FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
BOB MARTINEZ CENTER
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

RICK SCOTT
GOVERNOR

CARLOS LOPEZ-CANTERA
LT. GOVERNOR

JONATHAN P. STEVERSON
SECRETARY

March 31, 2015

Electronically Sent – Received Receipt Requested

Robert A. Velasco, P.E., BCEE, QEP
Tampa Electric Company (TEC)
P.O. Box 111
Tampa, Florida 33601

Re: Project No. 0570039-078-AC
Amends Permit No. 0570039-070-AC
Big Bend Station, Process Heaters (EU 051)
Revise the Initial Compliance Test Requirements
Letter of Authorization

Dear Mr. Velasco:

The Department acknowledges receipt of your request (dated March 3, 2015) to revise the initial compliance test requirements specified in Permit No. 0570039-070-AC. This permit authorized the installation of to two process heaters at the facility to heat the natural gas required by recently permitted igniter projects. The natural gas igniter projects were authorized by Permit No. 0570039-065-AC. The igniter projects involve installing the necessary number of natural gas igniters in each of the four Fossil Fuel Fired Steam Generator Units (Units 1 to 4) at the Big Bend Station. TEC is requesting the initial compliance test required by Permit No. 0570039-070-AC for nitrogen oxides (NO_X) be modified from the current requirement of "*the initial tests shall be conducted within 60 days after achieving permitted capacity, but not later than 180 days after initial operation of the unit*." Instead TEC has requested that the initial test be conducted within 180 days after startup of the last of the four igniter projects in order to obtain enough natural gas flow capacity to continuously operate one of the two process heaters to conduct the required initial emissions compliance tests for NO_X.

TEC Request

TEC provided the following information on the way the process heaters will operate at the Big Bend Station, along with a description of initial compliance testing issues. Some of the language has been paraphrased by the Department.

Configuration

Each process heater is equipped with 2 independent combustion sources (burners). Each burner is rated at 3 million British thermal units per hour (MMBtu/hr) for a combined rate of 6 MMBtu/hr. Each burner is equipped with a dedicated vent stack that is 24 inches in diameter and approximately 20 feet tall. Each vent stack contains a 1-inch sample port that is located in the lower section of the vent stack.

Operation

The process heaters are used to control the natural gas pipeline inlet/outlet temperature and pressure, propylene glycol bath temperature and natural gas flow. When there is a demand for natural gas, Burner No.1 of the primary process heater will startup and operate as required providing up to 3 MMBtu/hr of heat input to maintain the necessary operational conditions within the pipeline. If Burner No. 1 cannot meet the necessary conditions as the natural gas flow rate increases, Burner No. 2 of the process heater will startup separately and operate as required contributing up to an additional 3 MMBtu/hr of heat input. If the primary process heater cannot maintain the necessary operational conditions in the pipeline, the secondary process heater will startup and operate each its combustion burners in the same manner as the primary process heater. Each process heater is designed to heat up to approximately 5,000 million standard cubic feet of natural gas per hour.

Initial Compliance Test Issues

Specific Condition 3.B.11 of Permit No. 0570039-070-AC states:

11. *Initial Compliance Tests: Each process heater shall be tested to demonstrate initial compliance with the emissions standards for NO_X. The initial tests shall be conducted within 60 days after achieving permitted capacity, but not later than 180 days after initial operation of the unit. [Rules 62-4.070(3), 62-212.400(12), F.A.C. to avoid PSD preconstruction review for NO_X and 62-297.310(7)(a)1, F.A.C.]*

According to TEC, there are several issues with the current initial compliance test requirement. First, each process heater is equipped with two independent burners rated at 3 MMBtu/hr for a combined rate of 6 MMBtu/hr. Each source is equipped with a dedicated vent stack. Therefore, two simultaneous stack sampling trains would be required to meet the full load requirement of 6 MMBtu/hr during the compliance testing. Also each burner may cycle to a higher or lower heat input value or cutoff entirely during a compliance test depending on inlet and outlet temperature and pressure in the natural gas pipeline. Because of this cycling, it would be difficult to successfully achieve three one hour stack test runs at a burner's full load of 3 MMBtu/hr. Similarly, with two burners in operation (one cycling and other continuously operating) it will also be difficult to achieve the required testing conditions at a full load of 6 MMBtu/hr. Finally, there is not enough natural gas capacity at this time to ensure continuous operation of one burner to meet the testing requirements in **Specific Condition 3.B.11**. Instead, the test should be conducted after the completion of all four igniter projects to ensure there is sufficient natural gas capacity to operate one burner continuously during the entire testing period.

Requested Revisions to **Specific Condition 3.B.11**

TEC requested the following revisions to the test conditions in **Specific Condition 3.B.11**:

i. Conduct the initial NO_X emission test within 60 days of the completion of all igniter projects (Units 1 to 4), but no later than 180 days after completion of the last igniter project (Unit 1).

ii. Test only one of the two burners at full load (3 MMBtu/hr). This will satisfy the full load requirements for the process heater.

iii. Conduct a 20 minute run for each test run for a total of 60 minutes.

iv. Conduct the NO_X emissions test at the outlet of the burners, which were already installed by vendor.

Department Response

The Department agrees that the **Specific Condition 3.B.11** should be modified to indicate that the initial compliance tests should occur within 60 days of the completion of all igniter projects, but no later than 180 days after completion of the last igniter project. This change will ensure that there is a sufficient flow of natural gas to allow for successful testing at full load. Also since the burners are identical, the Department agrees only one burner needs to be tested and that the test can take place at the outlet of the burner. However the Department disagrees that three 20 minute stack test runs are sufficient. The Department believes because testing is now only required on one burner, it should be possible to successfully carry out three 1-hour tests runs at the rate capacity of the burner.

Specific Condition 3.B.11 of Air Permit No. 0570039-070-AC is modified as follows. Note that deletions are in ~~strikethrough~~ text while additions are in double underline text. Also all changes are also highlight in yellow.

11. *Initial Compliance Tests: Each process heater shall be tested to demonstrate initial compliance with the emissions standards for NO_X. The initial tests shall be conducted within ~~60 days after achieving permitted capacity, but not later than 180 days after initial operation of the unit~~ 60 days of the completion of all igniter projects (Units 1 to 4), but no later than 180 days after completion of the last igniter project (Unit 1). Testing is only required on one burner of a process heater and should occur at full load (3 MMBtu/hr). Compliance testing shall consist of three 1-hour tests runs at the rate capacity of the burner. [Rules 62-4.070(3), 62-212.400(12), F.A.C. to avoid PSD preconstruction review for NO_X and 62-297.310(7)(a)1, F.A.C.]*

The Department will consider this action final unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, of the Florida Statutes (F.S.). Mediation under Section 120.573, F.S., will not be available for this proposed action.

A person whose substantial interests are affected by the proposed decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Department's Office of General Counsel, MS #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within 14 days of receipt of this notice. Petitions filed by any other person must be filed within 14 days of receipt of this proposed action. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when each petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and, (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the permitting authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the permitting authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Any party to this order has the right to seek judicial review of it under Section 120.68, F.S., by the filing of a Notice of Appeal, under Rule 9.110 of the Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station #35, 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 of Appeal must be filed within thirty days from the date this notice is filed with the Clerk of the permitting authority.

Executed in Tallahassee, Florida

David L. Read, P.E.
2015.03.31 11:05:36
-04'00'

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

JFK/dlr

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this authorization 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. Byron Burrows, TEC: btburrows@tecoenergy.com
Mr. Robert Velasco, TEC: ravelasco@tecoenergy.com
Ms. Kelley Boatwright, SWD: kelley.m.boatwright@dep.state.fl.us
Ms. Justin Green, DEP Siting Office: justin.b.green@dep.state.fl.us
Ms. Alisa Coe, Earth Justice: acoe@earthjustice.org
Ms. Heather Ceron, US EPA Region 4: ceron.heather@epa.gov
Lorinda Shepherd, EPA Region 4: shephard.lorinda@epa.gov
Ms. Lynn Scearce, DEP OPC: (lynn.scearce@dep.state.fl.us)

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.

Lynn Scearce

2015.03.31
13:32:16 -04'00'