# DRAFT

Month Day, 2008

*Sent by Electronic Mail – Received Receipt Requested*

Mr. James M. Chansler, P.E., D.P.A.
Chief Operating Officer, JEA
21 West Church Street
Jacksonville, Florida 32202

Re: DEP File No. 0310047-018-AC; PSD-FL-386A
Kennedy Generating Station – Combustion Turbine No. 8

Dear Mr. Chansler:

The Department received your request to modify the current construction permit for Combustion Turbine (CT) No. 8 (Emission Unit No. 016) at the Kennedy Generating Station. The ongoing combustion turbine project was approved under permit PSD-FL-386 (DEP File 0310047-015-AC). CT No. 8 is a General Electric PG7241(FA) simple cycle combustion turbine generator with a nominal output of 172 megawatt.

Based on the above and as explained in the technical evaluation and preliminary determination, the Department will modify PSD-FL-386, previously issued on May 4, 2007, as follows. Please note that double underlined words are additions and strikethrough words are deletions.

I. The expiration date of the construction permit is extended from December 31, 2008 to <u>December 31, 2009.</u>

II. The following Section 3 Specific Conditions of the construction permit PSD-FL-386 will be modified:

12. <u>Emission Standards</u>: Emissions from each combustion turbine shall not exceed the following emissions standards.

| Pollutant | Emission Standard [e] | Averaging Time | Compliance Method | Basis |
|---|---|---|---|---|
| CO [a] (Gas) | 9.0 ppmvd @ 15% $O_2$ | 3-hour test avg. | EPA Method 10 Test | Avoid PSD |
| | 32.0 lb/hour | | | |
| CO [a] (Oil) | 20.0 ppmvd @ 15% $O_2$ | 3-hour test avg. | EPA Method 10 Test | |
| | 66.0 lb/hour | | | |
| NOx [b] (Gas) | 15.0 ppmvd @ 15% $O_2$ | 4 hour rolling average | CEMS | Avoid PSD |
| | 108.3 lb/hour | 3-hour test avg. | CEMS and EPA Method 19 | Avoid PSD |
| $NO_X$ [b] | 42 ppmvd @ 15% $O_2$ | 4 hour rolling average | CEMS | Avoid PSD |

| Pollutant | Emission Standard [e] | Averaging Time | Compliance Method | Basis |
|---|---|---|---|---|
| (Oil) | 335.0 lb/hour | 3-hour test avg. | CEMS and EPA Method 19 | |
| $PM/PM_{10}$ [c] | 10% Opacity | 6-minute block | EPA Method 9 Test | BACT |
| | Fuel sulfur specifications | N/A | Record Keeping | |
| $SO_2$ [d] (Gas) | 2 grains S/100 SCF of gas | N/A | Record Keeping | Avoid PSD |
| $SO_2$ [d] (Oil) | 0.05% sulfur by weight | N/A | Record Keeping | Avoid PSD |

a. The permittee shall conduct an initial test to demonstrate compliance with the CO emissions limits for the unit as constructed. Subsequent compliance tests shall be conducted during the year prior to renewing the Title V operating permit.

b. Continuous compliance shall be demonstrated with the 4-hour rolling average NOx emissions limit (ppmvd @ 15% $O_2$) by data collected from the required continuous emissions monitoring system (CEMS). <u>If the CEMS data indicates that the 4-hour rolling average is in excess of the emission limit, excess emission reports must be filed</u>. Compliance with the $NO_X$ emissions limit (lb/hr) shall be demonstrated <u>only during the initial compliance test</u> by converting the $NO_X$ CEMS data collected during the initial CO test by using the applicable F-Factor and EPA Method 19.

c. The fuel sulfur specifications combined with the efficient combustion design and operation of the combustion turbine represents BACT for $PM/PM_{10}$ emissions. No stack tests are required. Compliance with the CO and visible emissions standards shall serve as indicators of good combustion. *{Permitting Note: Maximum expected $PM/PM_{10}$ emissions are approximately 19 lb/hour on natural gas and 45.0 lb/hr on oil.}*

d. The fuel sulfur specifications effectively limit the potential emissions of sulfur dioxide ($SO_2$) from each combustion turbine. No stack tests are required.

e. The mass emission rate standards are based on a turbine inlet condition of 59° F and the higher heating value of each fuel. Mass emission rates may be adjusted for actual test conditions in accordance with the performance curves and/or equations on file with the Department.

[Rule 62-212.400 (BACT), F.A.C.; Rule 62-4.070(3), F.A.C.]

23. <u>CEM Systems</u>: The permittee shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) to measure and record the emissions of $NO_X$ from the combustion turbine in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards of this section. All continuous monitoring systems shall be installed and functioning within the required performance specification by the time of the initial performance tests.

a. *$NO_X$ Monitor:* Each $NO_X$ monitor shall be certified pursuant to the specifications of 40 CFR 75 and comply with the applicable requirements of 40 CFR 60 Subpart KKKK. Quality assurance procedures shall conform to the requirements of 40 CFR 75. The ~~annual and required~~ RATA tests required for the $NO_X$ monitor shall be performed using EPA Method 20 or 7E in Appendix A of 40 CFR 60.

b. *Diluent Monitor:* The oxygen ($O_2$) or carbon dioxide ($CO_2$) content of the flue gas shall be monitored at the location where $NO_X$ is monitored to correct the measured emissions rates to 15% oxygen. If a $CO_2$ monitor is installed, the oxygen content of the flue gas shall be calculated using F-factors that are appropriate for the fuel fired. Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75. For any hour in which the hourly average $O_2$ concentration exceeds 19.0 percent $O_2$ (or the hourly average $CO_2$ concentration is less than 1.0 percent $CO_2$), a diluent cap value of 19.0 percent $O_2$ or 1.0 percent $CO_2$ (as applicable) may be used in the emission calculations.

c. For purposes of determining compliance with the CEMS emissions standards of the permit, missing or excluded data shall not be substituted and bias corrected data shall not be used.

[Rules 62-4.070(3), 62-210.800, 62-212.400(BACT), ~~and~~ 62-297.520, F.A.C. and 40 CFR 60.4350]

25. Monthly Operations Summary: By the ~~fifth~~ 15th calendar day of each month, the permittee shall record the following for each fuel in a written or electronic log for the combustion turbine for the previous month of operation: hours of operation for the month and for the rolling 12-month total. Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request by the Department. The fuel consumption shall be monitored in accordance with the provisions of 40 CFR 75 Appendix D.

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

29. ~~NSPS~~ Emissions Reports

a. NSPS Emissions Report: Within thirty (30) days following each calendar semiannual period, the permittee shall submit a report including any applicable periods of excess emissions and monitoring systems performance as defined in 40 CFR 60, Subpart KKKK (Standards of Performance for Stationary Combustion Turbines) that occurred during the previous semiannual period to the Compliance Authority.

b. *Malfunction Notification*: For each malfunction resulting in excess emissions that exceed two hours in any 24 hour period, the permittee shall notify the Compliance Authority within one working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Compliance Authority may request a written summary report of the incident.

[Rules 62-4.070(3), 62-4.130, 62-204.800, 62-210.700(6) and 62-212.400(BACT), F.A.C.; and 40 CFR 60.7 and 60.4395]

A copy of this letter and attachments shall be filed with the referenced permit and shall become part of the permit. This permitting decision is issued pursuant to Chapter 403, Florida Statutes.

Any party to this permitting decision (order) has the right to seek judicial review of it under section 120.68 of the Florida Statutes, by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

_____ _____
Joseph Kahn, Director Date
Division of Air Resource Management

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that either this Notice of Intent to Issue Air Permit package (including the Written Notice of Intent to Issue Air Permit, the Public Notice of Intent to Issue Air Permit, the Technical Evaluation and Preliminary Determination, and the Draft Modification Letter) or a link to these documents available electronically on a publicly accessible server, was sent by electronic mail with received receipt requested before the close of business on _____ to the persons listed below.

Mr. James M. Chansler, P.E., D.P.A., JEA (chanjm@jea.com)
Mr. Bert Gianazza, P.E., JEA (giannb@jea.com)
Mr. Chris Kirts, DEP-NED (christopher.kirts@dep.state.fl.us)
Mr. Richard Robinson, P.E., EQD (robinson@coj.net)
Ms. Kathleen Forney, EPA Region 4 (forney.kathleen@epa.gov)
Mr. Dee Morse, NPS (dee_morse@nps.gov)

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.

_____ _____
(Clerk) (Date)