit No. 0310485-005-AV.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Dry Low-NOx (DLN) Combustor.

   Water Injection during fuel oil firing.

   Selective Catalytic Reduction (SCR).

2. Control Device or Method Code(s): 205, 028, 065

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1.	Maximum Process or Throughput Rate:		
2.	Maximum Production Rate:		
3.	Maximum Heat Input Rate:	1,911 (HHV) million Btu/hr	(Natural gas firing)
		2,060 (HHV) million Btu/hr	(Fuel oil firing)
	Duct Burner	170 (HHV) million Btu/hr	(Natural gas firing)
4.	Maximum Incineration Rate:	pounds/hr	
		tons/day	
5.	Requested Maximum Operating Schedule:		
	For natural gas firing:	24 hours/day	7 days/week
	CT and duct burner	52 weeks/year	8,760 hours/year
	For 0.05% sulfur fuel	16 hours/day	7 days/week
	oil firing:	52 weeks/year	576 hours/year
	For lower sulfur fuel	24 hours/day	7 days/week
	Oil (0.0065% S) firing:	52 weeks/year	1,478 hours/year

6. Operating Capacity/Schedule Comment:
The heat input rates are a function of operating parameters and ambient conditions. The rates given in Field 3 are from Permit No. PSD-FL-310 and the June 5, 2003 modification to Permit No. PSD-FL-310 and are based on the higher heating value (HHV) of each fuel. The heat input rates are included in the permit only for purposes of determining capacity during performance tests. Continuous compliance with these rates is not required.
Under permit number PSD-FL-310, the permitted annual operating rate while firing 0.05 percent sulfur fuel oil is 576 hours per year for unit 2 and unit 3 combined.
Under the May 17, 2004 modification to Permit Number PSD-FL-310, the permitted annual operating rate while firing 0.0065 percent sulfur fuel oil is 1,478 hours per year for Unit 2 and Unit 3 combined with no short-term operational limitations.

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: ID #23 on Plot Plan	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: One 190-foot vertical cylindrical exhaust stack associated with the CT/HRSG		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A		
5. Discharge Type Code: V	6. Stack Height: 190 feet	7. Exit Diameter: 18.0 feet
8. Exit Temperature: 204 °F	9. Actual Volumetric Flow Rate: 1,009,200 acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: 790,100 dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 408.774 North (km): 3354.531	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Exit temperature and flow rate are for operation of the combustion turbine at 100 percent load on natural gas with the duct burner firing and at an ambient temperature of 59°F.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 4

1. Segment Description (Process/Fuel Type): Combustion turbine operating in combined cycle mode on natural gas. This unit is allowed to operate on natural gas for the entire year (i.e. 8,760 hours per year).		
2. Source Classification Code (SCC): 2-01-002-01	3. SCC Units: Million Cubic Feet Burned	
4. Maximum Hourly Rate: 1.98 (approx.)	5. Maximum Annual Rate: 16,200 (approx.)	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 965 (HHV)
10. Segment Comment: Approximate fuel use rate calculations: (heat input at HHV)/(fuel HHV) = hourly rate (1,911 mmBtu/hr)/(965 mmBtu/million scf) = 1.98 million scf/hour [(1,785 mmBtu/hr)/(965 mmBtu/million scf)]x(8,760 hr/yr) = 16,204 million scf/yr Approximate fuel use rates are provided for informational purposes only and do not constitute limits. Actual fuel use rates are a function of the fuel heating value and the emission unit operating conditions.		

Segment Description and Rate: Segment 2 of 4

1. Segment Description (Process/Fuel Type): Combustion turbine operating in combined cycle mode on No. 2 distillate fuel oil. The maximum allowable hours of fuel oil firing for Unit 2 and Unit 3 combined is 576 hours per consecutive 12-month period (Permit No. PSD-FL-310).		
2. Source Classification Code (SCC): 2-01-001-01	3. SCC Units: Thousand Gallons Burned	
4. Maximum Hourly Rate: 14.8 (approx.)	5. Maximum Annual Rate: 8,040 (approx.)	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.05	8. Maximum % Ash:	9. Million Btu per SCC Unit: 139 (HHV)
10. Segment Comment: Approximate fuel use rate calculations: (heat input at HHV)/(fuel HHV) = hourly rate (2,060 mmBtu/hr)/(139 mmBtu/kgal) = 14.82 kgal/hour [(1,939 mmBtu/hr)/(139 mmBtu/kgal)]x(576 hr/yr) = 8,035 kgal/yr The maximum annual rate is based on the assumption that combined Unit 2 and Unit 3 maximum allowable hours of fuel oil firing are all used in Unit 3. Actual fuel use rates are a function of the fuel heating value and the emission unit operating conditions. Approximate fuel use rates are provided for informational purposes only and do not constitute limits.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 3 of 4

1. Segment Description (Process/Fuel Type): Combustion turbine operating in combined cycle mode on lower sulfur fuel oil (0.0065% sulfur, by weight). The maximum allowable hours of lower sulfur fuel oil firing for Unit 2 and Unit 3 combined is 1,478 hours per consecutive 12-month period.		
2. Source Classification Code (SCC): 2-01-001-01	3. SCC Units: Thousand Gallons Burned	
4. Maximum Hourly Rate: 14.8 (approx.)	5. Maximum Annual Rate: 20,620 (approx.)	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.0065	8. Maximum % Ash:	9. Million Btu per SCC Unit: 139 (HHV)
10. Segment Comment: Approximate fuel use rate calculations: (heat input at HHV)/(fuel HHV) = hourly rate (2,059 mmBtu/hr)/(139 mgal/mmBtu) = 14.81 kgal/hour [(1,939 mmBtu/hr)/(139 mgal/mmBtu)]x(1,478 hr/yr) = 20,618 kgal/yr The maximum annual rate is based on the assumption that combined Unit 2 and Unit 3 maximum allowable hours of lower sulfur fuel oil firing are all used in Unit 3. Actual fuel use rates are a function of the fuel heating value and the emission unit operating conditions. Approximate fuel use rates are provided for informational purposes only and do not constitute limits.		

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type): Duct burner operating on natural gas.		
2. Source Classification Code (SCC):	3. SCC Units: Million Cubic Feet Burned	
4. Maximum Hourly Rate: 0.18 (approx.)	5. Maximum Annual Rate: 1,540 (approx.)	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 965 (HHV)
10. Segment Comment: Approximate fuel use rate calculations: (heat input at HHV)/(fuel HHV) = hourly rate Maximum hourly rate = (170 mmBtu/hr)/(965 mmBtu/mmscf) = 0.176 mmscf/hr Maximum annual rate = (0.176 mmscf/hr) x (8,760 hr/yr) = 1,543 mmscf/yr Fuel use rates are a function of operating conditions. Approximate fuel use rates are provided for informational purposes only and do not constitute limits.		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
NOX	**065**	**205, 028**	**EL**
CO			**EL**
VOC			**EL**
SO2			**WP**
PM			**EL**
PM10			**EL**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: NOX	2. Total Percent Efficiency of Control:
3. Potential Emissions: 119.37 lb/hour 137.47 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 5

8. Calculation of Emissions:
Highest hourly emissions for combined cycle operation:
Natural gas = 24.95 lb/hr @ 20°F (w/out duct burner) and 23.92 @ 59°F (with duct burner)
Fuel oil = 119.37 lb/hr max @ 20°F and 112.41 lb/hr @ 59°F (w/out duct burner)
Potential annual emissions:
Potential annual emissions are based on operation at 100% load and 59°F and the maximum allowable hours of lower sulfur fuel oil (0.0065% sulfur) firing for Unit 2 and Unit 3 combined of 1,478 hours per consecutive 12-month period. For this calculation, it is assumed that these hours of operation are evenly split between Unit 2 and Unit 3. Therefore, worst-case annual NOx emissions are with 739 hours of operation on the lower sulfur fuel oil and 8,021 hours of operation on natural gas.
Annual emissions = [(23.92 lb/hr) x (8,021 hr/yr) + (112.41 lb/hr) x (739 hr/yr)] / (2,000 lb/ton) = 137.47 ton/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
The potential hourly and annual emissions are for informational purposes only and do not constitute limits. If all of the Unit 2 and Unit 3 combined allowable hours of fuel oil firing were used in Unit 3, the annual potential emissions would be greater than shown. However, the annual potential emissions for Unit 2 would then decrease by an equal amount.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 3.5 ppmvd @15% O_2 on a 3-hour block avg	4. Equivalent Allowable Emissions: 25 lb/hour 109.5 tons/year
5. Method of Compliance: CEMS	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions level in Field 3 applies when firing natural gas. The allowable emissions level is BACT and is found in Permit No. PSD-FL-310. The pound per hour and ton per year equivalent emissions rates are given for informational purposes only and do not constitute limits.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 15.0 ppmvd @15% O_2 on a 3-hour block average	4. Equivalent Allowable Emissions: 119.4 lb/hour 41.5 tons/year
5. Method of Compliance: CEMS	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions level in Field 3 applies when firing fuel oil. The allowable emissions level is BACT and is found in Permit No. PSD-FL-310. The pound per hour and ton per year equivalent emissions rates are given for informational purposes only and do not constitute limits.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control:
3. Potential Emissions: 72.43 lb/hour 245.13 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 5

8. Calculation of Emissions:
Highest hourly emissions for combined cycle operation:
Natural gas = 62.57 lb/hr @ 95°F and 54.87 lb/hr @ 59°F (with duct burner)
Fuel oil = 72.43 lb/hr @ 20°F and 67.86 lb/hr @ 59°F (w/out duct burner)
Potential annual emissions:
Potential annual emissions are based on operation at 100% load and 59°F and the maximum allowable hours of lower sulfur fuel oil (0.0065% sulfur) firing for Unit 2 and Unit 3 combined of 1,478 hours per consecutive 12-month period. For this calculation, it is assumed that these hours of operation are evenly split between Unit 2 and Unit 3. Therefore, worst-case annual CO emissions are with 739 hours of operation on the lower sulfur fuel oil and 8,021 hours of operation on natural gas.
Annual emissions = [(54.87 lb/hr) x (8,021 hr/yr) + (67.86 lb/hr) x (739 hr/yr)] / (2,000 lb/ton) = 246.83 ton/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
The potential hourly and annual emissions are for informational purposes only and do not constitute limits. If all of the Unit 2 and Unit 3 combined allowable hours of fuel oil firing were used in Unit 3, the annual potential emissions would be greater than shown. However, the annual potential emissions for Unit 2 would then decrease by an equal amount.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 14 ppmvd @15% O_2 on a 24-hour block average	4. Equivalent Allowable Emissions: 72.4 lb/hour 245.1 tons/year
5. Method of Compliance: CEMS	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions level in Field 3 applies when firing natural gas or fuel oil. The allowable emissions level is BACT and is found in Permit No. PSD-FL-310. The pound per hour and ton per year equivalent emissions rates are given for informational purposes only and do not constitute limits.	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM/PM10	2. Total Percent Efficiency of Control:
3. Potential Emissions: 62.1 lb/hour 103.32 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:

8. Calculation of Emissions:
Highest hourly emissions for combined cycle operation:
Natural gas = 22.02 lb/hr @ 95°F and 20.04 lb/hr @ 59°F (with duct burner)
Fuel oil = 62.1 lb/hr (w/out duct burner)
Potential annual emissions:
Potential annual emissions are based on operation at 100% load and 59°F and the maximum allowable hours of lower sulfur fuel oil (0.0065% sulfur) firing for Unit 2 and Unit 3 combined of 1,478 hours per consecutive 12-month period. For this calculation, it is assumed that these hours of operation are evenly split between Unit 2 and Unit 3. Therefore, worst-case annual PM/PM_{10} emissions are with 739 hours of operation on the lower sulfur fuel oil and 8,021 hours of operation on natural gas.
Annual emissions = [(20.04 lb/hr) x (8,021 hr/yr) + (62.1 lb/hr) x (739 hr/yr)] / (2,000 lb/ton) = 103.32 ton/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment: Hourly emissions are given in Permit No. PSD-FL-310 and the June 5, 2003 modification to Permit No. PSD-FL-310. The potential annual emissions are for informational purposes only and do not constitute limits. If all of the Unit 2 and Unit 3 combined allowable hours of fuel oil firing were used in Unit 3, the annual potential emissions would be greater than shown. However, the annual potential emissions for Unit 2 would then decrease by an equal amount. By this permit application, in accordance with recent FDEP permitting of combustion turbines, JEA is requesting that the pound per hour emission limits for Unit 3 be removed from PSD Permit No. PSD-FL-310 and that PM emission limits not be included in the revised Title V permit, with the PM emissions instead being handled with fuel specification standards (use of natural gas and low or very low sulfur fuel oil) and an opacity standard.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 22.02 lb/hr	4. Equivalent Allowable Emissions: 22.0 lb/hour 96.4 tons/year
5. Method of Compliance: Compliance demonstrated by opacity	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions rate in Field 3 applies when firing natural gas. The allowable emissions and method of compliance are from Permit No. PSD-FL-310 and the June 5, 2003 modification to Permit No. PSD-FL-310. See note in Field 9 of F1 of this Section and the application support document for a discussion of a request to remove numerical PM/PM10 emission limits from Construction Permit No. PSD-FL-310 and not include such limits in the revised Title V permit. The ton per year equivalent emissions rate is given for informational purposes only and does not constitute a limit.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 62.1 lb/hr	4. Equivalent Allowable Emissions: 62.1 lb/hour 22.9 tons/year
5. Method of Compliance: Compliance demonstrated by opacity	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions rate in Field 3 applies when firing fuel oil. The allowable emissions and method of compliance are found in Permit No. PSD-FL-310. See note in Field 9 of F1 of this Section and the application support document for a discussion of a request to remove numerical PM/PM_{10} emission limits from Construction Permit No. PSD-FL-310 and not include such limits in the revised Title V permit. The ton per year equivalent emissions rate is given for informational purposes only and does not constitute a limit. For the tons per year equivalent emissions rate, it is assumed that the allowable annual hours of fuel oil firing operation for Unit 2 and Unit 3 combined are evenly split between Unit 2 and Unit 3.	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: SO2	2. Total Percent Efficiency of Control:
3. Potential Emissions: 109.35 lb/hour 64.39 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:

8. Calculation of Emissions:
Highest hourly emissions for combined cycle operation:
Natural gas (2 grains sulfur per 100 scf) = 12.2 lb/hr @ 20°F (w/out duct burner) and 11.70 lb/hr @ 59°F (with duct burner)
Fuel oil (0.05% sulfur) = 109.35 lb/hr @ 20°F and 102.97 lb/hr @ 59°F (w/out duct burner)
Lower sulfur fuel oil (0.0065% sulfur) = 14.22 lb/hr @ 20°F and 13.39 @ 59°F
Potential annual emissions:
Worst case potential annual emissions are based on operation at 100% load and 59°F and the maximum allowable hours of 0.05% sulfur fuel oil firing for Unit 2 and Unit 3 combined of 576 hours per consecutive 12-month period. It is assumed that these hours of operation are evenly split between Unit 2 and Unit 3. Therefore, worst-case annual SO_2 emissions are with 288 hours of operation on 0.05% sulfur fuel oil and 8,472 hours of operation on natural gas. Note that potential annual SO_2 emissions are less with the lower sulfur fuel oil (0.0065% sulfur) operating scenario.
Annual emissions = [(11.70 lb/hr) x (8,472 hr/yr) + (102.97 lb/hr) x (288 hr/yr)] / (2,000 lb/ton) = 64.39 ton/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
The potential hourly and annual emissions are for informational purposes only and do not constitute limits. If all of the Unit 2 and Unit combined allowable hours of fuel oil firing were used in Unit 3, the annual potential emissions would be greater than shown. However, the annual potential emissions for Unit 2 would then decrease by an equal amount.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: Use of pipeline natural gas	4. Equivalent Allowable Emissions: 12.2 lb/hour 51.2 tons/year
5. Method of Compliance: Natural gas supplier tariff sheet	
6. Allowable Emissions Comment (Description of Operating Method): The pound per hour and tons per year equivalent emissions rates are given for informational purposes only and do not constitute limits.	

Allowable Emissions Allowable Emissions 2 of 4

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.05% sulfur, by weight, in the fuel oil	4. Equivalent Allowable Emissions: 109.4 lb/hour 14.8 tons/year
5. Method of Compliance: Fuel analysis	
6. Allowable Emissions Comment (Description of Operating Method): The pound per hour and tons per year equivalent emissions rates are given for informational purposes only and do not constitute limits. For the tons per year equivalent emissions rate, it is assumed that the allowable annual hours of fuel oil firing operation for Unit 2 and Unit 3 combined are evenly split between Unit 2 and Unit 3.	

Allowable Emissions Allowable Emissions 3 of 4

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0065% sulfur, by weight, in the lower sulfur fuel oil	4. Equivalent Allowable Emissions: 14.2 lb/hour 4.9 tons/year
5. Method of Compliance: Fuel analysis	
6. Allowable Emissions Comment (Description of Operating Method): The fuel sulfur level given in Field 3 represents the alternate operating scenario allowed per the May 17, 2004 revision to Permit No. PSD-FL-310. The pound per hour and tons per year equivalent emissions rates are given for informational purposes only and do not constitute limits. For the tons per year equivalent emissions rate, it is assumed that the allowable annual hours of fuel oil firing operation for Unit 2 and Unit 3 combined are evenly split between Unit 2 and Unit 3.	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 4 of 4

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.8% sulfur, by weight, in the fuel oil	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: Fuel analysis	
6. Allowable Emissions Comment (Description of Operating Method): Rule: NSPS 40 CFR 60.334(b) Subpart GG – Standards of Performance for Stationary Gas Turbines	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control:
3. Potential Emissions: 7.68 lb/hour 19.08 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:

8. Calculation of Emissions:
Highest hourly emissions for combined cycle operation:
Natural gas = 6.81 lb/hr @ 95°F and 4.05 lb/hr @ 59°F (with duct burner)
Fuel oil = 7.68 lb/hr @ 59°F (w/out duct burner) (permit limit)
Potential annual emissions:
Potential annual emissions are based on the maximum allowable hours of fuel oil firing for Unit 2 and Unit 3 combined with lower sulfur fuel oil (0.0065% sulfur) of 1,478 hours per consecutive 12-month period with these hours of operation evenly split between Unit 2 and Unit 3. Therefore, worst-case annual VOC emissions are with 739 hours of operation on the lower sulfur fuel oil and 8,021 hours of operation on natural gas.
Annual emissions = [(4.05 lb/hr) x (8,021 hr/yr) + (7.68 lb/hr) x (739 hr/yr)] / (2,000 lb/ton) = 19.08 ton/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
The potential annual emissions are for informational purposes only and do not constitute limits. If all of the Unit 2 and Unit 3 combined allowable hours of fuel oil firing were used in Unit 3, the annual potential emissions would be greater than shown. However, the annual potential emissions for Unit 2 would than decrease by an equal amount.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 6.81 lb/hr	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: EPA Method 18, 25 or 25A; CO CEMS as a surrogate	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions rate in Field 3 applies when firing natural gas. The allowable emissions level is found in Permit No. PSD-FL-310 and the June 5, 2003 modification to Permit No. PSD-FL-310.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 7.68 lb/hr	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: EPA Method 18, 25 or 25A: CO CEMS as a surrogate	
6. Allowable Emissions Comment (Description of Operating Method): The allowable emissions rate in Field 3 applies when firing fuel oil. The allowable emissions level is found in Permit No. PSD-FL-310.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: This visible emissions limit is included in Permit No. PSD-FL-310. Per Construction Permit No. PSD-FL-310 excess emissions resulting from startup, shutdown, or malfunction are permitted provided that best operational practices are adhered to and the period of excess emissions are minimized.	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 3

1. Parameter Code: EM	2. Pollutant(s): NOX
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: TECO Model Number: 42CLS	Serial Number: 42CLS-78404-389
5. Installation Date: 12/15/2004	6. Performance Specification Test Date: 12/15/2004
7. Continuous Monitor Comment: Rule: 40 CFR 60 and 40 CFR Part 75. Use of CEMS is required by Construction Permit No. PSD-FL-310.	

Continuous Monitoring System: Continuous Monitor 2 of 3

1. Parameter Code: EM	2. Pollutant(s): CO
3. CMS Requirement:	☐ Rule ☒ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Use of CEMS is required by Construction Permit No. PSD-FL-310.	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 3 of 3

1. Parameter Code: CO2	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: CAI Model Number: 100	Serial Number: PO3049
5. Installation Date: 12/15/2004	6. Performance Specification Test Date: 12/15/2004
7. Continuous Monitor Comment: Use of CEMS is required by Construction Permit No. PSD-FL-310.	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. B ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. J ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. K ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. L ☐ Previously Submitted, Date _____
   ☐ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. M ☐ Previously Submitted, Date _____
   ☐ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Previously Submitted, Date: 1/14/05
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known):_____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Not Applicable

   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☒ Attached, Document ID: Attach. G
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☒ Attached, Document ID: Attach. N ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☒ Certificate of Representation (EPA Form No. 7610-1)
      ☒ Copy Attached, Document ID: Attach. O
   ☒ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☒ Attached, Document ID: Attach. O
      ☐ Previously Submitted, Date: _____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Not Applicable

Additional Requirements Comment

Attachment P contains the natural gas tariff sheet for the facility.
Attachment Q Contains the Unit 2 and Unit 3 CT performance curve.

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☐ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☒ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☒ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: Mechanical Draft Cooling Tower

3. Emissions Unit Identification Number: 007

4. Emissions Unit Status Code: C	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? ☐ Yes ☒ No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating:

11. Emissions Unit Comment:

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Drift eliminators will be used to reduce PM/PM_{10} emissions.

2. Control Device or Method Code(s): 015

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:		
2. Maximum Production Rate:		
3. Maximum Heat Input Rate:		
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:		
	24 hours/day	7 days/week
	52 weeks/year	8,760 hours/year
6. Operating Capacity/Schedule Comment:		

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: Item No. 59 – Cooling Tower	2. Emission Point Type Code: 4	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: F	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: 77°F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type): Drift loss		
2. Source Classification Code (SCC): 38500101	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM/PM10			**WP**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted:	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? ☐ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions:	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. L ☐ Previously Submitted, Date _____
   ☐ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: Attach. M ☐ Previously Submitted, Date _____
   ☐ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known):_____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable

   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

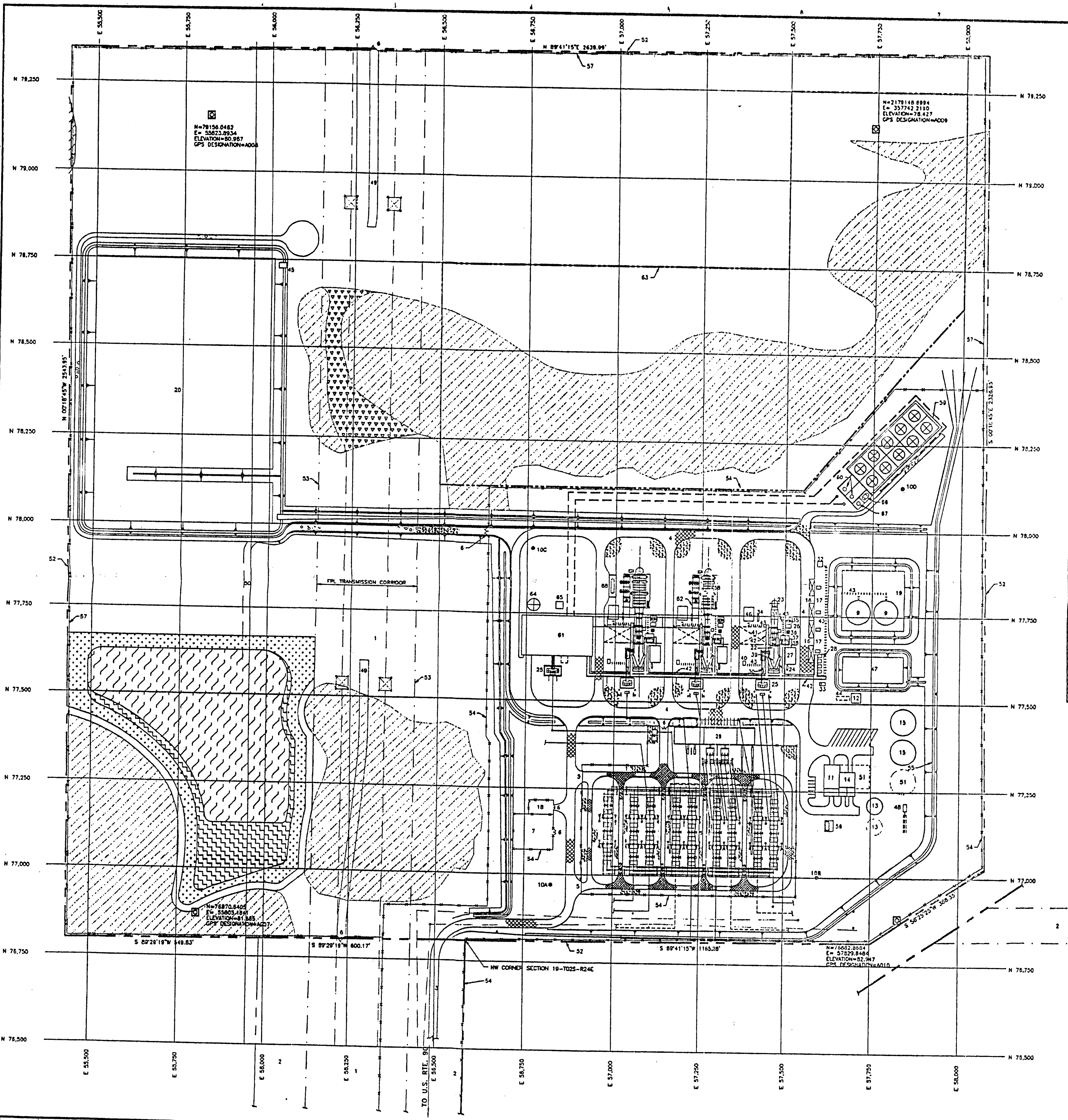
Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _____
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   - ☐ Certificate of Representation (EPA Form No. 7610-1)
     - ☐ Copy Attached, Document ID:_____
   - ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☒ Not Applicable

Additional Requirements Comment

Attachment A

Facility Plot Plan



FACILITIES LEGEND

ITEM NO	DESCRIPTION	LOCATION COORDINATES NORTH	EAST	REFERENCE LOCATION
1	F.P.&L. RIGHT-OF-WAY	N/A	N/A	
2	JEA TRANSMISSION CORRIDOR	N/A	N/A	
3	ACCESS ROAD	N/A	N/A	
4	LOOP ROAD	N/A	N/A	
5	SLIDE GATE	N/A	N/A	
6	SWING GATE	N/A	N/A	
7	FUEL GAS METERING STATION	N/A	N/A	
8	SUBSTATION AREA	N/A	N/A	
9	FUEL OIL STORAGE TANK (1,000,000 GALLONS)	N/A	N/A	
10A	WATER SUPPLY WELL	76970.00	56825.00	CL WELL
10B	WATER SUPPLY WELL	77001.82	57597.00	CL WELL
10C	WATER SUPPLY WELL	77943.00	567645.00	CL WELL
10D	WATER SUPPLY WELL	78129.00	57834.00	CL WELL
11	SHOP/STORAGE BUILDING	N/A	N/A	
12	WASTEWATER PUMPING STATION	N/A	N/A	
13	RAW WATER/FIRE WATER STORAGE TANK	N/A	N/A	
14	MECHANICAL EQUIPMENT BUILDING	N/A	N/A	
15	DEMINERALIZED WATER STORAGE TANK	N/A	N/A	
16	FUEL OIL UNLOADING AREA	N/A	N/A	
17	FUEL OIL UNLOADING PUMP AREA	N/A	N/A	
18	HYDROGEN STORAGE GAS AREA	N/A	N/A	
19	FUEL OIL STORAGE TANK SECONDARY CONTAINMENT	N/A	N/A	
20	STORM WATER DETENTION POND	N/A	N/A	
21	COMBUSTION TURBINE (CT)	N/A	N/A	
22	CT GENERATOR	N/A	N/A	
23	CT EXHAUST STACK (UNIT 1)	77738.26	57469.00	CL STACK
23	CT EXHAUST STACK (UNIT 2)	N/A	N/A	
23	CT EXHAUST STACK (UNIT 3)	N/A	N/A	
24	CT AIR INLET FILTER	N/A	N/A	
25	GENERATOR STEP-UP TRANSFORMER	N/A	N/A	
26	CT WATER INJECTION SKID	N/A	N/A	
27	CONTROL/ELECTRICAL BUILDING	N/A	N/A	
28	FUEL FORWARDING SKIDS	N/A	N/A	
29	CONTROL/SHARED SERVICES BUILDING	N/A	N/A	
30	UNIT AUXILIARY TRANSFORMER	N/A	N/A	
31	EXHAUST DUCT SILENCER	N/A	N/A	
32	FIRE PROTECTION FOAM HOUSE	N/A	N/A	
33	WASH WATER SKID	N/A	N/A	
34	MISCELLANEOUS DRAIN TANK	N/A	N/A	
35	CT CO2 FIRE PROTECTION SKID	N/A	N/A	
36	FALSE START DRAIN TANK	N/A	N/A	
37	LIQUID FUEL/ATOMIZING AIR MODULE	N/A	N/A	
38	CT ACCESSORY MODULE	N/A	N/A	
39	GENERATOR COMPARTMENT	N/A	N/A	
40	FIRE WATER DELUGE HOUSE	N/A	N/A	
41	MAINTENANCE AREA	N/A	N/A	
42	PIPE TRENCH	N/A	N/A	
43	SLEEPER PIPE RACK	N/A	N/A	
44	OIL WATER SEPARATOR	N/A	N/A	
45	STORM WATER DETENTION POND DISCHARGE STRUCTURE	N/A	N/A	
46	COOLER	N/A	N/A	
47	PERCOLATION POND	N/A	N/A	
48	SEPTIC TANK AND DRAINFIELD DETAIL	N/A	N/A	
49	EXISTING ROAD	N/A	N/A	
50	TEMPORARY CONSTRUCTION ACCESS ROAD	N/A	N/A	
51	FUTURE WATER TREATMENT EQUIPMENT EXPANSION	N/A	N/A	
52	PROPERTY BOUNDARY	N/A	N/A	
53	EASEMENT BOUNDARY	N/A	N/A	
54	CHAIN LINK SECURITY FENCE	N/A	N/A	
55	PERIMETER [illegible]	N/A	N/A	
56	LUBE OIL STORAGE AREA	N/A	N/A	
57	BARBED WIRE SITE PERIMETER FENCE	N/A	N/A	
58	HEAT RECOVERY STEAM GENERATOR	N/A	N/A	
59	COOLING TOWER	N/A	N/A	
60	CIRCULATING WATER PUMPS	N/A	N/A	
61	STEAM TURBINE GENERATOR BUILDING	N/A	N/A	
62	ABOVE GROUND PIPE RACK	N/A	N/A	
63	CONSERVATION EASEMENT	N/A	N/A	
64	CONDENSATE STORAGE TANK	N/A	N/A	
65	WASTEWATER SUMP	N/A	N/A	
66	CIRCULATING WATER ACID TANK	N/A	N/A	
67	CIRCULATING WATER HYPOCHLORITE TANK	N/A	N/A	
68	AMMONIA STORAGE TANK	N/A	N/A	

GENERAL LEGEND

- BENCHMARK
- FUTURE FACILITY
- WETLANDS
- CYPRESS (ZONE 2) AREA
- ASPHALT
- CRUSHED ROCK SURFACING
- HERBACEOUS (ZONE 1) AREA
- UPLAND SEEDING AREA
- RESTORATION MITIGATION AREA
- GEOWEB

NOT TO BE USED
FOR CONSTRUCTION

NO	DATE	REVISIONS AND RECORD OF ISSUE		
C	10-13-2000	GENERAL REVISIONS	WG	LWS
B	09-19-2000	GENERAL REVISIONS	WG	SKW
A	09-05-2000	ISSUED FOR REVIEW	WG	SKW

SCALE: 1"=100'

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF FLORIDA.
SIGNED
DATE REG NO.

BLACK & VEATCH
JEA Building Community
ENGINEER SKW DRAWN WG

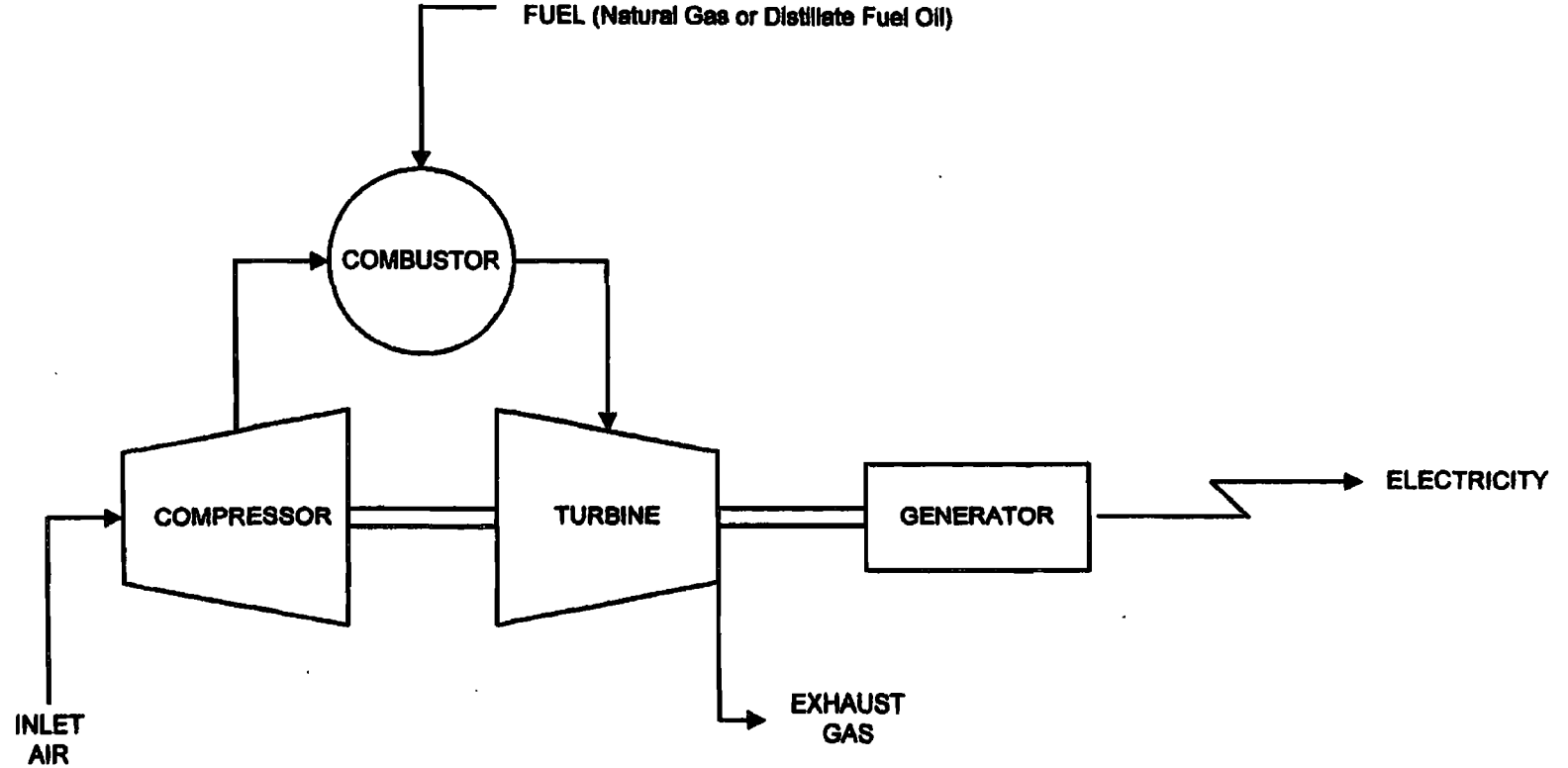
JEA
BRANDY BRANCH COMBINED CYCLE PROJECT
SITE ARRANGEMENT

PROJECT 97990-DS-0001 REV C

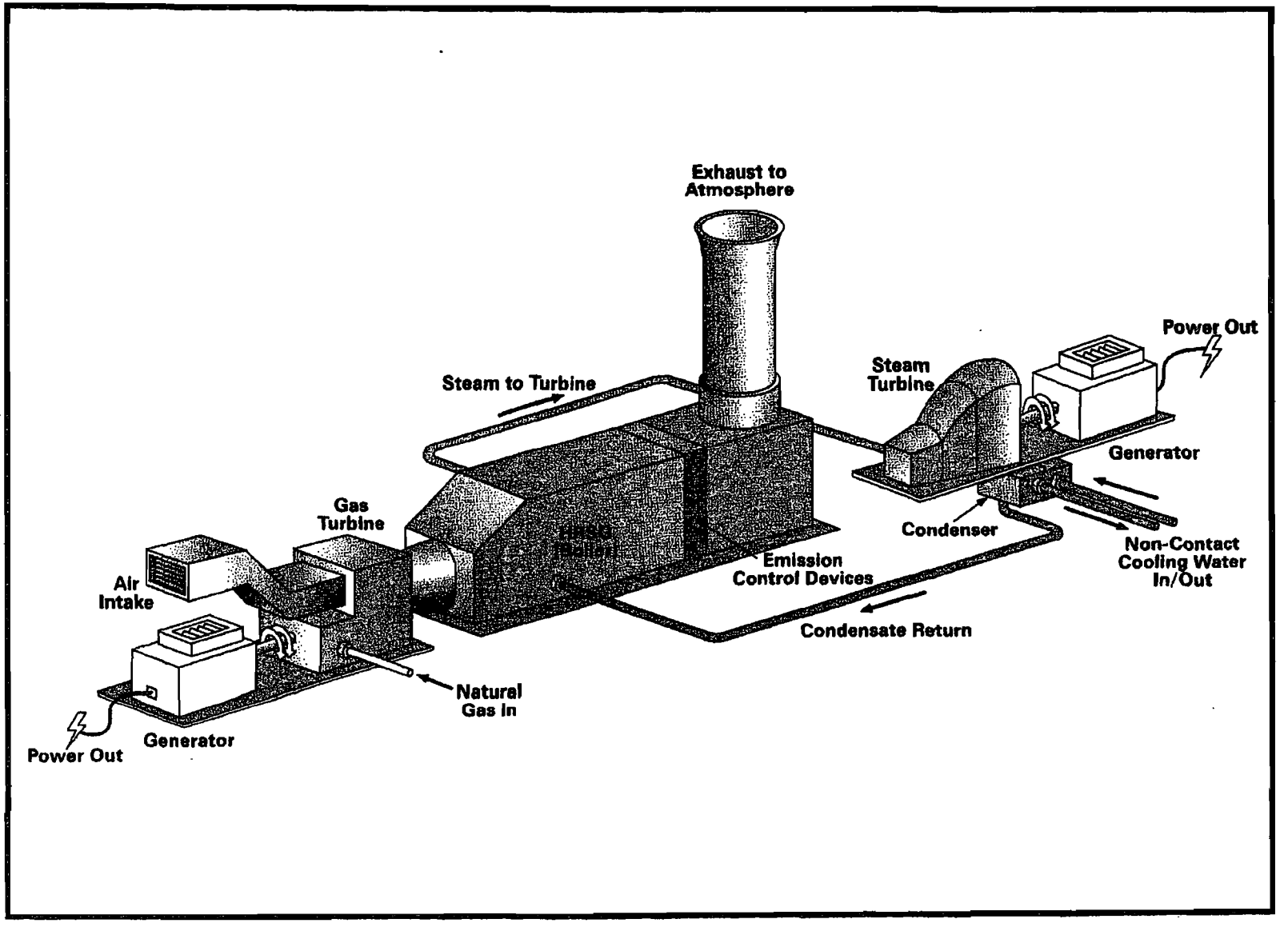
Attachment B

Process Flow Diagrams

Jacksonville Electric Authority
Brandy Branch Facility
Facility ID: Unknown



Simple Cycle Combustion Turbine
Process Flow Diagram


Exhaust to Atmosphere
Steam to Turbine
Steam Turbine
Power Out
Generator
Gas Turbine
Condenser
Air Intake
Emission Control Devices
Non-Contact Cooling Water In/Out
Condensate Return
Natural Gas In
Generator
Power Out

Attachment C

Precautions to Prevent Emissions of Unconfined Particulate Matter

Precautions to Prevent Emissions of Unconfined Particulate Matter

The facility has negligible amounts of unconfined particulate matter as a result of the operation of the facility. Potential examples of particulate matter include:

- Fugitive dust from paved and unpaved roads;
- Sandblasting abrasive material from facility maintenance activities.

Several precautions were taken to prevent emissions of particulate matter in the original design of the facility. These include:

- Paving of roads, parking areas and equipment yards;
- Landscaping and planting of vegetation.

Operational measures are undertaken at the facility which also minimize particulate emissions, in accordance with Rule 62-296.320(4)(c) F.A.C.:

- Maintenance of paved areas as needed;
- Regular mowing of grass and care of vegetation;
- Limiting access to plant property for unnecessary vehicles.

Attachment D

Description of Proposed Modification

Description of Proposed Modification

Physical modifications of the facility are not requested as part of this permit application. Minor changes to the facility's construction permits are included with this application. See the letter report accompanying this application for a description of the proposed permit changes covered under this application.

Attachment E

Rule Applicability Analysis

Rule Applicability Analysis

See the letter report accompanying this application for a discussion on rule applicability as it pertains to the requested permit changes that may require construction permit modifications. Also see Attachment G for the identification of applicable regulations.

Attachment F

List of Insignificant Activities

List of Insignificant Activities

All facility activities previously identified as an insignificant activity

Fire and safety equipment

Brazing, soldering or welding equipment and other maintenance shop activities.

Fuel oil storage tanks

Attachment G

Identification of Applicable Requirements

Identification of Applicable Requirements

List of facility-wide applicable regulations

- Facility-wide applicable regulations specified in construction permit PSD-FL-310 are hereby incorporated by reference.
- Facility-wide applicable regulations hereby incorporates by reference the Title V core list of applicable regulations that all Title V sources are presumptively subject.

Unit 1 – List of applicable regulations

- Applicable regulations specified in existing Title V permit 0310485-005-AV for Unit 1 are hereby incorporated by reference, except as noted in the application support document.
- Emission unit applicable regulations hereby incorporates by reference the Title V core list of applicable regulations that all Title V sources are presumptively subject.
- 40 CFR 60, Subpart A
- 40 CFR 60, Subpart GG
- 40 CFR 72
- 40 CFR 73
- 40 CFR 75
- 40 CFR 77
- 62-204.800(8)(c)
- 62-204.800(8)(d)
- 62-204.800(8)(b)39
- 62-204.800(8)(e)
- 62-204.800(16)
- 62-204.800(17)
- 62-204.800(18)
- 62-204.800(18)
- 62-214
- 62-297.401
- Jacksonville Environmental Protection Board, Rule 2
- Ordinance Code, City of Jacksonville, Title X, Chapter 376
- Ordinance Code, City of Jacksonville, Title V, Chapter 362

Unit 2 – List of applicable regulations

- Applicable regulations specified in construction permit PSD-FL-310 for Unit 2 are hereby incorporated by reference, except as noted in the application support document.
- Emission unit applicable regulations hereby incorporates by reference the Title V core list of applicable regulations that all Title V sources are presumptively subject.
- 40 CFR 60, Subpart A
- 40 CFR 60, Subpart GG
- 40 CFR 60, Subpart Db
- 40 CFR 72
- 40 CFR 73
- 40 CFR 75
- 40 CFR 77

- 62-204.800(8)(c)
- 62-204.800(8)(d)
- 62-204.800(8)(b)39
- 62-204.800(8)(b)3
- 62-204.800(8)(e)
- 62-204.800(16)
- 62-204.800(17)
- 62-204.800(18)
- 62-204.800(20)
- 62-214
- 62-297.401
- Jacksonville Environmental Protection Board, Rule 2
- Ordinance Code, City of Jacksonville, Title X, Chapter 376
- Ordinance Code, City of Jacksonville, Title V, Chapter 362

Unit 3 – List of applicable regulations

- Applicable regulations specified in construction permit PSD-FL-310 for Unit 3 are hereby incorporated by reference, except as noted in the application support document.
- Emission unit applicable regulations hereby incorporates by reference the Title V core list of applicable regulations that all Title V sources are presumptively subject.
- 40 CFR 60, Subpart A
- 40 CFR 60, Subpart GG
- 40 CFR 60, Subpart Db
- 40 CFR 72
- 40 CFR 73
- 40 CFR 75
- 40 CFR 77
- 62-204.800(8)(c)
- 62-204.800(8)(d)
- 62-204.800(8)(b)39
- 62-204.800(8)(b)3
- 62-204.800(8)(e)
- 62-204.800(16)
- 62-204.800(17)
- 62-204.800(18)
- 62-204.800(20)
- 62-214
- 62-297.401
- Jacksonville Environmental Protection Board, Rule 2
- Ordinance Code, City of Jacksonville, Title X, Chapter 376
- Ordinance Code, City of Jacksonville, Title V, Chapter 362

Attachment H

Compliance Report and Plan

Compliance Report and Plan

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
Section II. Facility-wide Conditions **The following conditions apply facility-wide:**			
1. Appendix TV-4, Title V Conditions (version dated 02/12/02), is a part of this permit.	Procedural	C	
2.0. Not federally enforceable. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.	Procedural, Complaints	C	
2.1. Not federally enforceable. Odor Nuisance. Pursuant to Jacksonville Ordinance Code (JOC) Chapter 376, any facility that causes or contributes to the emission of objectionable odors, which results in the City of Jacksonville Air and Water Quality Division (AWQD) receiving and validating complaints from five (5) or more different households within a 90 day period, can be cited for objectionable odors.	Procedural, Notification or citing by AWQD	C	
3. General Particulate Emission Limiting Standards. General Visible Emissions Standard. Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.	Procedural	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
4. Prevention of Accidental Releases (Section 112(r) of CAA). a. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to: RMP Reporting Center Post Office Box 3346 Merrifield, VA 22116-3346 Telephone: 703/816-4434 and, b. The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.	1) Submittal of RMP to CEPPO if applicable; and 2) Submittal of one of the following to permitting authority (if applicable): 1) Title V Certification form documenting compliance with RMP requirements; or 2) Compliance schedule if RMP is required but has not been submitted.	C	
8. General Pollutant Emission Limiting Standards. Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. *Nothing was deemed necessary and ordered at this time.*	N/A	N/A	N/A

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
9. Not federally enforceable. The Permittee shall take reasonable precautions to prevent emissions of unconfined particulate matter at this facility. These precautions include (a) using paved roads, parking areas, and equipment yards, (b) maintenance of paved areas as needed, (c) regular mowing of grass and care of vegetation, and (d) limiting access to plant property by unnecessary vehicles. {Note: This condition implements the requirements of Rules 62-296.320(4)(c)1., 3., & 4., F.A.C. (see Condition **57.** of Appendix TV-4, Title V Conditions.)}	Procedural, Verify that plant personnel are taking reasonable precautions	C	
10. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one.	Timely recording, monitoring, and reporting.	C	
11. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3)(a)2., F.A.C., shall be submitted to the Department and EPA within 60 (sixty) days after the end of the calendar year using DEP Form No. 62-213.900(7), F.A.C.	Timely submittal of annual statement of compliance to addresses shown in 12. & 13. below, using appropriate DEP Form.	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
12. The Permittee shall submit all compliance, annual operating reports and other correspondence required of this permit to: Department of Environmental Protection Northeast District Office 7825 Baymeadows Way, Suite 200B Jacksonville, Florida 32256 Telephone: 904/448-4300 Fax: 904/448-4363 and Regulatory and Environmental Services Department City of Jacksonville 117 West Duval Street, Suite 225 Jacksonville, Florida 32202 Telephone: 904/630-3484 Fax: 904/630-3686	Procedural	C	
13. Any reports, data, notification, certifications, and requests required by the United States Environmental Protection Agency should be sent to: United States Environmental Protection Agency Region 4 Air, Pesticides, & Toxics Management Division Air and EPCRA Enforcement Branch, Air Enforcement Section 61 Forsyth Street Atlanta, Georgia 30303 Telephone: 404/562-9155 Fax: 404/562-9163	Procedural	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
14. Certification by Responsible Official (RO). In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information.	Procedural, Verify that document submittals contain a certification by RO where appropriate	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
15. BACT Determination. In accordance with paragraph (4) of 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 (e.g. conversion to combined- cycle operation) short-term or annual emission limits, annual fuel heat input limits or similar changes.	Verify that BACT analysis/analyses have been or are performed as appropriate	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS

Section III. Emissions Unit Specific Conditions

Subsection A. Simple-Cycle Combustion Turbine-Electrical Generators

E.U. ID No.

Brief Description

001

Simple-Cycle Combustion Turbine-Electrical Generator (nominal 170 megawatt)

002

Simple-Cycle Combustion Turbine-Electrical Generator (nominal 170 megawatt)

003

Simple-Cycle Combustion Turbine-Electrical Generator (nominal 170 megawatt)

These three emissions units are each comprised of a nominal 170 MW simple-cycle combustion turbine (General Electric PG7241FA), with a 90-foot exhaust stack. Natural gas is the primary fuel, with low-sulfur distillate fuel oil as the back-up fuel. NO_X emissions are controlled by dry low NOx (DLN) combustors, and a water injection system for use when firing No. 2 or superior grade distillate fuel oil. Each stationary combustion turbine, ducting, and stacks are designed so as to not preclude installation of SCR equipment and/or oxidation catalyst equipment in the event of a failure to achieve the NO_X limits given in Specific Conditions **A.10.** and **A.11.**, or the carbon monoxide (CO) limits given in Specific Condition **A.12.** Compliance Assurance Monitoring (CAM) *does not apply* to these emissions units. Start-up dates were: April 20, 2001, for Unit 001, April 16, 2001, for Unit 002, and September 10, 2001, for Unit 003.

{Permitting note: These emissions units are regulated under Acid Rain-Phase II, 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(7)(b), F.A.C., Rule 212.400, F.A.C., Prevention of Significant Deterioration (PSD), Best Available Control Technology (BACT), and Air Construction Permit PSD-FL-267 (0310485-001-AC).}

The following conditions apply to the emissions units listed above:

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
General Requirements			
A.1. Definitions. For the purposes of Rule 62-204.800(7), F.A.C., the definitions contained in the various provisions of 40 CFR 60, shall apply except that the term "Administrator" when used in 40 CFR 60, shall mean the Secretary or the Secretary's designee.	N/A	C	
A.2. 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.	Procedural	C	
A.3. Concealment. No owner or operator subject to the provisions of 40 CFR 60 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Procedural	C	
A.4. 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.	Procedural	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
Essential Potential to Emit (PTE) Parameters			
A.5. Capacity. The maximum heat input rates, based on the lower heating value (LHV) of each fuel to each Unit (1-3) at ambient conditions of 59°F temperature, 60% relative humidity, 100% load, and 14.7 psi pressure shall not exceed 1,623 million Btu per hour (MMBtu/hr) when firing natural gas, nor 1,822 MMBtu/hr when firing No. 2 or superior grade of distillate fuel oil. These maximum heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions or equations for correction to other ambient conditions shall be provided to the Department of Environmental Protection (DEP) within 45 days of completing the initial compliance testing. {Permitting note: The heat input limitations have been placed in the permit to identify the capacity of each emissions unit for purposes of confirming that emissions testing is conducted within 90-100 percent of the emissions unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead, the owner or operator is expected to determine heat input whenever emission testing is required, to demonstrate at what percentage of the rated capacity that the unit was tested. Rule 62-297.310(5), F.A.C., included in this permit, requires measurement of the process variables for emission tests. Such heat input determination may be based on measurements of fuel consumption by various methods (including but not limited to) fuel flow metering or tank drop measurements, using the heat value of the fuel determined by the fuel vendor or the operator to calculate average hourly heat input during the test.}	Emission Testing Records, Record of Submittals	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
Control Technology			
A.6. Consistent with best operation and maintenance practices, the DLN systems shall each be tuned to optimize emissions reductions and shall be maintained to minimize NO_X emissions and CO emissions. Operation of the DLN systems in the diffusion-firing mode shall be minimized when firing natural gas.	Procedural & Records	C	
A.7. Emissions Unit Operating Rate Limitation After Testing. See Specific Condition **A.35.**	See A.35	C	
A.8. Methods of Operation – Fuels. Only pipeline natural gas or maximum 0.05 percent sulfur fuel oil, by weight, No. 2 or superior grade of distillate fuel oil shall be fired in these units. {Permitting 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.}	Records from natural gas and distillate fuel supplier(s) or other documentation of fuel sulfur content	C	
A.9. Hours of Operation. Each stationary gas turbine shall only operate up to 4750 hours during any consecutive twelve-month period, of which 750 hours of operation per combustion turbine may be while firing fuel oil. Additionally, each turbine shall be limited to 16 hours per day of fuel oil firing. [NOTE: See Construction Permit Modification Condition 14.B. for revised Hours of Operation]	Records, Rolling twelve-month logs and calculations	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
Emission Limitations and Standards {Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.} {Permitting note: Unless otherwise specified, the averaging times for Specific Conditions **A.10.** through **A.14.** are based on the specified averaging time of the applicable test method.}			
A.10. The following table is a summary of the emissions limits from air construction permit 0310485-001-AC. Values for NO_X are corrected to 15% O_2 on a dry basis. Operational Mode (Fuel) Natural Gas NO_X(15%O2) 10.5 ppmvd CO 15 ppmvd PM/Visibility 10% Opacity SO_2/SAM 2 grains of sulfur per 100 scf Technology and Comments: Dry Low NOx Burners. Clean fuels, good combustion. Fuel Oil NO_X(15%O2) 42 ppmvd CO 20 ppmvd PM/Visibility 10% Opacity SO_2/SAM 0.05% sulfur oil, by weight Technology and Comments: Water Injection. Units limited to 750 hrs equivalent full load oil operation (per CT) annually. Clean fuels.	Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.11. Nitrogen Oxides (NO_X). • When NO_X monitoring data are not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate any specified average time. • While firing Natural Gas. The emission rate of NO_X in the exhaust gas shall not exceed 69.3 lb/hr (at ISO conditions) on a 24 hr block average as measured by the continuous emission monitoring system (CEMS). In addition, NO_X emissions calculated as NO_2 (at ISO conditions) shall not exceed 10.5 ppmvd @15% O_2 to be demonstrated by annual stack test. Note: Basis for lb/hr limit is 10.5 ppmvd @ 15% O_2, full load. • While firing Fuel Oil. The concentration of NO_X in the exhaust gas shall not exceed 42 ppmvd at 15% O_2 on the basis of a 3 hr average as measured by the continuous emission monitoring system (CEMS). In addition, NO_X emissions calculated as NO_2 (at ISO conditions) shall not exceed 42 ppmvd @15% O_2 to be demonstrated by stack test. • After combusting fuel oil for at least 400 hours on any individual combustion turbine (CT), the permittee shall prepare and submit for the Department's review and acceptance an engineering report regarding the lowest NO_X emission rate that can consistently be achieved when firing distillate oil. This lowest recommended rate shall include a reasonable operating margin, taking into account long-term performance expectations and good operating and maintenance practices. The Department may revise the NO_X emission rate based upon this report.	Monitoring Data, stack test reports, records, verify whether any single turbine has combusted fuiel oil for at least 400 hours and if so verify that report has been submitted to the addresses shown in item 12.	I	See attached summary of exceedances.

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.12. Carbon Monoxide (CO). The concentration of CO in the exhaust gas when firing natural gas shall not exceed 15 ppmvd when firing natural gas and 20 ppmvd when firing fuel oil as measured by EPA Method 10. CO emissions (at ISO conditions) shall not exceed 48.0 lb/hr (when firing natural gas) and 65.0 lb/hr (when firing fuel oil) as indicated by EPA Method 10. Within 18 months after the initial compliance test on any individual CT, the permittee shall prepare and submit for the Department's review and acceptance an engineering report regarding the lowest CO emission rate that can consistently be achieved firing natural gas. This lowest recommended rate shall include a reasonable operating margin, taking into account long-term performance expectations and good operating and maintenance practices. The Department may revise the CO emission rate based upon this report.	Source Test Data, Records, Verify if 18 months have elapsed since the intial compliance test of any indiviudal CT and if so verify that report has been submitted to the addresses shown in item 12.	C	
A.13. Sulfur Dioxide (SO_2) SO_2 emissions shall be limited by firing pipeline natural gas (sulfur content not greater than 2 grains per 100 standard cubic feet) and 0.05% sulfur oil, by weight. Compliance with this requirement in conjunction with implementation of the Custom Fuel Monitoring Schedule in Specific Conditions **A.24.** and **A.25.** will demonstrate compliance with the applicable NSPS SO_2 emissions limitations from the combustion turbine. Note: This will effectively limit the combined SO_2 emissions for emissions units 001, 002, and 003 to 117 tons per year.	Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.14. Visible emissions (VE). VE emissions shall not exceed 10 percent opacity when firing natural gas or No. 2 or superior grade of fuel oil. Particulate matter emissions shall not exceed 9.0 lb/hr (front catch) while firing natural gas and 17.0 lb/hr (front catch) while firing fuel oil as indicated by opacity.	Source Testing Records, log books.	C	
Excess Emissions {Permitting note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.}			
A.15. 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, but in no case exceed two hours in any 24-hour period for other reasons, unless specifically authorized by the Department for longer duration. Operation below 50% output shall be limited to 2 hours per unit cycle (breaker closed to breaker open). Excess emissions caused 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.	Procedural, Records	I	See attached summary of exceedances.

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.16. Excess Emissions Report. If excess emissions occur due to malfunction, the owner or operator shall notify the Regulatory and Environmental Services Department of the City of Jacksonville (RESD) 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, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A.	Records, Reporting	C	
A.17. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.	Procedural, Records	C	
Monitoring Requirements			
A.18. At all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.	Procedural, Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.19. 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 unit. Periods when NO_X emissions are above the standards as listed in Specific Condition **A.11.**, shall be reported to RESD pursuant to Rule 62-4.160(8), F.A.C. Following the format of 40 CFR 60.7, periods of startup, shutdown and malfunction shall be monitored, recorded, and reported as excess emissions when emission levels exceed the standards listed in Specific Condition **A.11.**, except as noted in Specific Condition **A.31.**	Records, Reporting	I	CEM problems reported upon discovery.
A.20. The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG and using water injection to control NO_X emissions shall install and operate a continuous monitoring system (CMS) to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within $\pm$5.0 percent and shall be approved by the Administrator.	Monitoring, Records	C	
A.21. The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. Please see Specific Conditions **A.24.** and **A.25.**	Monitoring, Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.22. 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. Data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location shall be provided to both the Department's Northeast District Office and the Regulatory and Environmental Services Department of the City of Jacksonville (RESD) no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62.	Monitoring, Records	C	
A.23. 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. Data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location shall be provided to both the Department's Northeast District Office and the Regulatory and Environmental Services Department of the City of Jacksonville (RESD) no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62.	Records, Timely notification	I	CEM problems reported upon discovery.

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.24. 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 or superior grade fuel oil received at the Brandy Branch Generating Station, 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).	Monitoring, Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.25. Natural Gas Monitoring Schedule. The following custom monitoring schedule for natural gas is approved (pending EPA concurrence) in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2): • The permittee shall apply for an Acid Rain permit in compliance with the deadlines specified in 40 CFR 72.30. See Section IV, Acid Rain Part of this permit. • 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 2 gr/100 scf pursuant of 40 CFR 75.11(d)(2)). See Specific Condition A.13. • Each unit shall be monitored for SO_2 emissions using methods consistent with the requirements of 40 CFR 75 and certified by the USEPA. • JEA shall notify DEP of any change in natural gas supply for reexamination of this monitoring schedule. A substantial change in natural gas quality (i.e., sulfur content variation of greater than 1 grain per 100 standard cubic feet of natural gas) shall be considered as a change in the natural gas supply. Sulfur content of the natural gas will be monitored weekly by the natural gas supplier during the interim period when this monitoring schedule is being reexamined.	Timely Application, Monitoring Plan, Monitoring, Procedural, Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.26. Determination of Process Variables. (a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards. (b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.	Verification of Equipment, Operation and Maintentance Records, and Calibration Records	C	
Test Methods and Procedures {Permitting Note: The attached Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}			
A.27. 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 Department to determine the nitrogen content of the fuel being fired.	Procedural	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.28. For purposes of demonstrating compliance with NSPS - 40 CFR 60, Subpart GG, 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 the permitted NO_X standard 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.	Monitoring	C	
A.29. Compliance with the allowable emission limiting standards shall be determined annually by using the following reference methods as described in 40 CFR 60, Appendix A (1997 version), and adopted by reference in Chapter 62-204.800, F.A.C.	Procedural	C	
A.30. *Annual* 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. • EPA Reference Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources". • EPA Reference Method 10, "Determination of Carbon Monoxide Emissions from Stationary Sources". • EPA reference Method 7E, "Determination of Nitrogen Oxides Emissions from Stationary Sources" (or RATA test data) shall be used to demonstrate compliance with the short-term NO_X BACT limits.	Timely Emissions Testing, Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.31. 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 technology while burning gas) or a 3-hr average (SCR technology or while burning oil). For the 24-hr block average (lb/hr) emissions may be determined via EPA Method 19 or equivalent EPA approved methods. Based on CEMS data, a separate compliance determination is conducted at the end of each operating day (or 3-hr period when applicable) and a new average emission rate is calculated from the arithmetic average of all valid hourly emission rates from the previous operating day (or 3-hr period when applicable). Valid hourly emission rates shall not include periods of startup, shutdown, or malfunction as defined in Rule 62-210.200 F.A.C., where emissions exceed the applicable NO_X standard. These excess emissions periods shall be reported as required in Specific Conditions A.15. and A.16. 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.	Monitoring, Calculations, Reporting	I	See attached summary of exceedances.

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.32. Compliance with the SO_2 and PM/PM_{10} emission limits. Notwithstanding the requirements of Rule 62-297.310(7), F.A.C., the use of pipeline natural gas and maximum 0.05 percent sulfur (by weight) No. 2 or superior grade distillate fuel oil, is the method for determining compliance for SO_2 and PM_{10}. For the purposes of demonstrating compliance with the 40 CFR 60.333 SO_2 standard and the 0.05% sulfur limit, fuel oil analysis using ASTM D2880-941 or D4294-90 (or equivalent latest version) for the sulfur content of liquid fuels and D1072-80, D3031-81, D4084-82 or D3246-81 (or equivalent latest version) 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. The applicant is responsible for ensuring that the procedures above are used for determination of fuel sulfur content. 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) (1997 version).	Procedural	C	
A.33. Compliance with the CO emission limit. Annual compliance testing for CO may be conducted concurrently with the annual RATA testing for NO_X required pursuant to 40 CFR 75 (required for gas only).	Optional	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.34. DEP Method 9. The provisions of EPA Method 9 (40 CFR 60, Appendix A) are adopted by reference with the following exceptions: 1. EPA Method 9, Section 2.4, Recording Observations. Opacity observations shall be made and recorded by a certified observer at sequential fifteen-second intervals during the required period of observation. 2. EPA Method 9, Section 2.5, Data Reduction. For a set of observations to be acceptable, the observer shall have made and recorded, or verified the recording of, at least 90 percent of the possible individual observations during the required observation period. For single-valued opacity standards (e.g., 20 percent opacity), the test result shall be the highest valid six-minute average for the set of observations taken. For multiple-valued opacity standards (e.g., 20 percent opacity, except that an opacity of 40 percent is permissible for not more than two minutes per hour) opacity shall be computed as follows: a. For the basic part of the standard (i.e., 20 percent opacity) the opacity shall be determined as specified above for a single-valued opacity standard. b. For the short-term average part of the standard, opacity shall be the highest valid short-term average (i.e., two-minute, three-minute average) for the set of observations taken. In order to be valid, any required average (i.e., a six-minute or two-minute average) shall be based on all of the valid observations in the sequential subset of observations selected, and the selected subset shall contain at least 90 percent of the observations possible for the required averaging time. Each required average shall be calculated by summing the opacity value of each of the valid observations in the appropriate subset, dividing this sum by the number of valid observations in the subset, and rounding the result to the nearest whole number. The number of missing observations in the subset shall be indicated in parenthesis after the subset average value.	Procedural, Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.35. Operating Rate During Testing. 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. Test procedures shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapter 62-204.800 F.A.C.	Procedural, Emission Test Reports, Records	C	
A.36. Required Stack Sampling Facilities. When a mass emissions stack test is required, the permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities. (See attachment.)	Verify facilities have been provided	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.37. Frequency of Compliance Tests. The following provisions apply only to the combustion turbine system and only for the pollutants listed in Specific Conditions **A.10.** through **A.14.** for which compliance testing is required. (a) Compliance Testing. 3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal: a. Did not operate; or b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.	Procedural, Compliance Test Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.37. Frequency of Compliance Tests. The following provisions apply only to the combustion turbine system and only for the pollutants listed in Specific Conditions **A.10.** through **A.14.** for which compliance testing is required. **(a) Compliance Testing.** 4. During each federal fiscal year (October 1 -- September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for: a. Visible emissions (VE); b. Carbon monoxide (CO); and	Procedural, Compliance Test Records	C	
A.37. Frequency of Compliance Tests. The following provisions apply only to the combustion turbine system and only for the pollutants listed in Specific Conditions **A.10.** through **A.14.** for which compliance testing is required. **(a) Compliance Testing.** 5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours. 8. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit.	Procedural, Compliance Test Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.37. Frequency of Compliance Tests. The following provisions apply only to the combustion turbine system and only for the pollutants listed in Specific Conditions A.10. through A.14. for which compliance testing is required. (a) Compliance Testing. 9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.	Procedural, Notification Records	C	
A.37. Frequency of Compliance Tests. The following provisions apply only to the combustion turbine system and only for the pollutants listed in Specific Conditions A.10. through A.14. for which compliance testing is required. (b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.	Procedural, As Required by the Department	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.37. Frequency of Compliance Tests. The following provisions apply only to the combustion turbine system and only for the pollutants listed in Specific Conditions A.10. through A.14. for which compliance testing is required. (c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a baghouse or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.	Optional, Procedural, Records (if applicable)	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.38. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.	Procedural, Compliance Test Records	C	
A.39. Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the separate test runs unless otherwise specified in a particular test method or applicable rule.	Procedural, Compliance Test Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.40. Applicable Test Procedures. (a) Required Sampling Time. 1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. 2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows: a. (not applicable) b. (not applicable) c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes. (b) Minimum Sample Volume. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.	Procedural, Compliance Test Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.40. **Applicable Test Procedures.** (c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained. (d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1. (See attachment.) (e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.	Procedural, Compliance Test Records	C	
Reporting and Recordkeeping Requirements			
A.41. Records. All measurements, records, and other data required to be maintained by JEA 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 Department and the Regulatory and Environmental Services Department representatives upon request.	Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.42. Emission Compliance Stack Test Reports. A test report indicating the results of the required compliance tests shall be filed as per Specific Condition **A.51.** 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.	Reporting, Record of Report Submittal	C	
A.43. Special Record Keeping Requirements. The owner or operator shall obtain, make, and keep the following records related to fuel usage: (1) Hours of operation for each combustion turbine by fuel type shall be submitted with the Annual Operation Report (AOR) for the prior year. (2) Hours of operation for each combustion turbine shall kept for each consecutive 12-month period by fuel type. (3) Daily hours of fuel oil operation shall be kept for each combustion turbine during any day in which fuel oil is fired.	Procedural, Records	C	
A.44. Malfunction Reporting. In the case of excess emissions resulting from malfunctions, the permittee shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.	Reporting, Record of Notification	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.45. Test Reports - General Requirements. (a) The owner or operator an emissions unit for which a compliance test is required shall file a report with the Department's Northeast District Office on the results of each such test. (b) The required test report shall be filed with the Department's Northeast District Office as soon as practical but no later than 45 days after the last sampling run of each test is completed.	Timely Reporting	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.45. Test Reports - General Requirements. (c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information: 1. The type, location, and designation of the emissions unit tested. 2. The facility at which the emissions unit is located. 3. The owner or operator of the emissions unit. 4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run. 5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard. 6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run. 7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances. 8. The date, starting time and duration of each sampling run. 9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used. 10. The number of points sampled and configuration and location of the sampling plane. 11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point. 12. The type, manufacturer and configuration of the sampling equipment used. 13. Data related to the required calibration of the test equipment. 14. Data on the identification, processing and weights of all filters used. (cont.)	Procedural, Reporting	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.45. Test Reports - General Requirements. (c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information: (cont) 15. Data on the types and amounts of any chemical solutions used. 16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test. 17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report. 18. All measured and calculated data required to be determined by each applicable test procedure for each run. 19. The detailed calculations for one run that relate the collected data to the calculated emission rate. 20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure. 21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.	Procedural, Reporting	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.46. The owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form [see 40 CFR 60.7(d)] to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or, the CMS data are to be used directly for compliance determination, in which case quarterly reports shall be submitted; or, the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each calendar half (or quarter, as appropriate). Written reports of excess emissions shall include the following information: (1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period. (2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted. (3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments. (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.	Timely Reporting, Procedural	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.47. The summary report form shall contain the information and be in the format shown in FIGURE 1 - SUMMARY REPORT-GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE (attached) unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility. (1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator. (2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.	Timely Reporting, Procedural	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.48. (1) Notwithstanding the frequency of reporting requirements specified in 40 CFR 60.7(c), an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met: (i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard; (ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in 40 CFR 60, Subpart A, and the applicable standard; and (iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in 40 CFR 60.7(e)(2).	Optional, Procedural, Records (if applicable)	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.48. (2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.	Optional, Procedural, Records (if applicable)	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.48. (3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in 40 CFR 60.7(e)(1) and (e)(2).	Procedural	C	
A.49. Any owner or operator subject to the provisions of 40 CFR 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and, all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least **5 (five)** years following the date of such measurements, maintenance, reports, and records.	Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
A.50. Test Notification. The permittee shall notify the Regulatory and Environmental Services Department of the City of Jacksonville (RESD), in writing, at least 15 days prior to the date on which each formal annual compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted.	Procedural, Notification Letters	C	
A.51. Test Results. Compliance test results shall be submitted to RESD no later than 45 days after completion of the last test run.	Timely Reporting, Record of Submittals	C	

Subsection B. Fuel Oil Storage Tanks

E.U. ID No.

Brief Description

004

Fuel Oil Storage Tank (one-million gallon)

005

Fuel Oil Storage Tank (one-million gallon)

Emissions units 004 and 005 are two one-million (1,000,000) gallon capacity No. 2 distillate fuel oil storage tanks. The tanks are of a vertical fixed-roof design. The emissions points are breather valves on the dome roofs, located at 40 feet above ground level. The start-up date was April 16, 2001.

{Permitting note: These emissions units are regulated under 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels, adopted by reference in Rule 62-204.800(7)(b), F.A.C., and Air Construction Permit PSD-FL-267 (0310485-001-AC).}

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
Essential Potential to Emit (PTE) Parameters			
B.1. Hours of Operation. These emissions units are allowed to operate continuously, i.e., 8,760 hours/year.	Self-Verifying	C	
Recordkeeping Requirements			
B.2. The permittee shall maintain records on site for storage vessels identification numbers 004 and 005 to include the date of construction, the material storage capacity, and type of material stored for the life of these storage vessels.	Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
Section IV. Acid Rain Part, Phase II. **Brandy Branch Generating Station** **Operated by: JEA** **ORIS code: 7846** The emissions units listed below are regulated under Phase II of the Federal Acid Rain Program. **E.U. ID No.** **Description** 001 Simple-Cycle Combustion Turbine-Electrical Generator (nominal 170 megawatt) 002 Simple-Cycle Combustion Turbine-Electrical Generator (nominal 170 megawatt) 003 Simple-Cycle Combustion Turbine-Electrical Generator (nominal 170 megawatt)			
1. The Acid Rain Phase II Part application submitted for this facility, as approved by the Department, is a part of this permit. The owners and operators of these acid rain units must comply with the standard requirements and special provisions set forth in the application listed below: **a.** DEP Form No.62-210.900(1)(a), version 07/01/95, received January 3, 2000.	Procedural	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
2. Sulfur dioxide (SO_2) allowance allocations for each Acid Rain unit are: **E.U. ID No. / EPA ID # / Year / 2004 / 2005 / 2006 / 2007 / 2008** 001 / 001 / * / 0 / 0 / 0 / 0 / 0 002 / 002 / * / 0 / 0 / 0 / 0 / 0 003 / 003 / * / 0 / 0 / 0 / 0 / 0 *SO_2 allowances to be determined by U.S. EPA.	N/A	-	Statement of Fact
3. Emission Allowances. Emissions from sources subject to the Federal Acid Rain Program (Title IV) shall not exceed any allowances that the source lawfully holds under the Federal Acid Rain Program. Allowances shall not be used to demonstrate compliance with a non-Title IV applicable requirement of the Act. **a.** No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.400(3), F.A.C. **b.** No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain Program. **c.** Allowances shall be accounted for under the Federal Acid Rain Program.	Procedural, Records	C	
4. Where an applicable requirement of the Act is more stringent than applicable regulations promulgated under Title IV of the Act, both provisions shall be incorporated into the permit and shall be enforceable by the Administrator.	N/A	-	Statement of Fact

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
CONDITIONS FROM PREVENTION OF SIGNIFICANT DETERIORATION PERMIT NO. PSD-FL-310			
GENERAL AND ADMINISTRATIVE REQUIREMENTS			
1. Regulating Agencies: All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP), at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 and phone number (850) 488-1344. All documents related to reports, tests, and notifications should be submitted to the DEP Northeast District office, 7825 Baymeadows Way, Suite 200B, Jacksonville, Florida 32256 and phone number 904/807-3300; additionally, such documents shall be submitted to RESD, Suite 225, 117 W. Duval St., Jacksonville, Florida 32202 and phone number 904/630-3484.	Procedural	C	
2. General Conditions: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in Appendix GC of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes.	Procedural	C	
3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.	N/A	-	Statement of Fact

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
4. 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.	Procedural	C	
5. 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.	Procedural, Records (if applicable)	C	
6. 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.	Procedural	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
7. 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, changes in methods of operation or similar changes.	Procedural	C	
8. 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, 2005 permit expiration date, the permittee may be required to demonstrate the adequacy of any previous determination of best available control technology for the source, at the Department's discretion.	Procedural	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
9. Application for Title IV Permit: A revised application for a Title IV Acid Rain Permit must be submitted 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).	Procedural	C	
10. Application for Title V Permit: An application for a Title V operating permit revision, 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 Northeast District office as well as RESD.	Procedural	C	
11. 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.	Procedural	C	
12. 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 Northeast District office as well as RESD by March 1st of each year.	Reporting, Record of AOR Submittal	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
13. Stack Testing Facilities: Stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C.	Records or Physical Verification	C	
14. Quarterly Reports: Quarterly excess emission reports, in accordance with 40 CFR 60.7 (a)(7) (c) (1997 version), shall be submitted to RESD. Each excess emission report shall include the information required in 40 CFR 60.7(c) and 60.334.	Timely Reporting, Record of Submittals	C	
APPLICABLE STANDARDS AND REGULATIONS			
1. 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.	Procedural	C	
2. 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.	N/A	-	Statement of Fact

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
3. 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	Prodedural	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
4. ARMS Emissions Units 002 and 003. 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 170 MMBTU/hr duct burner (HHV) and combined with one 200 MW steam electrical generator. The duct burners shall comply with all applicable provisions of 40CFR60, Subpart Db, 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.	Procedural, Records	C	
5. ARMS Emission Unit 007. Cooling Tower, an unregulated emission unit. The Cooling Tower is not subject to a NESHAP because chromium-based chemical treatment is not used.	Procedural	-	Statement of Fact
6. All notifications and reports required by the above specific conditions shall be submitted to RESD.	Correspondence, Reporting	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
GENERAL OPERATION REQUIREMENTS			
7. Fuels: Only pipeline natural gas or fuel oil containing sulfur content of 0.05% or less shall be fired in these units. [Applicant Request, Rule 62-210.200, F.A.C. (Definitions - Potential Emissions); see BACT Determination for detailed information]	Procedural, Records	C	
8. Combustion Turbine Capacity: The maximum heat input rates, based on the higher heating value (HHV) of the fuel to this Unit shall not exceed 1,911 million Btu per hour (MMBtu/hr) when firing natural gas nor 2060 MMBtu/hr for oil firing. This maximum heat input rate will vary depending upon turbine inlet conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions or equations for correction to other ambient conditions shall be provided to the Department of Environmental Protection (DEP) within 45 days of completing the initial compliance testing. {Permitting note: The heat input limitations have been placed in the permit to identify the capacity of each emissions unit for purposes of confirming that emissions testing is conducted within 90-100 percent of the emission unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead, the owner or operator is expected to determine heat input whenever emission testing is required, to demonstrate at what percentage of the rated capacity that the unit was tested.} [Design, Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]	Record of Submittal, Emission Test Reports	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
9. Heat Recovery Steam Generators equipped with Duct Burners: The maximum heat input rate of each natural gas fired duct burner shall not exceed 170 MMBtu/hr (HHV). {Permitting note: The heat input limitations have been placed in the permit to identify the capacity of each emissions unit for purposes of confirming that emissions testing is conducted within 90-100 percent of the emission unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead, the owner or operator is expected to determine heat input whenever emission testing is required, to demonstrate at what percentage of the rated capacity that the unit was tested.} [Applicant Request, Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]	Procedural, Records	C	
10. 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.	Procedural	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
11. 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 DEP Northeast District Office and RESD 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.]	Records, Timely and Complete Correspondence	C	
12. 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.]	Procedural, Records	C	
13. 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.]	Procedural, Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
14. A. Allowable fuels: The facility is authorized to burn any combination of natural gas (2.0 grains sulfur / 100 scf), low sulfur fuel oil (0.05% sulfur) and lower sulfur fuel oil (0.0065% sulfur). The combinations of these fuels are subject to the hour limitations and record-keeping requirements set fort in 14.B. and 14.C below. Unless otherwise authorized by this permit, CT operation below 50% output shall be limited to 2 hours during each calendar day.	Records, Calculations, Fuel Receipts	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
14.B. Hours of Operation: All units (combined and simple cycle) are authorized to operate 8760 hours per year while firing natural gas (2.0 grains sulfur / 100 scf). The combined cycle units are authorized to operate up to a combined maximum of 576 actual plus "equivalent hours" per consecutive 12 –month period while firing 0.05% sulfur oil OR a combined maximum of 1478 actual plus "equivalent hours" while firing 0.0065% sulfur oil per consecutive 12 – month period, whichever occurs first. The simple cycle unit is authorized to operate up to a maximum of 750 actual plus "equivalent hours" per consecutive 12-month period, while firing either 0.05% or 0.0065% sulfur oil whichever occurs first. Tracking of "equivalent hours" shall conform with and be recorded as defined in paragraph 14C. Additionally the following requirements shall apply: 1. In the event that any of the 3 emission units (simple or combined cycle) fires No. 2 distillate fuel oil (0.05% sulfur) during a calendar day, that unit shall be limited to 16 hours of daily operation on any fuel. Additionally, the other 2 units shall not be fired on any of the allowable fuels for that calendar day. 2. In the event that the simple cycle unit fires lower sulfur oil (0.0065% sulfur) during any calendar day, but for 8 hours or less, the combined cycle units may fire any combination of lower sulfur oil (0.0065% sulfur) or natural gas (2 grains / 100 scf) during that calendar day.	Records, Calculations	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
3. In the event that the simple cycle unit fires lower sulfur fuel oil (0.0065%) for more than 8 hours during a calendar day, it shall be allowed 24 hours of daily operation while the combined cycle units shall not be fired on any fuel for the calendar day.		C	
14.C. Record Keeping Requirements and Fuel Switching: Upon prior written notification, JEA may switch between firing 0.05% or 0.0065% sulfur oil on a calendar day basis (i.e. switching is not authorized within any calendar day). A record shall be made every day for each emission unit documenting: the fuel type actually used, the number of actual hours of firing each fuel type, and (for hours when any oil is fired) the "equivalent hours" for the fuel which is not fired. The following shall be used to determine the "equivalent hours": each actual of combustion of 0.05% sulfur distillate oil shall equate to 2.6 "equivalent hours" of lower sulfur oil (0.0065% sulfur) combustion and each actual hour of firing lower sulfur oil (0.0065% sulfur) shall equate to 0.39 "equivalent hours" of 0.05% sulfur oil combustion. At the end of each calendar month, the total number of "equivalent hours" plus actual hours shall be determined. A running total shall be maintained in order to ensure compliance with Condition 14.B above. [Applicant Request, Rule 62-210.200 F.A.C. (Definitions – Potential Emissions)]	Records, Calculations	C	
15. Neither EU-002 nor EU-003 may be operated without the use of the SCR system except during periods of startup and shutdown in accordance with the manufacturers requirements.	Procedural, Records	C	
CONTROL TECHNOLOGY			

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
16. Dry Low NO_X (DLN) combustors shall be installed on each stationary combustion turbine and the permittee shall install a selective catalytic reduction system to comply with the NO_X and ammonia limits listed in Specific Condition 20. [Design, Rules 62-4.070 and 62-212.400, F.A.C.]	Verify Equipment Is Installed	C	
17. Wet injection shall additionally be installed on each stationary combustion turbine for use during fuel oil firing, in conjunction with the SCR referenced in Specific Condition 16. [Design, Rules 62-4.070 and 62-212.400, F.A.C.]	Verify Equipment Is Installed	C	
18. 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. 20 through 24. [Rule 62-4.070, Rule 62-204.800, F.A.C.]	Verify Design	C	
19. Drift eliminators shall be installed on the cooling tower to reduce PM/PM_{10} 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.	Verify Equipment Is Installed, Verify Certification was Submitted	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
EMISSION LIMITS AND STANDARDS			
20. Nitrogen Oxides (NO_X) Emissions: • The concentration of NO_X in the stack exhaust gas, with the combustion turbine operating on natural gas and the duct burner on, shall not exceed 3.5 ppmvd @15% O_2 on a 3-hr block average. The concentration of NO_X in the stack exhaust gas, with the combustion turbine operating on fuel oil (duct burner firing not permitted), shall not exceed 15.0 ppmvd @15% O_2 on a 3-hr block average. Compliance shall be determined by the continuous emission monitor (CEMS). [BACT Determination] • The concentration of ammonia in the exhaust gas from each CT/HRSG shall not exceed 5.0 ppmvd @15% O_2 while firing natural gas, nor 9 ppmvd @ 15%O_2 while firing oil. The compliance procedures are described in Specific Conditions 29 and 45. [BACT, Rules 62-212.400 and 62-4.070, F.A.C.]	Monitoring, Records, Calculations	I	Appropriate method for compliance with ammonia slip limit is being investigated. No history of current equation is available from other similar sources to assist in evaluating appropriateness of equation for determining compliance with slip limit.
21. Carbon Monoxide (CO) Emissions: Emissions of CO in the stack exhaust gas (at ISO conditions) with the combustion turbine operating on any fuel (with duct burners on or off) shall not exceed 14 ppmvd @15% O_2, on a 24-hr block average to be demonstrated by CEMS. [BACT, Rule 62-212.400, F.A.C.]	Monitoring, Records, Calculations	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
22. 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 not exceed 6.81 lb/hour and with the combustion turbine operating on oil shall not exceed 7.68 lb/hr, to be demonstrated by initial stack test using EPA Method 18, 25 or 25A. Thereafter, continuous monitoring of CO shall represent a surrogate for VOC emissions and provide assurance that a BACT Determination is not required. [PSD Avoidance, Rule 62-212.400, F.A.C.]	Stack Test, Monitoring, Records	C	
23. Sulfur Dioxide (SO_2) emissions: SO_2 emissions shall be limited by firing pipeline natural gas (sulfur content not greater than 2 grains per 100 standard cubic foot) and a limited amount of 0.05% sulfur oil. Compliance with this requirement in conjunction with implementation of the Custom Fuel Monitoring Schedule in Specific Conditions 40 and 42 will demonstrate compliance with the applicable NSPS SO_2 emissions limitations from the combustion turbines as well as the duct burners. [BACT, 40CFR60 Subpart GG and Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C.].	Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
24. PM/PM_{10} and Visible emissions (VE): VE emissions shall not exceed 10 percent opacity from the stack in use. PM/PM_{10} emissions from each combustion turbine and HRSG train shall not exceed 22.02 lb/hr at 100% output firing natural gas with the duct burner on and 62.1 lb/hr at 100% output firing fuel oil to be demonstrated by opacity. [BACT, Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C.]	Procedural, Testing	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
EXCESS EMISSIONS			
25. 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 "warm" or "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 in any 24-hour period. During warm startup from combined cycle operation, up to three hours of excess emissions are allowed in any 24-hour period. Cold start-up is defined as a startup to combined cycle operation following a shutdown lasting at least 72 hours. Warm startup is defined as a startup to combined cycle operation following a shutdown lasting at least 24 hours. A startup of any type is defined as being complete upon the first 3-hour block NO_X average of 3.5 ppmvd or less (15 ppmvd or less for oil firing). Operation below 50% output per turbine shall otherwise be limited to 2 hours in any 24-hour period. [Rule 62-210.700, F.A.C.].	Prodcedural, Monitoring, Records	I	To be provided upon contractor correction of software problems related to report generating algorithms.
26. 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.	Procedural, Monitoring, Records	I	See attached summary of ezcess emissions.

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
27. Excess Emissions Report: If excess emissions occur for more than two hours due to malfunction, the owner or operator shall notify RESD 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. 20 through 24. [Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., and 40 CFR 60.7 (1998 version)].	Monitoring, Procedural, Timely Notification and Reporting, Records	I	To be provided upon contractor correction of software problems related to report generating algorithms.
COMPLIANCE DETERMINATION			
28. Compliance with the allowable emission limiting standards shall be determined within 60 days after achieving the maximum production rate for each fuel, 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. (unless the U.S. Environmental Protection Agency authorizes an extension).	Timely Testing and Reporting	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
29. Initial (I) performance tests shall be performed by the deadlines in Specific Condition 28. 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 change of combustors, if specifically requested by the DEP or RESD 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). This testing may be conducted during the NO_X RATA tests, which includes loads that are less than permitted capacity. • EPA Reference Method 18, 25 and/or 25A, "Determination of Volatile Organic Concentrations." Initial test only. • Method CTM-027 for ammonia slip during oil firing (I) and natural gas firing (I, A). The applicant shall calculate and report the ppmvd ammonia slip (@ 15% O_2) 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.	Timely Testing, Calculations, Procedural, Reporting	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
30. 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 27. Since CEMS are used for compliance, testing at four separate loads is not required for demonstrating initial compliance under 40 CFR 60.335(c)(3), consistent with recent EPA guidance. [Rules 62-4.070 F.A.C., 62-210.700, F.A.C., 40 CFR 75 and BACT]	Monitoring, Calculations, Reporting	I	See attached summary of excess emissions.

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
31. Compliance with the SO_2 and PM/PM_{10} emission limits: For the purposes of demonstrating compliance with the 40 CFR 60.333 SO_2 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 CFR60.335 or 40 CFR75 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).	Records	C	
32. Compliance with CO emission limit: Annual RATA testing for the CO and NO_X CEMS shall be-required pursuant to 40 CFR 75.	Timely Testing	C	
33. 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.	Testing, Monitoring	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
34. 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.	Procedural, Records	C	
35. Test Notification: The DEP's Northeast District office and RESD shall be notified, in writing, at least 30 days prior to the initial performance tests and at least 15 days before annual compliance tests (unless waived by the affected agency).	Timely Notification	C	
36. Special Compliance Tests: The DEP or RESD 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.	N/A	C	Statement of Fact
37. Test Results: Compliance test results shall be submitted to RESD no later than 45 days after completion of the last test run. [Rule 62-297.310(8), F.A.C.].	Timely Reporting	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
Notification, Reporting, and Recordkeeping			
38. Records: All measurements, records, and other data required to be maintained by JEA 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 and RESD representatives upon request.	Records	C	
39. 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.	Procedural, Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
40. Special Record Keeping Requirements: The owner or operator shall obtain, make, and keep the following records: (1) Hours of operation for each combustion turbine by fuel type shall be submitted with the Annual Operation Report (AOR) for the prior year. (2) Hours of operation for each combustion turbine shall be kept for each consecutive 12-month period by fuel type. (3) Daily hours of fuel oil and natural gas operation shall be kept for each combustion turbine during any day in which fuel oil is fired. (4) Daily hours of operation when the CT is being fired and the SCR is not in service, along with support documentation demonstrating that the unit was in a startup or shutdown condition. (5) Daily (as-fired) sulfur content of fuel oil shall be kept for each combustion turbine during any day in which fuel oil is fired.	Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
MONITORING REQUIREMENTS			
41. 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 (CO_2) 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 NOx and CO established in this permit.	Equipment, Procedural	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
Compliance with the emission limits for NOx 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.	Records, Calculations	I	See attached excess emissions summary.

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
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.	Calculations, Procedural	C	
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.	Procedural, Records	I	CEM software and hardware upgrades in progress.
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 or 24-hour block.	Procedural	C	
Record keeping and reporting shall be conducted pursuant to 40 CFR Part 75, Subparts F and G.	Procedural	C	
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.	Testing Records	C	
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% O_2.	Equipment	C	Ranges changed as required and approved by regulatory authority.

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
The CO monitor and CO_2 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 CO_2 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 RESD and the Department's Northeast 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% O_2.	Equipment, Procedural, Records, Reports	C	
The RATA tests required for the CO_2 monitor shall be performed using EPA Method 3B, of Appendix A of 40 CFR 60.	Procedural	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
NO_X, CO and CO_2 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 "warm" or "cold" startup. Periods of data excluded for cold startup shall not exceed four hours in any 24-hour block period. Periods of data excluded for warm startup shall not exceed three hours in any 24-hour block period. Periods of data excluded for hot startups, shutdowns or 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 combined startup, shutdown and 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.	Procedural, Records	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
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.	Procedural	C	
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 RESD and the Department's Northeast 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.	Reporting	I	Fourth quarter Part 60 report submitted late. Software, permit language, and rule requirements are contradictory in many cases. To be resolved via permit revisions.

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
Upon request from the Department or RESD, 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]	As required by the Department or RESD	C	
JEA shall be permitted to utilize O_2 as a diluent (rather than CO_2), but shall notify the Department of this change prior to CEMS installation. [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].	Optional, Notification	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
42. Fuel Monitoring Schedule: An optional SO_2 Emissions Data Protocol (without additional EPA approvals) for Gas-Fired and Oil-Fired Units 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:	Optional If optional protocol chosen:	C	
• The permittee shall apply for an Acid Rain permit within the deadlines specified in 40 CFR 72.30.	Timely Acid Rain Permit		
• The permittee shall submit a monitoring plan, certified by signature of the Designated Representative, that commits to the sole use of pipeline supplied natural gas (sulfur content less than 20 gr/100 scf pursuant to 40 CFR 75.11(d)(2)) for the CT's.	Monitoring Plan		
• Each unit shall be monitored for SO_2 emissions using methods consistent with the requirements of 40 CFR 75 and certified by the USEPA.	Monitoring Plan		
• The following monitoring schedule for No. 2 or superior grade fuel oil shall be followed: For all bulk shipments of No. 2 or superior grade fuel oil received at the Brandy Branch Power Plant, an analysis which reports the sulfur 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).	Procedural, Records		

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
43. 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]	Procedural List of Process Variables submitted to the Department Procedural, Records	C	
44. Subpart Dc Monitoring and Recordkeeping Requirements: The permittee shall comply with all applicable requirements of this Subpart [40CFR60, Subpart Dc].	Monitoring, Recordkeeping	C	

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
45. Selective Catalytic Reduction System (SCR) Compliance Procedures:		C	
• An annual stack emission test for nitrogen oxides and ammonia from the CT/HRSG pair shall be simultaneously conducted while firing natural gas and operating with the duct burner on as defined in Specific Condition 20. The ammonia injection rate necessary to comply with the NO_X standard shall be established and reported during each annual performance test.	Timely Testing, Test Reports		
• 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.	Procedural, Records		
• The permittee shall install and operate an ammonia flow meter to continuously 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.	Equipment, Procedural, Records		
• 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.	Procedural, Records		

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
• 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%O_2 =(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%O_2) 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.	Calculations, Procedure Included in CEM Monitoring Plan, Procedural	I	Appropriate method for compliance with ammonia slip limit is being investigated. No history of current equation is available from other similar sources to assist in evaluating appropriateness of equation for determining compliance with slip limit.

PERMIT TERM OR CONDITION	METHOD OF COMPLIANCE	COMPLIANCE[a] C, I, N, or NA	COMMENTS
• Upon specific request by RESD or 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.	As required by RESD or Department	C	

[a]Compliance Abreviations
C = Unit has been in full compliance during the entire certification period (i.e. continous compliance)
I = Unit has been in compliance for only a portion of the certification period (i.e. intermittent compliance)
N = Unit has not been in compliance during the certification period (i.e. out of compliance)
NA = Not Applicable or Not Yet Applicable.

Compliance Period of Review: 1 / 1 / 04 to 12 / 31 / 04

I, the undersigned, am the responsible official as defined in Chapter 62-210.200, F.A.C., of the Title V source for which the compliance report is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate, and complete.

Signature _____ Date _____

Attachment I

Requested Changes to Current Title V Air Operation Permit

Requested Changes to Current Title V Operating Permit

See the application support document accompanying this application for a discussion on requested changes to existing facility permits.

Attachment J

Fuel Analysis or Specification

Fuel Analysis or Specification

Fuel is specified as pipeline quality sweet natural gas, No. 2 distillate fuel oil containing no more than 0.05% sulfur and lower sulfur fuel oil containing no more than 0.0065% sulfur.

The lower sulfur fuel oil is expected to have the same specifications as the No. 2 low sulfur fuel oil, except the sulfur content will be a maximum 0.0065%, by weight.

Attachment K

Detailed Description of Control Equipment

Detailed Description of Control Equipment

For Unit No. 1 with natural gas firing, low NO_x burners will be used to control NO_x emissions. For Unit No. 1 with fuel oil firing, water injection will be used to limit NO_x emissions by lowering the combustion temperature. For further information on Unit No. 1 control equipment refer to the simple cycle combustion turbine PSD application submitted to FDEP in May 1999.

For Unit No. 2 and Unit No. 3 with natural gas firing, dry low NO_x burners with an SCR will be used to limit NO_x emissions. For Unit No. 2 and Unit No. 3 with fuel oil firing, water injection with an SCR will be used to limit NO_x emissions. For further information on Unit No. 2 and Unit No. 3 control equipment refer to Appendix 10.7 – PSD Application of the Site Certification Application for the JEA Brandy Branch Combined Cycle Conversion submitted to FDEP in December 2000.

Attachment L

Procedures for Startup and Shutdown

Procedures for Startup and Shutdown

Startup and shutdown will be completed in accordance with the manufacturers' operating procedures and/or based on plant experience. Excess emissions from startup and shutdown are permitted in condition 25 of PSD permit PSD-FL-310 and by condition A.15 of operation permit No. 0310485-005-AV.

Attachment M

Operation and Maintenance Plan

Operation and Maintenance Plan

The emission units will be operated and maintained in accordance with manufacturer's recommendations, operations and maintenance experience, and technical guidance taking into account protection of equipment, safety of personnel, and other factors as deemed necessary to maintain compliance with the permitted limits.

Attachment N

Alternative Methods of Operation

Alternative Methods of Operation

Emission Units 001, 002 and 003 can operate on pipeline quality natural gas, No. 2 distillate fuel oil (0.05 percent sulfur) and lower sulfur fuel oil (0.0065 percent sulfur)

The following operating limitations are for the operation of Units No. 1, No.2 and No. 3 on natural gas and/or 0.05% sulfur fuel oil. These are the currently permitted operational limits:

- Annual hours of operation:
  - Simple Cycle Unit (Unit No. 1)
    - 4,750 hours total.
    - 750 hours of operation firing either 0.05 percent sulfur fuel oil or very low sulfur fuel oil (0.0065 percent sulfur).
  - Combined Cycle Units (Unit No. 1 and Unit No. 2)
    - No limit on total annual hours of operation.
    - 576 total hours of operation with 0.05 percent sulfur fuel oil firing for Unit No. 2 and Unit No. 3 combined.
    - 1,478 total hours of operation with lower sulfur fuel oil (0.0065 percent sulfur) firing for Unit No. 2 and Unit No. 3 combined

- Short-term operational limits:
  - No daily limitations are required when firing only natural gas in Unit No.1, Unit No. 2 and Unit No. 3.
  - When any of the three combustion turbines (Unit No. 1, Unit No. 2 or Unit No. 3) fires 0.05 percent sulfur fuel oil during a calendar day that combustion turbine is limited to 16 hours of daily operation on any fuel for that calendar day. Also, the other two Units shall not be fired on any day in which 0.05 percent sulfur fuel oil is fired in one of the Units.
  - In the event that Unit 1 fires lower sulfur fuel oil (0.0065 percent sulfur) during any calendar day, but for 8 hours or less, the combined cycle units may fire any combination of lower sulfur oil (0.0065 percent sulfur) or natural gas during the calendar day.
  - In the event that Unit 1 fires lower sulfur fuel oil (0.0065 percent sulfur) for more than 8 hours during a calendar day, it shall be allowed 24 hours of daily operation while the combined cycle units shall not be fired on any fuel for that calendar day.

Attachment O

Acid Rain Part Application

JEA

December 30, 1999

Mr. Scott Sheplak, P.E.
Title V Administrator
Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee. FL 32399-2400

RE: Brandy Branch Facility
Acid Rain Application Forms

Dear Mr. Sheplak:

Enclosed please find the Acid Rain Application Forms for the Brandy Branch Facility.

If you have any questions with regard to this matter, please contact me at (904) 665-6247.

Sincerely.

N. Bert Gianazza, P.E.
Environmental Permitting
& Compliance Group

cc: USEPA
USEPA, Region 4

bc: J. Connolly
E. Mims
L. Starner
B. Gianazza
File

bbacidrain

Phase II Permit Application

For more information, see instructions and refer to 40 CFR 72.30 and 72.31 and Chapter 62-214, F.A.C.

This submission is: ☒ New ☐ Revised

STEP 1
Identify the source by plant name, State, and ORIS code from NADB

Plant Name	Brandy Branch	State	FL	ORIS Code	7846

STEP 2 Enter the boiler ID# from NADB for each affected unit and indicate whether a repowering plan is being submitted for the unit by entering "yes" or "no" at column c. For new units, enter the requested information in columns d and e.

a	b	c	d	e
Boiler ID#	Compliance Plan: Unit will hold allowances in accordance with 40 CFR 72.9(c)(1)	Compliance Plan: Repowering Plan	New Units: Commence Operation Date	New Units: Monitor Certification Deadline
001	Yes		Dec. 2000	Dec. 2000
002	Yes		Dec. 2000	Dec. 2000
003	Yes		Dec. 2001	Dec. 2001
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			

STEP 3
Check the box if the response in column c of Step 2 is "Yes for any unit

☐ For each unit that will be repowered, the Repowering Extension Plan form is included and the Repowering Technology Petition form has been submitted or will be submitted by June 1, 1997.

Plant Name (from Step 1) **Brandy Branch**

STEP 4
Read the standard requirements and certification, enter the name of the designated representative, and sign and date

Standard Requirements

Permit Requirements.

(1) The designated representative of each Acid Rain source and each Acid Rain unit at the source shall:
(i) Submit a complete Acid Rain part application (including a compliance plan) under 40 CFR part 72, Rules 62-214.320 and 330, F.A.C. in accordance with the deadlines specified in Rule 62-214.320, F.A.C.; and
(ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain part application and issue or deny an Acid Rain permit;
(2) The owners and operators of each Acid Rain source and each Acid Rain unit at the source shall:
(i) Operate the unit in compliance with a complete Acid Rain part application or a superseding Acid Rain part issued by the permitting authority; and
(ii) Have an Acid Rain Part.

Monitoring Requirements.

(1) The owners and operators and, to the extent applicable, designated representative of each Acid Rain source and each Acid Rain unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75, and Rule 62-214.420, F.A.C.
(2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
(3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements.

(1) The owners and operators of each source and each Acid Rain unit at the source shall:
(i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
(ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
(2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
(3) An Acid Rain unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
(i) Starting January 1, 2000, an Acid Rain unit under 40 CFR 72.6(a)(2); or
(ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an Acid Rain unit under 40 CFR 72.6(a)(3).
(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1)(i) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements. The owners and operators of the source and each Acid Rain unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements.

(1) The designated representative of an Acid Rain unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
(2) The owners and operators of an Acid Rain unit that has excess emissions in any calendar year shall:
(i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
(ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the source and each Acid Rain unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
(i) The certificate of representation for the designated representative for the source and each Acid Rain unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with Rule 62-214.350, F.A.C.; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
(ii) All emissions monitoring information, in accordance with 40 CFR part 75;
(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,

Plant Name (from Step 1) **Brandy Branch**

Recordkeeping and Reporting Requirements (cont)

(iv) Copies of all documents used to complete an Acid Rain part application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.

(2) The designated representative of an Acid Rain source and each Acid Rain unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability.

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain part application, an Acid Rain part, or a written exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
(4) Each Acid Rain source and each Acid Rain unit shall meet the requirements of the Acid Rain Program.
(5) Any provision of the Acid Rain Program that applies to an Acid Rain source (including a provision applicable to the designated representative of an Acid Rain source) shall also apply to the owners and operators of such source and of the Acid Rain units at the source.
(6) Any provision of the Acid Rain Program that applies to an Acid Rain unit (including a provision applicable to the designated representative of an Acid Rain unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one Acid Rain unit shall not be liable for any violation by any other Acid Rain unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.
(7) Each violation of a provision of 40 CFR parts 72, 73, 75, 77, and 78 by an Acid Rain source or Acid Rain unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities. No provision of the Acid Rain Program, an Acid Rain part application, an Acid Rain part, or a written exemption under 40 CFR 72.7 or 72.8 shall be construed as:

(1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an Acid Rain source or Acid Rain unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
(2) Limiting the number of allowances a unit can hold; *provided*, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;
(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

Certification

I am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name Jon P. Eckenbach	
Signature	Date 12-14-99

STEP 5 (optional)
Enter the source AIRS FINDS identification

AIRS
FINDS

United States
Environmental Protection Agency
Acid Rain Program

OMB No. 2060-0258

Certificate of Representation

For more information, see instructions and refer to 40 CFR 72.24

This submission is: [X] New [ ] Revised (revised submissions must be completed in full; see instructions)

This submission includes combustion or process sources under 40 CFR part 74 [ ]

STEP 1
Identify the source by plant name, State, and ORIS code.

Plant Name	State	ORIS Code
Brandy Branch	FL	7846

STEP 2
Enter requested information for the designated representative.

Name	Jon P. Eckenbach
Address	21 West Church Street Jacksonville, Florida 32202
Phone Number	(904) 665-6315
Fax Number	(904) 554-7366
E-mail address (if available)	eckejp@jea.com

STEP 3
Enter requested information for the alternate designated representative, if applicable.

Name	Tim E. Perkins
Phone Number	(904) 665-4520
Fax Number	(904) 665-7376
E-mail address (if available)	perkte@jea.com

STEP 4
Complete Step 5, read the certifications, and sign and date. For a designated representative of a combustion or process source under 40 CFR part 74, the references in the certifications to "affected unit" or "affected units" also apply to the combustion or process source under 40 CFR part 74 and the references to "affected source" also apply to the source at which the combustion or process source is located.

I certify that I was selected as the designated representative or alternate designated representative, as applicable, by an agreement binding on the owners and operators of the affected source and each affected unit at the source.

I certify that I have given notice of the agreement, selecting me as the designated representative for the affected source and each affected unit at the source identified in this certificate of representation, in a newspaper of general circulation in the area where the source is located or in a State publication designed to give general public notice.

I certify that I have all necessary authority to carry out my duties and responsibilities under the Acid Rain Program on behalf of the owners and operators of the affected source and of each affected unit at the source and that each such owner and operator shall be fully bound by my actions, inactions, or submissions.

I certify that I shall abide by any fiduciary responsibilities imposed by the agreement by which I was selected as designated representative or alternate designated representative, as applicable.

I certify that the owners and operators of the affected source and of each affected unit at the source shall be bound by any order issued to me by the Administrator, the permitting authority, or a court regarding the source or unit.

Where there are multiple holders of a legal or equitable title to, or a leasehold interest in, an affected unit, or where a utility or industrial customer purchases power from an affected unit under life-of-the-unit, firm power contractual arrangements, I certify that:

I have given a written notice of my selection as the designated representative or alternate designated representative, as applicable, and of the agreement by which I was selected to each owner and operator of the affected source and of each affected unit at the source; and

Allowances and the proceeds of transactions involving allowances will be deemed to be held or distributed in proportion to each holder's legal, equitable, leasehold, or contractual reservation or entitlement or, if such multiple holders have expressly provided for a different distribution of allowances by contract, that allowances and the proceeds of transactions involving allowances will be deemed to be held or distributed in accordance with the contract.

The agreement by which I was selected as the alternate designated representative, if applicable, includes a procedure for the owners and operators of the source and affected units at the source to authorize the alternate designated representative to act in lieu of the designated representative.

Plant Name (from Step 1) Brandy Branch

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Signature (designated representative) [signature]	Date 12-14-99
Signature (alternate designated representative) [signature]	Date 12-16-99

STEP 5
Provide the name of every owner and operator of the source and identify each affected unit (or combustion or process source) they own and/or operate.

Name JEA					[X] Owner	[X] Operator
ID# 001	ID# 002	ID# 003	ID#	ID#	ID#	ID#
ID#	ID#	ID#	ID#	ID#	ID#	ID#

Name					[ ] Owner	[ ] Operator
ID#	ID#	ID#	ID#	ID#	ID#	ID#
ID#	ID#	ID#	ID#	ID#	ID#	ID#

Name					[ ] Owner	[ ] Operator
ID#	ID#	ID#	ID#	ID#	ID#	ID#
ID#	ID#	ID#	ID#	ID#	ID#	ID#

Name					[ ] Owner	[ ] Operator
ID#	ID#	ID#	ID#	ID#	ID#	ID#
ID#	ID#	ID#	ID#	ID#	ID#	ID#

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

January 19, 2000

Mr. N. Bert Gianazza, P.E.
Environmental Permitting & Compliance Group
Jacksonville Electric Authority
21 West Church Street
Jacksonville, FL 32202-3139

Re: Acid Rain Phase II Permit Application
Brandy Branch Facility; ORIS Code: 7846

Dear Mr. Gianazza:

Thank you for your recent submission of the Acid Rain Phase II Permit Application for the subject facility. We have reviewed the document and found it to be complete.

Sincerely,

Scott M. Sheplak, P.E.
Administrator
Title V Section

cc: Jenny Jachim, EPA Region 4

United States
Environmental Protection Agency
Acid Rain Program

OMB No. 2060-0258

Certificate of Representation

For more information, see instructions and refer to 40 CFR 72.24
This submission is: ☐ New ☒ Revised (revised submissions must be completed in full; see instructions)
This submission includes combustion or process sources under 40 CFR part 74 ☐

STEP 1
Identify the source by plant name, State, and ORIS code.

Plant Name	State	ORIS Code
Brandy Branch	FL	7846

STEP 2
Enter requested information for the designated representative.

Name	Jon P. Eckenbach, Executive Vice President
Address	21 West Church Street Jacksonville, FL 32202
Phone Number	(904) 665-6315
Fax Number	(904) 665-7366
E-mail address (if available)	eckejp@jea.com

STEP 3
Enter requested information for the alternate designated representative, if applicable.

Name	Susan Hughes, Vice President
Phone Number	(904) 665-6248
Fax Number	(904) 665-7376
E-mail address (if available)	hughsn@jea.com

STEP 4
Complete Step 5, read the certifications, and sign and date. For a designated representative of a combustion or process source under 40 CFR part 74, the references in the certifications to "affected unit" or "affected units" also apply to the combustion or process source under 40 CFR part 74 and the references to "affected source" also apply to the source at which the combustion or process source is located.

I certify that I was selected as the designated representative or alternate designated representative, as applicable, by an agreement binding on the owners and operators of the affected source and each affected unit at the source.

I certify that I have given notice of the agreement, selecting me as the 'designated representative' for the affected source and each affected unit at the source identified in this certificate of representation, in a newspaper of general circulation in the area where the source is located or in a State publication designed to give general public notice.

I certify that I have all necessary authority to carry out my duties and responsibilities under the Acid Rain Program on behalf of the owners and operators of the affected source and of each affected unit at the source and that each such owner and operator shall be fully bound by my actions, inactions, or submissions.

I certify that I shall abide by any fiduciary responsibilities imposed by the agreement by which I was selected as designated representative or alternate designated representative, as applicable.

I certify that the owners and operators of the affected source and of each affected unit at the source shall be bound by any order issued to me by the Administrator, the permitting authority, or a court regarding the source or unit.

Where there are multiple holders of a legal or equitable title to, or a leasehold interest in, an affected unit, or where a utility or industrial customer purchases power from an affected unit under life-of-the-unit, firm power contractual arrangements, I certify that:

I have given a written notice of my selection as the designated representative or alternate designated representative, as applicable, and of the agreement by which I was selected to each owner and operator of the affected source and of each affected unit at the source; and

Allowances and the proceeds of transactions involving allowances will be deemed to be held or distributed in proportion to each holder's legal, equitable, leasehold, or contractual reservation or entitlement or, if such multiple holders have expressly provided for a different distribution of allowances by contract, that allowances and the proceeds of transactions involving allowances will be deemed to be held or distributed in accordance with the contract.

The agreement by which I was selected as the alternate designated representative, if applicable, includes a procedure for the owners and operators of the source and affected units at the source to authorize the alternate designated representative to act in lieu of the designated representative.

Plant Name (from Step 1) Brandy Branch

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Signature (designated representative) [signature]	Date 11/14/00
Signature (alternate designated representative) [signature]	Date 11/17/00

STEP 5
Provide the name of every owner and operator of the source and identify each affected unit (or combustion or process source) they own and/or operate.

Name JEA					☒ Owner	☒ Operator
ID# 1	ID# 2	ID# 3	ID#	ID#	ID#	ID#
ID#	ID#	ID#	ID#	ID#	ID#	ID#

Name					☐ Owner	☐ Operator
ID#	ID#	ID#	ID#	ID#	ID#	ID#
ID#	ID#	ID#	ID#	ID#	ID#	ID#

Name					☐ Owner	☐ Operator
ID#	ID#	ID#	ID#	ID#	ID#	ID#
ID#	ID#	ID#	ID#	ID#	ID#	ID#

Name					☐ Owner	☐ Operator
ID#	ID#	ID#	ID#	ID#	ID#	ID#
ID#	ID#	ID#	ID#	ID#	ID#	ID#

Attachment P

Natural Gas Tariff Sheet

GENERAL TERMS AND CONDITIONS
(continued)

am. NAESB Definitions - shall mean any such definitions issued by NAESB which have been adopted by the FERC. Transporter incorporates NAESB Definitions (Version 1.6, July 31, 2002) including the Wholesale Gas Quadrant Recommendations R02002 and R02002-2, 1.2.8 through 1.2.19, 2.2.2, 2.2.3, 4.2.1 through 4.2.20, 5.2.2 and 5.2.3 by reference herein.

an. "Transporter's Web site" shall mean the Uniform Resource Locator (URL) of Transporter's Electronic Communication Mechanism on the Internet at www.fgt.enron.com.

ao. "Execution" or "executed" or any other form of the root word "execute" when used with respect to any service agreement, amendment to service agreement, or any other contract shall include electronic execution pursuant to the procedures established by Transporter.

ap. "Written" or "in writing" or any other combination of words indicating a requirement that a document be in a physically written form shall include any service agreement, amendment to service agreement, or any other contract or document which has been electronically executed pursuant to the procedures established by Transporter.

aq. NAESB - North American Energy Standards Board [Successor to the Gas Industry Standards Board ("GISB")], or any subsequent successor organization.

2. QUALITY

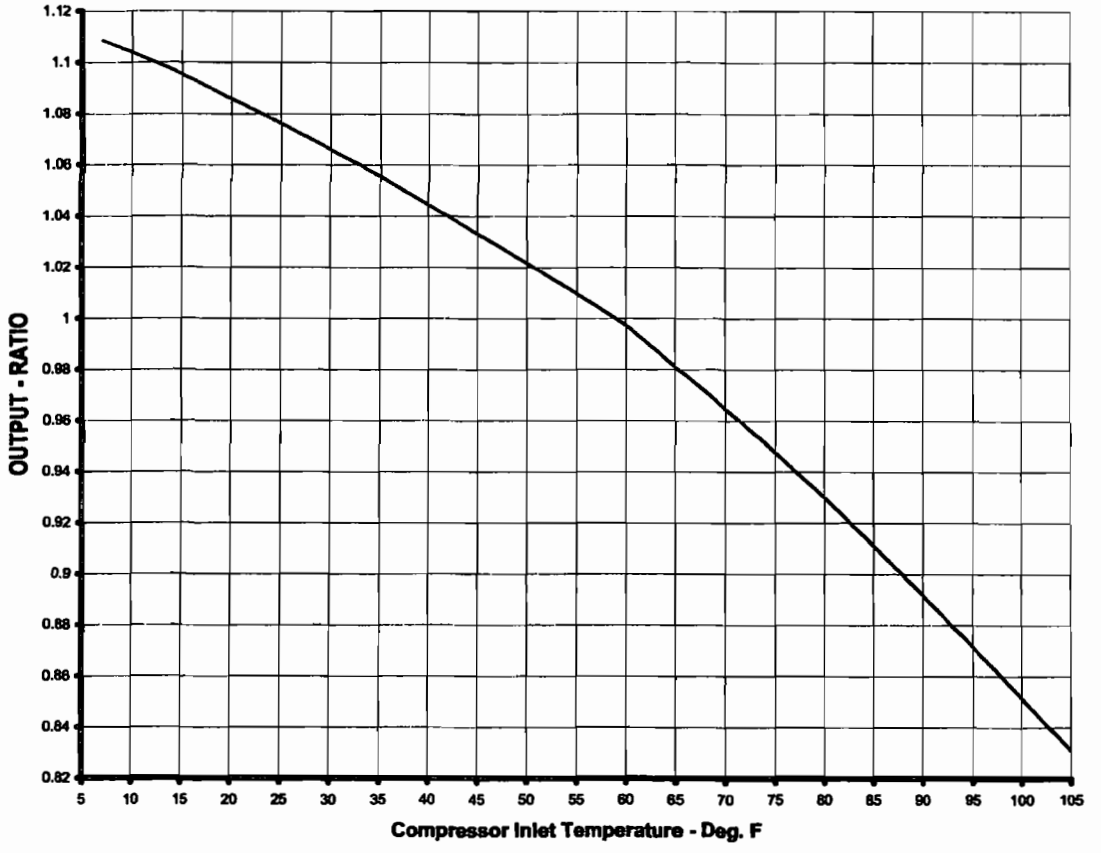
A. Gas delivered by Shipper or for its account into Transporter's pipeline system at receipt points shall conform to the following quality standards:

1. shall be free from objectionable odors, solid matter, dust, gums, and gum forming constituents, or any other substance which might interfere with the merchantability of the gas stream, or cause interference with proper operation of the lines, meters, regulators, or other appliances through which it may flow;
2. shall contain not more than seven (7) pounds of water vapor per one thousand (1,000) MCF;
3. shall contain not more than one quarter (1/4) grain of hydrogen sulphide per one hundred (100) cubic feet of gas;
4. shall contain not more than ten (10) grains of total sulphur per one hundred (100) cubic feet of gas;
5. shall contain not more than a combined total three percent (3%) by volume of carbon dioxide and/or nitrogen;
6. shall contain not more than one quarter percent (1/4%) by volume of oxygen;

Attachment Q

Unit 2 and Unit 3 Performance Curve

GENERAL ELECTRIC MODEL PG7241 GAS TURBINE
JEA BRANDY BRANCH OFE SN. 297379
ESTIMATED PERFORMANCE WITHOUT DILUENT INJECTION



Compressor Inlet Temp - Deg.F	7	33	59	74	82	89.999	90.999	96	100	105
Output Ratio	1.1086	1.0597	1.0000	0.9512	0.9227	0.8918	0.8879	0.8677	0.8514	0.8309