PERMITTEE

Tampa Electric Company
702 North Franklin Street
Tampa, Florida 33602

PERMITTING AUTHORITY

Florida Department of Environmental Protection (Department)
Division of Air Resource Management
Office of Permitting and Compliance
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

PROJECT

Air Permit No. 0570039-070-AC
Minor Air Construction Permit
Big Bend Station

This project authorizes a modification to the natural gas igniter project for Units 1 – 4 (Project No. 0570039-065-AC) to include the installation and operation of two natural gas fired process heaters.

NOTICE AND PUBLICATION

The Department distributed a draft minor air construction permit package on April 24, 2014. The applicant published the Public Notice in the La Gaceta on May 2, 2014. The Department received the proof of publication on May 5, 2014. No requests for administrative hearings or requests for extensions of time to file a petition for administrative hearing were received.

COMMENTS

No comments on the draft permit were received from the public, the Environmental Protection Commission of Hillsborough County or the EPA Region 4 Office. However, the following comments were received by the applicant.

On April 30, 2014, the Department received comments from Tampa Electric Company (TEC). The following summarizes the comments and the Department's response.

1. Section 3 Condition 2: This condition requires a non-resettable timer. The Industrial, Commercial, and Institutional Boilers and Process Heaters (Final Rule) does not require a non-settable hour meter. The current reciprocating internal combustion engines (RICE) rule does require a non-resettable timer, but this emission unit is not subject to this Rule. Therefore, a non-resettable hour meter is not required by rule and considered an unnecessary requirement. The industry standard practice is to track the operating hours as an "ON/OFF" permissive or monitoring the date and time of the other process variables such as heat input, flow and power output etc. In this particular case, the date and time of the natural gas flow meter can be used to track operating hours.

   Response: The Department requires the hours of operation to be monitored for the process heaters to report the actual annual emissions as described in this permit. However, the Department will remove the requirement to install a non-resettable timer since the natural gas flow meter can be used in tracking the hours of operation of the process heaters.

2. Section 3 Condition 8/Condition 18: This condition requires a consecutive 12 month compliance with the nitrogen oxide (NO_X) cap. TEC does take exception to the requirement of "consecutive 12 month rolling average." TEC successfully demonstrated a "12 month rolling average" is statistically equivalent to an "annual average" during the project -065 (See email attached). The same reasons are discussed below.

- Annual NO_X emissions are consistent with the established reporting period of the Annual Operating Report (AOR);
- "Consecutive 12 month period" is not consistent with the annual reporting requirements pursuant to Rule 62-210.370, F.A.C., which requires the permittee to monitor any Prevention of Significant Deterioration (PSD) pollutant annually for a period of 5 calendar years. For consistency with Rule 62-210.370, F.A.C., the NO_X emission should be based on a calendar year basis;
- "Consecutive 12 month period" and "annual calendar year" are considered statistically the equivalent and will provide the same compliance objectives;
- Variance between the "Consecutive 12 month period" and "annual calendar year" methodologies is well within the estimate 10% error of propagation assuming 5% error for the heat input and 5% error for the emission factor determination; and
- Finally, there is no regulatory requirement that mandates reporting of the emissions during "any consecutive 12 month period." The reasonable assurance (Rule 62- 4.070(3) F.A.C.) is not sufficient to justify this requirements. Given the "Consecutive 12 month period" and "annual calendar year" are statistically equivalent, "annual calendar" is sufficient to demonstrate reasonable assurance.

Response: The Department will change the compliance requirement when determining the annual emission for the NO_X emission cap to be demonstrated based on a 12-month annual total.

3. <u>Section 3 Condition 8 (NO_X Calculation)</u>: The equation should be corrected from 6 million British thermal units per hour (MMBtu/hour) to 6×10^6 Btu/hour as follows:

   $[\text{Units 1-4}_{CEMS}] + [(EF_{heater}/NG_{HHV})(6\times10^6 \text{ Btu/hour})((\text{ton}/2000 \text{ lb})(\text{Heater1}_{hours} + \text{Heater2}_{hours})] \leq 39.1 \text{ TPY, } NO_X$

   Response: The Department will make this clarification as requested.

4. <u>Section 3 Condition 12</u>: This condition provides a requirement for annual visible emissions (VE) test. Recently, the annual VE test requirement for combustion turbines (project -067) was removed while firing natural gas only. This should similarly apply to the process heaters.

   Response: Rule 62-296.406(1), F.A.C. (Fossil Fuel Steam Generators with Less Than 250 MMBtu/hour Heat Input, New and Existing Emissions Units) requires an annual VE tests. Therefore, the Department will not remove this requirement.

5. <u>Section 3 Condition 15</u>: Same as Section 3 Condition 2 above.

   Response: As stated in Comment 1 above, the Department will remove the requirement for a non-resettable hour meter since the natural gas flow meter can be used in tracking the operating hours.

6. <u>Section 3 Condition 17</u>: The condition requires that "Within 10 calendar days following each month, the permittee shall observe and record the total monthly number of hours of operation of each process heater." A 10 day requirement is unnecessary. The permittee should only be obligated to record the data on a monthly basis.

   Response: The Department feels 10 days following each month is sufficient time to observe and record monitored data; therefore, this requirement will not be changed.

7. <u>Section 3 Condition 18 d(1), (3)</u>: These conditions require the permittee to use the NO_X emission factor (AP-42, Table 1.4-1 - 100 pounds per 10^6 standard cubic feet (lb/10^6 scf)." While we agreed to use the AP-42, the condition does not provide the flexibility to use "site specific emission factor." Therefore, these conditions should state "AP-42 emission factor or a site specific emission factor."

   Response: Based on information provided in the application, potential NO_X emissions were based on an emission factor from EPA AP-42, Table 1.4-1, which showed the addition of the two process heaters would place the original project above the PSD significant emissions rates of 40 tons/year for NO_X emissions. As a result, TEC requested a NO_X emission cap of 39.1 tons/year. Therefore, the Department requires TEC to use

the same emission factor used in the application in determining actual NO_X emissions from the process heaters.

CONCLUSION

The final action of the Department is to issue the permit with the minor changes, corrections and clarifications as described above.