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Tampa Electric Company
Post Office Box 111
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Authorized Representative:
Frank Busot, Director

Air Permit No. 0570040-034-AC (PSD-FL-301F)
Permit Expires: January 1, 2016

H. L. Culbreath Bayside Power Station
Minor Air Permit Revisions

PROJECT

This permit authorizes miscellaneous revisions to previously issued air construction permits. H. L. Culbreath Bayside Power Station is an electric generating utility (Standard Industrial Classification No. 4911). The existing power plant is located at 3602 Port Sutton Road, Tampa, in Hillsborough County. UTM Coordinates are Zone 17, 360.1 kilometers (km) East and 3087.5 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); and Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Executed in Tallahassee, Florida

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for Jeffery F. Koerner, Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management

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CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Air Permit package was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on the date indicated below to the following persons.

Mr. Frank Busot, Director, TEC: flbusot@tecoenergy.com
Mr. Byron Burrows, Manager-Air Programs, TEC: btburrows@tecoenergy.com
Ms. Laurie Pence, TEC: lapence@tecoenergy.com
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Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

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FACILITY DESCRIPTION

The H. L. Culbreath Bayside Power Station is an electric power plant consisting of six primary electrical generating units, fuel yard, engines, and associated auxiliary equipment. The existing facility is an electric power plant categorized as Standard Industrial Classification No. 4911. The existing plant consists of the following emissions units.

- Unit 1 (EU 020 – EU 022) is a "3-on-1" combined cycle gas turbine system consisting of three General Electric Model PG7241(FA) gas turbines (169 megawatt (MW) each) and one common steam-electrical generator (239 MW) with a combined nominal generating capacity of 746 MW.
- Unit 2 (EU 023 – EU 026) is a "4-on-1" combined cycle gas turbine system consisting of four General Electric Model PG7241(FA) gas turbines (169 MW each) and one common steam-electrical generator (414 MW) with a combined nominal generating capacity of 1090 MW.

  Each gas turbine set includes an automated gas turbine control system, an inlet air filtration system, an evaporative inlet air cooling system, an unfired heat recovery steam generator (HRSG), a single exhaust stack, electric fuel heaters, cooling towers and associated support equipment. Each combustion turbine fires natural gas and is equipped with dry low-NO_X (DLN) combustion technology and a selective catalytic reduction (SCR) system to reduce nitrogen oxides (NO_X) emissions. Emissions of carbon monoxide (CO) and NO_X are monitored with continuous emissions monitoring systems (CEMS).
- Units 3 through 6 (EU 031 – EU 038) consist of four Pratt and Whitney Model No. FT8-3 SwiftPac® aero-derivative combustion turbine-electrical generator sets to operate in simple cycle mode. For each SwiftPac®, two combustion turbines are coupled to one common electrical generator set having a total nominal gross generation capacity of 62 MW. Each unit fires natural gas, controls NO_X emissions with water injection and CO emissions with catalytic oxidation. Emissions of CO and NO_X are monitored with CEMS.
- Three emergency diesel engines used to power generators and a fire pump (EU 039 – EU 042).

PROJECT DESCRIPTION

This permit addresses the following emission units (EU) at this facility: fuel yard (EU 008); Combined cycle gas turbines (EU 021 – EU026); and simple cycle combustion turbines (EU 031 – EU 038). This permitting action revises several conditions in underlying air construction permits primarily related to: deleting the obsolete emission unit for the fuel yard; CEMS monitoring availability; add an allowable NSPS emission standard; visible emission testing requirements; and, the replacement of the simple cycle combustion turbines.

These revisions to the existing construction permits are shown in ~~strike through~~ format for deletions and in double underline format for additions. For ease of identification, all changes have been highlighted in yellow within this DRAFT permit document. The revisions follow the existing permits numerical order. The revisions made to these conditions will replace the entire condition.

REGULATORY CLASSIFICATION

- The facility is not major source of hazardous air pollutants (HAP).
- The facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is a major stationary source (PSD-major source) in accordance with Rule 62-212.400, F.A.C.
- The facility operates units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) Part 60.
- The facility operates units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR Part 63.
- The facility operates units subject to the Acid Rain provisions of the Clean Air Act.

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- The facility operates units subject to the Federal Clean Air Interstate Rule (CAIR) in accordance with Rule 62-296.470, F.A.C.
- This facility is located in an area (Hillsborough County) designated "unclassifiable" for sulfur dioxide (SO_2), "maintenance" for Ozone (O_3), and lead (Pb), in the "area of influence" of the particulate matter (PM) maintenance area, and "attainment" for all the other criteria pollutants pursuant to Rule 62-204.340, F.A.C.

RELEVANT DOCUMENTS

Several documents shown in the following link are not a part of this permit, but helped form the basis for this permitting action. Documents related to this permitting action are posted under permit No. 0570040-034-AC at the following web site address: http://appprod.dep.state.fl.us/air/emission/apds/default.asp

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SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Office of Permitting and Compliance in the Division of Air Resource Management of the Department of Environmental Protection (Department). The Office of Permitting and Compliance mailing address is 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Hillsborough County Environmental Protection Commission (HCEPC), Air Management Division. The mailing address and phone number of the HCEPC are 3629 Queen Palm Drive, Tampa, Florida 33619-1309; (813)627-2600 and (813)627-2620 (fax).

3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix C (Common Conditions); Appendix D (Common Testing Requirements); and Appendix E (Continuous Emissions Monitoring System).

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Construction and Expiration. The expiration date shown on the first page of this permit provides time to complete the physical construction activities authorized by this permit, complete any necessary compliance testing, and obtain an operation permit. Notwithstanding this expiration date, all specific emissions limitations and operating requirements established by this permit shall remain in effect until the facility or emissions unit is permanently shut down. For good cause, the permittee may request that that a permit be extended. Pursuant to Rule 62-4.080(3), F.A.C., such a request shall be submitted to the Permitting Authority in writing before the permit expires. [Rules 62-4.070(4), 62-4.080 and 62-210.300(1), F.A.C.]

8. Applicable Standards and Regulations: Except as specified in Section 3 below, the facility remains subject to all of the rules and requirements contained in all previously issued air construction permits for this facility.

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A. Fuel Yard (EU 008)

The specific conditions in this subsection apply to the following emissions unit.

EU No.	Brief Description
008	Fuel Yard

The existing fuel yard equipment previously served F. J. Gannon Station Units 1 through 6; however, the coal-fired boilers are permanently shut down. The fuel yard no longer exists. Therefore, the applicant is requesting to delete the entire obsolete emission unit.

Permit No. 0570040-007-AC
Section III, Emission Units Specific Conditions

1. *Essential Potential to Emit (PTE) Parameters, Specific Condition 1.1.*

   ~~1.1. Permitted Capacity: Coal throughput for this facility shall not exceed 2.85 million tons in any 12 consecutive months. [Rules 62-4.160(2), 62-210.200 (PTE) and 62-212.400(2)(a)2, F.A.C.; and, Permit No. 0570040-007-AC]~~

2. *Operating Requirements, Specific Condition 2.1.*

   ~~2.1 Hours of Operation. This emissions unit is allowed to operate continuously (8760 hours per year). [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, Permit No. 0570040-007-AC]~~

3. *Emission Limitations and Standards, Specific Condition 3.1.*

   ~~3.1 Visible Emissions. Visible emissions generated by fugitive or unconfined particulate matter from fuel yard shall not exceed 5% opacity. [Rule 62-296.711(2)(a), F.A.C.; and, Permit No. 0570040-007-AC]~~

Permit No. 0570040-032-AC
Section 3, Subsection C, Emission Unit Requirements

4. *Description: Emission Point Summary for Fuel Yard*

~~Emission Point Description~~	~~ID No.~~	~~Throughput TPH~~	~~Control Method~~	~~Efficiency~~
~~Fuel storage pile~~	~~FH-022/023 a & b~~	~~NA~~	~~MWS~~	~~50%~~
~~Dozer operations of storage piles~~	~~FH-044~~	~~NA~~	~~MWS~~	~~50%~~
~~Truck unloading - auxiliary~~	~~AH-001~~	~~400~~	~~MWS~~	~~85%~~
~~Storage pile~~	~~AH-002~~	~~400~~	~~MWS~~	~~90%~~
~~Truck dump to flux storage pile~~	~~OMH-001~~	~~NA~~	~~MWS~~	~~85%~~
~~Flux storage pile maintenance~~	~~OMH-002~~	~~NA~~	~~MWS~~	~~50%~~
~~Flux storage pile~~	~~OMH-003~~	~~NA~~	~~MWS~~	~~50%~~

~~Notes: "MWS" means manual water suppression. "NA" means not applicable.~~

5. *Monitoring of Operations, Specific Condition 7.*

   ~~7. Proper Maintenance: All controls associated with the transfer points shall be maintained to the extent that the capture efficiencies credited will be achieved. [Rule 62-4.070(3), F.A.C. and Permit Nos. 0570040-006-AC and 05780040-032-AC]~~

6. *Test Methods and Procedures, Specific Condition 9.*

   ~~9. Visible Emissions: A 30-minute visible emissions test shall be performed on transfer operations during each federal fiscal year (October 1 - September 30) the fuel yard is operational:~~

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~~The test method for visible emissions shall be determined using EPA Method 9, adopted and incorporated by reference in Rule 62-204.800, F.A.C., and referenced in Chapter 62-297, F.A.C. [Rules 62-204.800, 62-297.310(4)(a)2, 62-297.310(7)(a)4, F.A.C.; and Permit No. 0570040-032-AC]~~

7. *Specific Condition 12.*

~~12. Control Techniques: Manual water suppression shall be applied to the emission control points specified in Table B-1 to control fugitives emissions and maintain the opacity of less than or equal of 5%. Facilities that cause frequent, valid complaints may be required by the Compliance Authority to take these or other reasonable precautions. In determining what constitutes reasonable precautions for a particular source, the Compliance Authority shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice. [Permit No. 0570040-032-AC]~~

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A. Combined Cycle Combustion Turbines (EU 020 – EU 026)

This section of the permit addresses the following emissions units.

EU No.	Bayside Combustion Turbines (CT)			Steam Turbines (ST)		Total
	Unit No.	CT No.	MW, Shaft	ST Unit No.	MW, Steam	
020	Combined Cycle Unit No. 1	CT-1A	169 MW	No. 5	239	746
021		CT-1B	169 MW			
022		CT-1C	169 MW			
023	Combined Cycle Unit No. 2	CT-2A	169 MW	No. 6	414	1,090
024		CT-2B	169 MW			
025		CT-2C	169 MW			
026		CT-2D	169 MW			
Totals	2 Combined Cycle Units	7 CTs	1,183 MW	2 STs	653	1,836

{Permitting Note: These emissions units are regulated under: NSPS Subpart GG for Stationary Gas Turbines in 40 CFR 60 adopted and incorporated by reference in Rule 62-204.800, F.A.C.; Rule 212.400, F.A.C. for the PSD, which required Best Available Control Technology (BACT) determinations as specified in Permit No. PSD-FL-301 (as modified) for CO, PM/PM with a mean particle diameter of 10 microns or less (PM_{10}), and volatile organic compounds (VOC); Chapter 62-214, F.A.C., the Phase II Acid Rain Program as specified in Section IV of this permit; and Rule 62-296.470, F.A.C., the CAIR as specified in Section V of this permit.}

The following revision replaces the condition in **Permit No. 0570040-015-AC (PSD-FL-301A).**

Section III, Subsection A, Specific Condition 14.d. (Particulate Matter).

1. 14.d. Particulate Matter (PM/PM_{10}): The exclusive firing of pipeline-quality natural gas combined with the efficient combustion design and operation of each gas turbine represent the Best Available Control Technology (BACT) requirements for particulate matter emissions. Compliance with carbon monoxide ~~and visible~~ emissions standard~~s~~ shall serve as continuous indicators of efficient combustion to minimize particulate matter emissions. No performance tests are required. [Rule 62-212.400(BACT), F.A.C.]

Specific Condition 14.f. (Visible Emissions).

2. 14.f. Visible Emissions: During startup and shutdown of the combined cycle units, ~~V~~visible emissions shall not exceed 10% opacity, based on a 6-minute average as determined by EPA Method 9. Except as allowed by Condition No. **Error! Reference source not found.** of this section, this standard applies to all loads. [Rule 62-212.400(BACT), F.A.C.]

Section III, Subsection A, Specific Condition 21. (Annual Compliance Tests):

3. 21. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), each gas turbine shall be tested to demonstrate compliance with the emission standard~~s~~ for ammonia slip ~~and visible emissions~~. The test results for ammonia slip shall also report the CO and NO_X emissions recorded by the CEMS during each test run. {Permitting Note: Continuous compliance with the CO and NO_X standards is demonstrated with certified CEMS data.} [Rules 62-212.400(BACT) and 62-297.310(7)(a)4, F.A.C.]

The following revision replaces the condition in the original **Permit No. 0570040-015-AC (PSD-FL-301A)** and revised in Permit Nos. 0570040-028-AC (PSD-FL-301D) and 0570040-032-AC (PSD-FL-301E).

Section III, Subsection A, Specific Condition 23. (Continuous Monitoring Requirements).

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4. 23. Continuous Emissions Monitoring Systems: The permittee shall install, calibrate, maintain, and operate a CEMS in the exhaust stack of each emissions unit to measure and record emissions of CO and NO_X in a manner sufficient to demonstrate compliance with the CEMS emission standards of this permit. The carbon dioxide (CO_2) content of the flue gas shall also be monitored at the location where CO and NO_X are monitored to correct the measured emissions rates to 15% oxygen. The oxygen content of the flue gas shall be calculated by the CEMS using the CO_2 content of the flue gas and an F-factor that is appropriate for natural gas.

a. *Emission Averages.* Compliance with the 24-hour standards for CO and NO_X emissions shall be based on data collected by the required CEMS. The 24-hour block shall start at midnight of each operating day and consist of 24 consecutive 1-hour blocks. If a unit operates continuously throughout the day, the 24-hour block average shall be the average of 24 consecutive 1-hour emission averages. If a unit operates less than 24 hours during the day, the 24-hour block average shall be the average of available valid 1-hour emission averages collected during operation. If monitoring data is authorized for exclusion (due to startup, shutdown, malfunction, or tuning), the 24-hour block average shall be the average of the remaining available valid 1-hour emission averages collected during operation. Upon a request from the Compliance Authority, the NO_X emission rate shall be corrected to ISO conditions to demonstrate compliance with the applicable standards of 40 CFR 60.332.

b. *Data Collection.* The CEMS shall be designed and operated to sample, analyze, and record CO, CO_2, and NO_X data evenly spaced over the hour. Each 1-hour emission average shall be computed using at least one data point in each fifteen minute quadrant of the 1-hour block during which the unit combusted fuel. Notwithstanding this requirement, each 1-hour emission average shall be computed from at least two data points separated by a minimum of 15 minutes. If the unit does not operate in more than one quadrant of a 1-hour block, the data is insufficient to determine a 1-hour emission average and shall be ignored. (Example: Unit begins startup with only ten minutes remaining in the 1-hour block. Data is insufficient to determine a 1-hour average and is ignored.) All valid measurements or data points collected during a 1-hour block shall be used to calculate the 1-hour emission averages. If the CEMS measures concentration on a wet basis, the CEMS 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, a curve of the flue gas moisture content versus load may be developed through manual stack test measurements and used in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). The CO and NO_X CEMS shall express the 1-hour emission averages and the 24-hour block averages in terms of "parts per mill by volume, dry (ppmvd) corrected to 15% oxygen".

c. *Data Exclusion.* CO, CO_2, and NO_X emissions data shall be recorded by the CEMS at all times including episodes of startup, shutdown, malfunction, and tuning. CO and NO_X emissions data recorded during such episodes may be excluded from the 24-hour block compliance averages in accordance with the requirements of Condition No. 17 of this section. All periods of data excluded due to startup, shutdown or malfunction shall be consecutive for each episode. The permittee shall minimize the duration of data excluded for startup, shutdown and malfunctions, to the extent practicable. Data recorded during startup, shutdown or malfunction shall not be excluded if the episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented. Best operational practices shall be used to minimize hourly emissions that occur during 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. Excluded emissions shall be summarized in the required semiannual report.

d. *NO_X and CO_2 Certifications.* The NO_X and CO_2 monitors shall be certified pursuant to 40 CFR Part 75 and maintained in accordance with the applicable requirements of 40 CFR Part 75, Subparts B

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and C. For purposes of determining compliance with the CEMS emission standards of this permit, missing data shall not be substituted. Instead the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block. Record keeping and reporting shall be conducted pursuant to 40 CFR Part 75, Subparts F and G. The relative accuracy test assessments (RATA) required for the NO_X monitor shall be performed using EPA Method 7E or 20 as defined in Appendix A of 40 CFR 60. The span for the NO_X monitor shall not be greater than 10 ppmvd corrected to 15% oxygen. A dual span monitor may be used. The RATA required for the CO_2 monitor shall be performed using EPA Method 3A, of Appendix A in 40 CFR 60.

e. *CO Certification*. The CO monitor shall be certified pursuant to Performance Specification 4 in Appendix B of 40 CFR 60. Quality assurance procedures for this 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 the Compliance Authority. The RATA required for the CO monitor shall be performed using EPA Method 10, of Appendix A in 40 CFR 60. The Method 10 analysis shall use a continuous sampling train. The span for the CO monitor shall not be greater than 25 ppmvd corrected to 15% oxygen. A dual span CO monitor may be used.

f. *Monitor Availability*. ~~Monitor availability shall not be less than 95% in any calendar quarter.~~ The quarterly excess emissions report shall identify monitor availability for each quarter in which the unit operated. Monitor availability for the CEMS shall be 95% or greater in any calendar quarter in which the unit operated for more than 760 hours. In the event ~~95%~~the applicable availability is not achieved, the permittee shall provide the Compliance Authority with a report identifying the problems in achieving ~~95%~~the required availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit. The quarterly reports shall be submitted semiannually in conjunction with the Semiannual CEMS Report in Condition 25.

{Permitting Note: Compliance with these requirements will ensure compliance with the other applicable CEMS requirements such as: NSPS Subpart GG; Rule 62-297.520, F.A.C.; 40 CFR 60.7(a)(5) and 40 CFR 60.13; 40 CFR Part 51, Appendix P; 40 CFR 60, Appendix B - Performance Specifications; and 40 CFR 60, Appendix F - Quality Assurance Procedures.}

[Rules 62-4.070(3), 62-210.700(5), and 62-212.400(BACT), F.A.C.; and, Permit Nos. PSD-FL-301A (0570040-015-AC), PSD-FL-301D (0570040-028-AC) and 0570040-032-AC]

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B. Simple Cycle Combustion Turbines (EU 031 – EU 038)

This section of the permit addresses the following emissions units.

EU No.	Emission Unit Description	CT No.	Generation
031	Simple Cycle Peaking Unit No. 3	CT-3A	62 MW
032		CT-3B	
033	Simple Cycle Peaking Unit No. 4	CT-4A	62 MW
034		CT-4B	
035	Simple Cycle Peaking Unit No. 5	CT-5A	62 MW
036		CT-5B	
037	Simple Cycle Peaking Unit No. 6	CT-6A	62 MW
038		CT-6B	
Totals	4 - Simple Cycle Peaking Units	6-CTs	248 MW

{Permitting Note: These emissions units are regulated under: NSPS Subpart KKKK for Stationary Combustion Turbines(CT) in 40 CFR 60 adopted and incorporated by reference in Rule 62-204.800, F.A.C.; Chapter 62-214, F.A.C., the Phase II Acid Rain Program as specified in Section IV of this permit; and Rule 62-296.470, F.A.C., the CAIR as specified in Section V of this permit.}

The following requirements are "new" established specific conditions which are based on the requested changes from the applicant.

REPORTING AND RECORDKEEPING REQUIREMENTS

5. Combustion Turbine Replacements. The CT may be replaced with a temporary equivalent "like-kind" overhauled or new CT while the existing CT is undergoing routine maintenance. The replacement CT shall not increase the CT maximum heat input rate or actual emissions. The replacement CT shall be designed and constructed to achieve the emissions standards specified in this permit. The replacement CT shall be deemed in compliance with all emissions standards by demonstrating compliance with the NO_X and CO emission standards using data from the CO and NO_X CEMS. The permittee shall meet the following requirements:

   a. *Report.* The temporary CT shall only be used for a maximum of 3-months. The permittee shall notify the Department within one day prior to replacing the CT with a temporary CT and when the original CT is back in operation. The permittee shall notify the Department if additional time is needed for the replacement CT.

   b. *Recordkeeping.* The permittee shall maintain a log on-site to record the date of any CT replacement, the manufacturer, model number, and serial number of the CT that is replaced during the term of this permit, and the manufacturer, model number, serial number, and the installation and removal date of the replacement CT. All records related to any testing shall be maintained on-site for five years and made available to the Department upon request.

   c. *Compliance Requirements*. The permittee shall comply with the requirements for notification, test methods, test procedures, and reporting required by this permit.

   d. *PSD Applicability*. If it is determined that the CTs actual emissions, heat input or capacity increased as a result of the maintenance performed, the applicant shall submit an application for an air construction permit within 30 days to evaluate PSD applicability resulting from the modification.

   [Rule 62-4.170(3), F.A.C.]

B. Simple Cycle Combustion Turbines (EU 031 – EU 038)

The following revisions will replace the specific condition in the original **Permit No. 0570040-024-AC** and revised Permit Nos. 0570040-026-AC, 0570040-028-AC and 0570040-032-AC.

Section III, Specific Condition 9 (Emissions and Testing Requirements).

6. 9. Emission Standards: Emissions from each simple cycle combustion turbine shall not exceed the following standards.

Pollutant	Emission Standard [e]	Averaging Time	Compliance Method	Basis
NO_X [a]	25 ppmvd @ 15% oxygen 96 ppmvd @ 15% oxygen (operating <75% of peak load)	4-hr rolling avg. [f]	CEMS	NSPS Subpart KKKK
	32.0 lb/hour 56.0 tons/year	3 1-hr runs	~~Annual~~ RATA	Rule 62-4.070(3), F.A.C.
CO [b]	21 ppmvd @ 15% oxygen	3-hr rolling avg.	CEMS	Rule 62-212.400(12), F.A.C. Source Obligation
	9.1 lb/hour 8.2 tons/year	3 1-hr runs	~~Annual~~ RATA	
VOC [b]	5.1 lb/hr/SCCT	3 1-hr runs	Surrogate is CO One-Time Stack Test	ESCPSD Rule 62-212.400(12), F.A.C.
~~Visible Emissions~~	~~<20 % Opacity~~	~~6 minute block~~	~~Visible Emissions Test~~	~~Rule 62-296.320(4)(b)1., F.A.C.~~
PM [c]	2 grains sulfur/100 scf of gas	N/A	Recordkeeping Firing pipeline quality natural gas	Vendor Data
SO_2 [d]	2 grains sulfur/100 scf of gas 0.060 lb/MMBtu	N/A	Recordkeeping Firing pipeline quality natural gas	ESCPSD Rule 62-212.400(12), F.A.C. NSPS Subpart KKKK
SAM [d]	2 grains sulfur/100 scf of gas	N/A	Recordkeeping Firing pipeline quality natural gas	ESCPSD Rule 62-212.400(12), F.A.C.

a. Continuous compliance with the 4-hour rolling average NO_X standards shall be demonstrated based on data collected by the required CEMS. During the RATA on the NO_X CEMS, the permittee shall demonstrate compliance with the individual mass-based (pound/hour (lb/hour)) standards.

b. An oxidation catalyst shall be installed on each simple cycle combustion turbine to minimize the emissions of CO and VOC. Continuous compliance with the 3-hour rolling average CO standards shall be demonstrated based on data collected by the required CEMS. During the RATA on the CO CEMS, the permittee shall demonstrate compliance with the individual mass-based (lb/hour) standards. CO will be used as a surrogate for VOC emissions as a demonstration of good combustion.

c. The sulfur fuel specification combined with the efficient combustion design and operation of each simple cycle combustion turbine will minimize PM emissions, which are a surrogate for PM_{10} emissions. Compliance with the fuel specifications and CO standards, shall serve as indicators of good combustion. Compliance with the fuel specification shall be demonstrated by keeping records of the fuel sulfur content.

d. The fuel sulfur specification effectively limits the potential emissions of SO_2 and sulfuric acid mist (SAM) from each simple cycle combustion turbine. Compliance with the fuel sulfur specification shall be the use of pipeline-quality natural gas. *{Permitting Note: Based on the fuel sulfur specification, potential SO_2 emissions are 1.9 lb/hour (0.03 pound/megawatt-hour (lb/MWhr)), which is equivalent to 0.0055*

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pound/million British thermal units (lb/MMBtu) and is less than the Subpart KKKK standard of 0.060 lb/MMBtu.}

e. The mass-based emission standards are based on a turbine compressor inlet temperature of 59° F, evaporative cooling on, and the higher heating value (HHV) of natural gas. Mass-based emission standards may be adjusted to actual test conditions in accordance with the performance curves and/or equations on file with the Department.

f. Compliance with the NO_X standard shall be in accordance with the requirements of Subpart KKKK in 40 CFR 60, as described in 40 CFR 60.4350(g).

{Permitting Note: In combination with the annual restriction on hours of operation, the above emissions standards effectively limit annual potential emissions from the simple cycle combustion turbine.}

[Rules 62-4.070(3), 62-210.200(PTE) and 62-212.400(PSD), F.A.C.; and Subpart KKKK in 40 CFR 60; and, Permit Nos. 0570040-028-AC and 0570040-032-AC (PSD-FL-301E)]

The following revision replaces the following specific condition in **Permit No. 0570040-024-AC** and revised in Permit No. 0570040-028-AC.

Section III, Specific Condition 13 (Testing Requirements)

7. 13. Testing Requirements: Initial tests shall be conducted between 90% and 100% of permitted capacity; otherwise, this permit shall be modified to reflect the true maximum capacity as constructed. Subsequent annual tests shall be conducted between 90% and 100% of permitted capacity in accordance with the requirements of Rule 62-297.310(2), F.A.C. An initial compliance test shall be conducted for each pollutant that is limited. ~~For each run during tests for visible emissions, emissions of CO recorded by the CEMS shall also be reported.~~ Data collected from the reference method during the required CEMS quality assurance relative accuracy test audit (RATA) tests may substitute for annual compliance tests for NO_X and CO, provided the owner or operator indicates this intent in the submitted test protocol, and obtains approval prior to testing. If the RATA is conducted at less than permitted capacity, and the data is used for annual compliance, the requirements of Rule 62-297.310(2)(Operating Rate During Testing), F.A.C., still apply. The mass emission rate standards are based on a turbine inlet condition of 59°F and 100 percent full load operation. Mass emission rate may be adjusted from actual test conditions in accordance with the performance curves and/or equations on file with the Department. [Rules 62-297.310(2) and (7)(a), F.A.C.; 40 CFR 60.8; and Appendix D of this permit]

The following revision replaces the following specific condition in **Permit No. 0570040-024-AC**

Section III, Specific Condition 17 (Emissions and Testing Requirements)

8. 17. Annual Compliance Requirements ~~Testing~~: ~~Annual compliance tests for visible emissions shall be conducted~~ ~~D~~during each federal fiscal year (October 1st to September 30th), data collected from the required CEMS quality assurance RATA shall be used to demonstrate compliance with the mass-based emissions standards (lb/hour) for NO_X and CO. Unless specifically requested by the Compliance Authority pursuant to Rule 62-297.310(7)(b), F.A.C., periodic opacity tests are not required when firing natural gas. [Rules 62-4.070(3) and 62-297.310(7)(a)4, F.A.C.]

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