Florida Department of Environmental Protection

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2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Noah Valenstein
Secretary

(Sent by Electronic Mail – Return Receipt Requested)

Ken Nusche ken.nusche@fpl.com
Plant General Manager
Florida Power & Light Company (FPL)
9050 State Road 62
Parrish, Florida 34219

Re: Title V Air Operation Permit Renewal
Proposed Permit No. 0710002-028 -AV
Fort Myers Power Plant

Dear Nusche:

One copy of the proposed permit determination for the renewal of the Title V air operation permit for the Fort Myers Power Plant located in Lee County at 10650 State Road 80, Fort Myers Florida 33905, is enclosed. This letter is only a courtesy to inform you that the draft permit has become a proposed permit.

An electronic version of this determination has been posted on the Division of Air Resource Management's world wide web site for the United States Environmental Protection Agency (USEPA) Region 4 office's review. Interested persons may view the proposed permit by visiting the following website: https://fldep.dep.state.fl.us/air/emission/apds/default.asp and entering the permit number shown above.

Pursuant to Section 403.0872(6), Florida Statutes, if no objection to the proposed Title V air operation permit is made by the USEPA within 45 days, the proposed permit will become a final permit no later than 55 days after the date on which the proposed permit was mailed (posted) to USEPA. If USEPA has an objection to the proposed permit, the final permit will not be issued until the permitting authority receives written notice that the objection is resolved or withdrawn.

If you should have any questions, please contact David Lyle Read, P.E., at 850/717-9075, or by email at David.Read@dep.state.fl.us.

Sincerely,

David Lyle Read, P.E.
2017.09.28 08:45:02 -04'00'

For:

Syed Arif, P.E., Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management

SA/dlr

Copies sent by electronic mail to the following:

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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.

Permit No. 0710002-028 -AV

I. Public Notice.

An Intent To Issue Air Permit issued to Florida Power & Light Company for the Fort Myers Power Plant located in Lee County at 10650 State Road 80, Fort Myers Florida 33905, was clerked on August 10, 2017. The Public Notice Of Intent To Issue Air Permit was published in The News-Press on August 27, 2017. The draft Title V air operation permit was available for public inspection at the permitting authority's office in Tallahassee. Proof of publication of the Public Notice Of Intent To Issue Air Permit was received on September 15, 2017.

II. Public Comment(s).

No Comments were received from the public during the 30-day public comment period; however, comments were received from the Permittee. The comments were not considered significant enough to reissue the draft Title V air operation permit and require another Public Notice; therefore, the draft Title V air operation permit was changed. Those comments are addressed below. Changes to the permit are highlighted in yellow, with additions indicated by a double underline text and deletions in ~~strike through~~ text.

Email dated September 14, 2017.

Comment 1 (page 4 of 66). Units 3C and 3D (EU 034 and 035) were not listed in Section 1, Subsection C 40 CFR 75 Acid Rain Monitoring Provisions section of the table.

Response 1. The Department agrees and will add the units as follows:

40 CFR 63, Subpart DDDDD, NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters	024~~, 029, 030~~
40 CFR 75 Acid Rain Monitoring Provisions	018, 019, 020, 021, 022, 023, 027, 028, 034, 035

Comment 2 (page 9 of 66). The remaining combustion turbines, 1 and 9 (EU 003 and EU011), have been renamed as combustion turbine 1 and 2 (EU 003 and EU004). For historical record keeping purposes, and to avoid confusion and limit necessary changes, we request that the emission unit numbers not be reassigned to the remaining combustion turbines and remain as EU 003 and EU011.

Response 2. This comment would require a change to Permit No. 0710002-022-AC (PSD-FL-424A) which was not previously requested. Consequently, this change will not be made now. However, this change can be made in the future, if requested by the applicant, via an air construction permit revision application along with a concurrent Title V revision.

Comment 3 (page 9 of 66). The sentence in the emission unit summary of Subsection A, starting in line 2, reads as follows: *Inlet air foggers were installed at the compressor inlet to each of the twelve combustion turbines during 1999, and initial compliance testing following installation of the inlet foggers was completed on November 30, 1999.* The foggers have been removed from the combustion turbines. To avoid confusion, we request that this reference be removed.

Response 3. The Department agrees and will make this change as follows:

Each unit has a rated gross capacity of 63 megawatts (MW). The combustion turbines commenced commercial operation in May, 1974. ~~Inlet air foggers were installed at the compressor inlet to each of the twelve combustion turbines during 1999, and initial compliance testing following installation of the inlet foggers was completed on November 30, 1999.~~ The stack height for each unit is 32 feet, flow rate is 1,160,000 actual cubic feet per minute (acfm), exit diameter is 11.4 feet and exit temperature is 975 degrees Fahrenheit (°F).

Comment 4 (page 11 of 66). **Condition A.13** reads as follows: *Nitrogen oxides emissions shall be determined by a stack test on one representative turbine. Testing shall be performed each calendar year, no later than September 30th*. This condition refers to calendar year but stipulates a fiscal year deadline. We request that all testing schedules be according to the calendar year and the deadline be changed to December 31st for clarity.

Response 4. The Department agrees and will change **Condition A.13** as follows:

A.13. Nitrogen Oxides Testing. Nitrogen oxides emissions shall be determined by a stack test on one representative turbine. Testing shall be performed each calendar year, no later than December 31st ~~September 30th~~.

Comment 5 (page 11 of 66). **Condition A.16** reads as follows: *In addition to the annual compliance tests specified above, compliance tests shall also be performed for visible emissions and nitrogen oxides prior to obtaining a renewed operating permit to demonstrate compliance with the emission limits in **Specific Conditions A.6 - A.7**. The permittee shall conduct visible emissions tests on 3 (three) of the combustion turbines that did not operate more than 400 hours per year on liquid fuels during the previous five-year period.* Prior to the decommissioning, this condition was meant to test three of the twelve turbines for a representative dataset. Since 10 of the 12 turbines have been decommissioned, if the remaining two turbines run less than a total of 400 hours per year, no NOx testing should be required prior to renewal. In the alternative, only one of the two turbines should be required for a representative data set if NOx testing is required prior to renewal. Per FAC 62-297.310(8)(b)(3)(c), "emissions test shall not be required for any emissions unit that, in the previous five-year period of permitted operation operated for 400 hours or less (including startup and shutdown) during each calendar year included in the five-year period of permitted operation. We suggest that language be used similar to the gas turbines in the Port Everglades Title V Permit No. 010036-012-AV **Specific Condition A.12**: *Provided operation is no more than 320 hours/year/simple cycle CT on oil, NOx emissions from the simple cycle CT shall be tested every five (5) years on any representative unit of the two (2) simple cycle CTs that remain in service.*

Response 5. The Department agrees and will change **Condition A.16** as follows:

A.16. Compliance Tests Prior To Renewal. In addition to the annual compliance tests specified above, compliance tests shall also be performed for visible emissions and nitrogen oxides prior to obtaining a renewed operating permit to demonstrate compliance with the emission limits in **Specific Conditions A.6 - A.7**. ~~The permittee shall conduct visible emissions tests on 3 (three) of the combustion turbines that did not operate more than 400 hours per year on liquid fuels during the previous five-year period.~~ Provided operation is no more than 320 hours/year/simple cycle CT on oil, NOx emissions from the simple cycle CT shall be tested every five (5) years on any representative unit of the two (2) simple cycle CTs that remain in service. [Rules 62-210.300(2)(a) & 62-297.310(8)(a), F.A.C.~~; and, Permit No. 0710002-005-AC, Condition No. 14~~]

Comment 6 (page 19 of 66). FPL requests that all combustion turbines at the Fort Myers facility be tested within the same capacity parameters:

- The permitting note on **Condition B.28** reads: *If testing is performed at 95% - 100% of rated capacity then the requirements of this specific condition to correct to ISO conditions are not applicable.*
- **Condition B. 35** reads: *Testing of emissions shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 95-100 percent of the maximum heat input rate allowed by the permit, corrected for the average compressor inlet temperature during the test (with 100 percent represented by a curve depicting heat input vs. compressor inlet temperature).*

Per FAC 62-297.310(3), FPL suggests the testing parameters be changed to 90-100% permitted capacity to match the testing conditions for combustion turbines 3A-3D.

Response 6. The Department agrees and will make the following changes:

B.28. Compliance with the NO_X Emission Limit. ……

{Permitting Note: If testing is performed at 95% - 100% of permitted ~~rated~~ capacity then the requirements of this specific condition to correct to ISO conditions are not applicable. The annual calibration RATA associated with the NO_X CEMS in use on these units may be used in lieu of the required annual EPA Reference Method 20, as long as all of the requirements of Rule 62-297.310, F.A.C., are met (i.e., prior test notification, proper test result submittal, etc.).}

B.35. Operating Rate During Testing/Testing Procedures. Testing of emissions shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 95-100 percent of

the permitted capacity ~~maximum heat input rate~~ allowed by the permit, corrected for the average compressor inlet temperature during the test (with 100 percent represented by a curve depicting heat input vs. compressor inlet 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. compressor inlet temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for compressor inlet temperature) and 105 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. The turbine manufacturer's capacity vs. temperature (ambient) curve shall be included with the compliance test results. Test procedures shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapter 62-204 and 62-297, F.A.C. [Rules 62-297.310(3) & (3)(a), F.A.C.; and, Permit No. 0710002-004-AC, Specific Condition 33.]

Comment 7 (page 25 of 66). **Condition C.13** reads as follows: *Each unit is allowed to operate continuously (or 8,760 hours per year). However, both units are limited to an aggregate 1,811,000 MMBtu lower heating value (LHV) per year operation on 0.05 % sulfur (by weight) fuel oil or superior grade oil and 500 hours on high power mode (HPM).* The language in **Section III, Condition C.13** is not clear on whether the aggregate limit for units 3A and 3B extends to the 500 hours on high power mode. **Condition C.12**, describes 500 hours on high power mode for each unit, 440 hours for power augmentation and 60 hours for temperature peaking. We request language inserted that clarifies that while there is an aggregate heat input limit for 3A and 3B, each unit is limited to 500 hours on high power mode.

- *Each unit is allowed to operate continuously (or 8,760 hours per year). However, both units are limited to an aggregate 1,811,000 MMBtu lower heating value (LHV) per year operation on 0.05 % sulfur (by weight) fuel oil or superior grade oil and each unit is limited to 500 hours on high power mode (HPM).*

Response 7. The Department agrees and will change the change **Condition C.13** as follows:

C.13. Hours of Operation. Each unit is allowed to operate continuously (or 8,760 hours per year). However, both ~~each~~ units ~~is~~ are limited to an aggregate 1,811,000 MMBtu lower heating value (LHV) ~~500 hours~~ per year operation on 0.05 % sulfur (by weight) fuel oil or superior grade oil and each unit is limited to 500 hours on high power mode (HPM). [Rules 62-4.070(3) & 62-210.200, F.A.C. (Definitions - Potential Emissions); and, ~~Permit No. 0710002-009-AC, Specific Condition 11~~ Permit No. 0710002-027-AC]

Comment 8 (page 35 of 66). Note (h) for the Emissions Standards Table in **Condition D.8**, requires compliance with the 10% opacity standard. Furthermore, it states that "*Visible emissions during startups, shutdowns, fuel switches and malfunctions shall not exceed 10% opacity, except for up to six 6-minute average periods during a calendar day, which shall not exceed 20% opacity.*" Since these units are permitted to startup on ULSD fuel oil, the opacity limit stated above should not be applicable during periods of transient mode operation such as startups and shutdown where they are not capable of an operating opacity below 20%. Furthermore, the 10%/20% opacity limit does not specify that is only for natural gas firing.

We request that a sentence be added to Note (h) to clarify that work practice standards apply as an alternative to the unit during transient modes of operation when starting up on ULSD fuel oil, as stated in **Specific Condition D.14**. It is suggested that use of manufacturer specified best operating practices and good combustion techniques apply. The numerical opacity and visibility standards would only apply during steady state operation when the units are operating on fuel oil. Furthermore, the 10%/20% opacity limit needs to be specific to natural gas firing. We suggest the following language be added to note (h) and **specific condition D.14** for clarification:

- *"Visible emissions when firing natural gas during startups, shutdowns, fuel switches and malfunctions shall not exceed 10% opacity, except for up to six 6-minute average periods during a calendar day, which shall not exceed 20% opacity. Visible emissions due to startups, shutdowns, fuel switches and malfunctions for oil firing shall be limited by following the original equipment manufacturer's procedures."*

Response 8. The Department agrees and will change the change **Note (h)** and **Condition D.14** as follows:

h. Compliance with the 10% opacity standard shall be demonstrated by conducting 30-minute tests in accordance with EPA Method 9 - Visual Determination of Opacity, at normal operating conditions. Visible emissions when firing natural gas during startups, shutdowns, fuel switches and malfunctions shall not exceed 10% opacity, except for up to six 6-minute average periods during a calendar day, which shall not exceed 20% opacity. Visible emissions due to startups, shutdowns, fuel switches and malfunctions for oil firing shall be limited by following the original equipment manufacturer's procedures.

D.14. Alternate Visible Emissions and Work Practice Standard. Visible emissions when firing natural gas due to startups, shutdowns, and malfunctions shall not exceed 10% opacity, except for up to six 6-minute averaging periods during a calendar day, which shall not exceed 20% opacity. Visible emissions due to startups, shutdowns, fuel switches and malfunctions for oil firing shall be limited by following the original equipment manufacturer's procedures. [permit No. 0710002-027-AC and Rule 62-210.200(BACT)]

III. Conclusion.

The enclosed proposed Title V air operation permit includes the changes to the draft Title V air operation permit described above.