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002

Mr. Hamilton S. Owen
Siting Coordination Administrator
Florida Department of Environmental Protection
2720 Blair Stone Rd.
Tallahassee, FL 32399

RE: Florida Power Corporation
Tiger Bay Facility Power Plant Site Certification Application

Dear Mr. Owen:

Florida Power Corporation (FPC) is applying for a site certification under the Florida Power Plant Siting Act (PPSA) for its Tiger Bay facility. Although Tiger Bay is an existing facility, the application is necessary in order for FPC to use the approximately 10 to 15 MW of additional steam capacity available. Because of the very minor increase in capacity, and the fact that no additional impacts to the environment will occur from the use of this capacity, FPC requests an expedited review as previously discussed.

Enclosed are fourteen copies of the application and a check in the amount of \$75,000. Please contact Mr. Mike Kennedy at (813) 866-4344 or Ms. Jennifer Tillman at (813) 866-5022 if you have any questions regarding this submittal.

Sincerely,

A handwritten signature in black ink, appearing to read "W. Jeffrey Pardue", is written over a circular scribble.

W. Jeffrey Pardue, C.E.P.
Director

Enclosure



Torathaw

Department of Environmental Protection

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

July 9, 1998

Mr. J. Michael Kennedy, Q.E.P.
Manager, Air Programs
Florida Power Corporation
P.O. Box 14042
St. Petersburg, FL 33733

Dear Mr. Kennedy:

1050223-002

Re: Acid Rain Phase II Permit Applications for the Hines, Tiger Bay, and Intercession City facilities

Thank you for your recent submission for the referenced facilities under the Acid Rain Program. To help us complete our review, please furnish us copies of the *EPA approved* Certificates of Representation (for the Designated Representative) for the three facilities.

If you have any questions, please contact Tom Cascio at 850/921-9526.

Sincerely,

Scott M. Sheplak, P.E.
Administrator
Title V Program

cc: Jenny Jachim, U.S. EPA, Region 4

Ross Pollock



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January 21, 1999

Scott Sheplak, P.E.
Bureau of Air Regulation
Division of Air Resources Management
Department of Environmental Protection
2600 Blair Stone Road, MS 5505
Tallahassee, FL 32399-2400

Dear Mr. Sheplak:

Re: Tiger Bay Cogeneration Facility
Draft Title V Permit No.: 1050023-002-AV

Florida Power Corporation (FPC) is providing comments related to the draft Title V permit dated October 27, 1998. Our comments are directed at specific conditions for the facility and emissions units. The comments are presented below in the same order as the conditions appear in the initial draft permit. FPC has filed a Request for Extension of Time until February 1, 1999. In this regard, if we are unable to resolve each of the issues described below before this time, FPC intends to file an additional Request for Extension. Accordingly, at your earliest convenience after reviewing this letter, please contact me at (727) 826-4258 to discuss.

1. Page 2. The Title V application (Facility Regulatory Classification) indicated that the facility was not a major source of HAPs. To the best of our knowledge, the facility classification has not changed.
2. Page 3. Brief Description of Unregulated Units. FPC requests that the units described as unregulated (i.e., internal combustion engines, emergency generator, and fresh water cooling towers) be re-classified as insignificant.
3. Page 7. Description. First Paragraph. The model number listed in line 2 for the combustion turbine should be MS7221 FA. The MS7001 FA is the general model classification made by General Electric. The HRSG was not manufactured by GE, as stated in line 4. Since the HRSG is not an emissions unit, it is not necessary to include a vendor designation. Also, all references to a duct burner, fuels for a duct burner, and emissions from the HRSG because of a duct burner, should be deleted as the duct burner has been physically removed.

4. Page 7. Second Paragraph. The flow rate listed in the paragraph (4th line) is for distillate oil; the flow rate listed in the application is 1,072,001 acfm. It should be noted the flow and other parameters change as a result of load and turbine inlet temperature. These data were included in the original construction permit application. It is suggested that these data be so qualified. Also, for your information, the statement that the emissions from the CT are controlled with DLN 2.6 will be accurate when the permit becomes effective; FPC has ordered this equipment and will have it installed in 1999.
5. Page 7. Condition A.3. This Condition should be deleted because it does not impose any existing requirement; it simply states that a "modification" to the unit will subject it to the NSPS requirements.
6. Page 8. Condition A.4. This Condition should clarify that the heat input is dependent upon the ambient temperature in accordance with manufacturer's curves. Also, as stated above, the reference to the duct burner should be deleted.
7. Page 8. Condition A.6.a. The description of the distillate fuel should be changed from "New" to "distillate fuel oil." This would be consistent with the terminology in the PSD/BACT permit that did not characterize the distillate oil as either "new", "No. 2" or "low sulfur." The latter comment applies to Condition A.6.b. Also, the third and fourth sentences of Condition A.6.a should be deleted: as stated above, the HRSG does not contain a duct burner, and the pre-construction requirements are redundant with Appendix TV-1.
8. All citations to the BACT as authority for a permit condition should be deleted because the BACT is simply the basis for the PSD permit. The PSD permit is appropriately listed, and is sufficient authority.
9. Pages 9-11. Conditions A.12, A.15, A.19, A.22, A.25, and A.28 should be deleted because the HRSG does not contain a duct burner.
10. Page 10. Condition A.20. The phrase "at full load conditions" should be added to this condition as was done in Condition A.21. This terminology is consistent with the PSD permit conditions.
11. Pages 10 and 11. In the Title V application, FPC requested that the Conditions for sulfuric acid mist, listed in Conditions A.26., A.27., and A.28, be deleted from the Title V Permit. These conditions were added to the original PSD Permit for the Tiger Bay Cogeneration Facility, as was common practice for other similar facilities at the time of permitting. These conditions are currently obsolete and no longer included in PSD permits for combustion turbines firing natural gas and distillate oil.
12. Page 11. In the Title V application, FPC requested that the conditions for mercury, arsenic, beryllium and lead, listed in Conditions A.31 through A.34, be deleted from the Title V Permit. These conditions were added to the original PSD Permit for the Tiger Bay Cogeneration Facility, as was common practice for other similar facilities at the

time of permitting. These conditions are currently obsolete and no longer included in PSD permits for combustion turbines firing natural gas and distillate oil. In addition, arsenic and beryllium have been deleted from the list of PSD Significant Emission Rates, by the Department. This request is consistent with Department guidance (DARM-PER/GEN-18).

13. Page 11. Condition A.35. In accordance with the attached start-up curve, FPC requests that this unit be specifically authorized to have excess emissions for 3 hours (rather than 2 hours) in any 24-hour period, unless specifically authorized by the Department for longer duration. Also, the pertinent excess emission provisions of 40 CFR Part 60 should be included in this section of the permit, i.e., §§ 60.8(c), 60.11(c), and 60.43c(d).
14. Page 12. Condition A.39. This Condition is identical with Condition A.37 and therefore should be deleted.
15. Page 12. Condition A.41. This condition should be replaced with the Custom Fuel Monitoring Schedule issued by the Department and dated December 2, 1994 (attached).
16. Page 13. Condition A.43. The reference to 40 CFR Part 75 on line 5 should be put into context with Part 60 and the word "or" should be added. The following is suggested: "(July 2, 1992) or 40 CFR Part 75, whichever is more stringent." Also, the last sentence of this Condition should be deleted because it does not appear in the PSD permit.
17. Page 14. Condition A.46. The references to annual testing for VOCs and H₂SO₄ should be deleted. A sentence should be added to this Condition stating that "VOC testing is only required if the CO test indicates an exceedance of the CO standard. See Condition A.55." In accordance with Comment No. 11, there should be no need for annual H₂SO₄ testing. Also, as stated above, the Permitting Note should be revised to reflect the deletion of the limits for mercury, arsenic, beryllium, and lead.
18. Page 14. Condition A.47. Section 60.335(a) applies only to fuel oil, since the nitrogen in gas is not fuel bound as provided in Section 60.332(a)(3).
19. Page 14. Condition A.48. This condition was deleted from the PSD permit by the Department letter dated April 23, 1996, which changed several permit conditions.
20. Conditions A.44, A.45, A.49, A.50, A.51, A.52, A.57, A.58, A.59, and A.67 through A. 72 should be deleted. Other Title V permits for similar facilities do not have these conditions and they are either misapplied to this unit or simply cause confusion. For example, Condition A.44 is not appropriate because the only CEM on this unit is for NO_x and Method 20 (a stack test method) is the compliance determination method pursuant to Condition A.48. Also, the permit should not reference 40 CFR 60.335(c)(2) in Condition A.49 as clarified by DEP guidance (DARM-EM-05).

21. Page 15. Condition A.53. The references to the other permit conditions should be revised as follows: "A.13, A.14, and A.16; and A.26 - A.27."
22. Page 15. Condition A.54. The reference to the other permit conditions should be revised as follows: "A.20 and A.21."
23. Page 16. Condition A.55. The reference to the other permit conditions should be revised as follows: "A.23 and A.24 . . . A.20 and A.21."
24. Page 16. Condition A.59. The reference to PSD-FL-014 appears incorrect.
25. Page 17. Condition A.62. This Condition should reference the manufacturer's curve for heat input vs. inlet temperature.
26. Page 18. Condition A.65. Paragraph (a)4. is redundant to Condition A.46, and therefore should be deleted.
27. Page 19. Condition A.66. There does not appear to be any basis for this Condition and therefore FPC requests that it be deleted.
28. Page 23. Condition A.76. This Condition is obsolete and duplicative and therefore should be deleted. Compliance with 40 CFR Part 75 should be sufficient.
29. Page 24. Description. Second Paragraph. FPC requests the following revision of the first sentence for clarification: "This unit is ~~regulated under~~ exempt from Rule 62-296.700, F.A.C., Reasonably Available Control Technology (RACT) Particulate Matter - Exemptions pursuant to Rule 62-296.700(2), F.A.C." Also, as listed in the application, the stack flow should be 5,000 acfm and not 5,050 acfm.
30. Page 25. Condition B.4. The second sentence of this condition should be deleted, since the air construction permit did not include such wording.
31. Page 25. Condition B.5. For clarification, FPC requests that this Condition specify the compliance method to be used, assuming the provisions of Condition B.6 are met.
32. Page 25. Condition B.6. This Condition states that compliance determinations, if required, shall be "demonstrated by the test method specified in the applicable rule." FPC is uncertain what the "applicable rule" is, and therefore requests that a specific citation be included.
33. Page 29. Condition B.15. FPC requests that paragraphs (a)4.b. and c. be deleted and replaced with a simple reference to particulate matter, because this unit is only subject to limits on visible emissions and particulate matter.
34. Page 33. Condition A.4. Consistent with other DEP Title V permits, FPC requests that

this Condition be moved to the facility-wide section of the permit.

35. Page 35. Item 17. The chemical tank listed is 550 lb., not 5,500 lb. indicated in the condition. There are several similar tanks associated with the Cooling Tower Area that were not listed. The tanks were pH guard (500 gal., 2,925 lb.) and Conquor 3583 (2 @ 500 lb.). Several chlorine tanks were also identified in this area, as well as gas cylinders (CO₂ and H₂).
36. Page 35. Items 19 and 20. The natural gas knockout tank was not listed with these items. This insignificant emission unit had a vent.

FPC appreciates the opportunity to comment on the Initial Title V Permit. Thank you again for your prompt attention to this matter.

Sincerely,



Scott H. Osbourn
Senior Environmental Engineer

Attachments

cc: Ken Kosky, P.E., Golder Assoc.
Robert Manning, HGS&S



GE Energy Services

Todd R. Nass, Facility Manager
FPC Tiger Bay

Contractual Services
3219 County Road 630 West
Fort Meade, FL 33841
(941) 285-1200
(941) 285-1206 Fax
Cell 941-512-0204
Todd.Nass@ps.ge.com

November 19, 1998

TO: Mike Kennedy
Florida Power Corporation
MAC BB1A

Re: 7FA Gas Turbine Soft Start Sequence

Mike,

Per your request attached please find a graph showing the start up sequence for the 7FA at Florida Power's Tiger Bay Facility. As we discussed the attached sequence occurs automatically after any gas turbine shutdown of 50 hours or more duration. General Electric has added this revised start up sequence (titled "Soft Start") to the gas turbine controls as a protective measure to minimize potentially damaging thermal stresses in the turbine rotor during a cold startup.

Of note is the long period at which the gas turbine operates below the steady state pre-mix mode (just over 2 hours from initial start up command). At loads below steady state pre-mix the combustion system is not capable of achieving 25 ppmvd NOx levels. Shortening of the cycle to get the turbine into steady state pre-mix sooner would offset the benefit of allowing the slower warm-up of the turbine rotor and may result in pre-mature failure of turbine components.

I trust this information will assist you in revising the Tiger Bay Air permit. If I can provide any further information on this or any other matter please do not hesitate to call me.

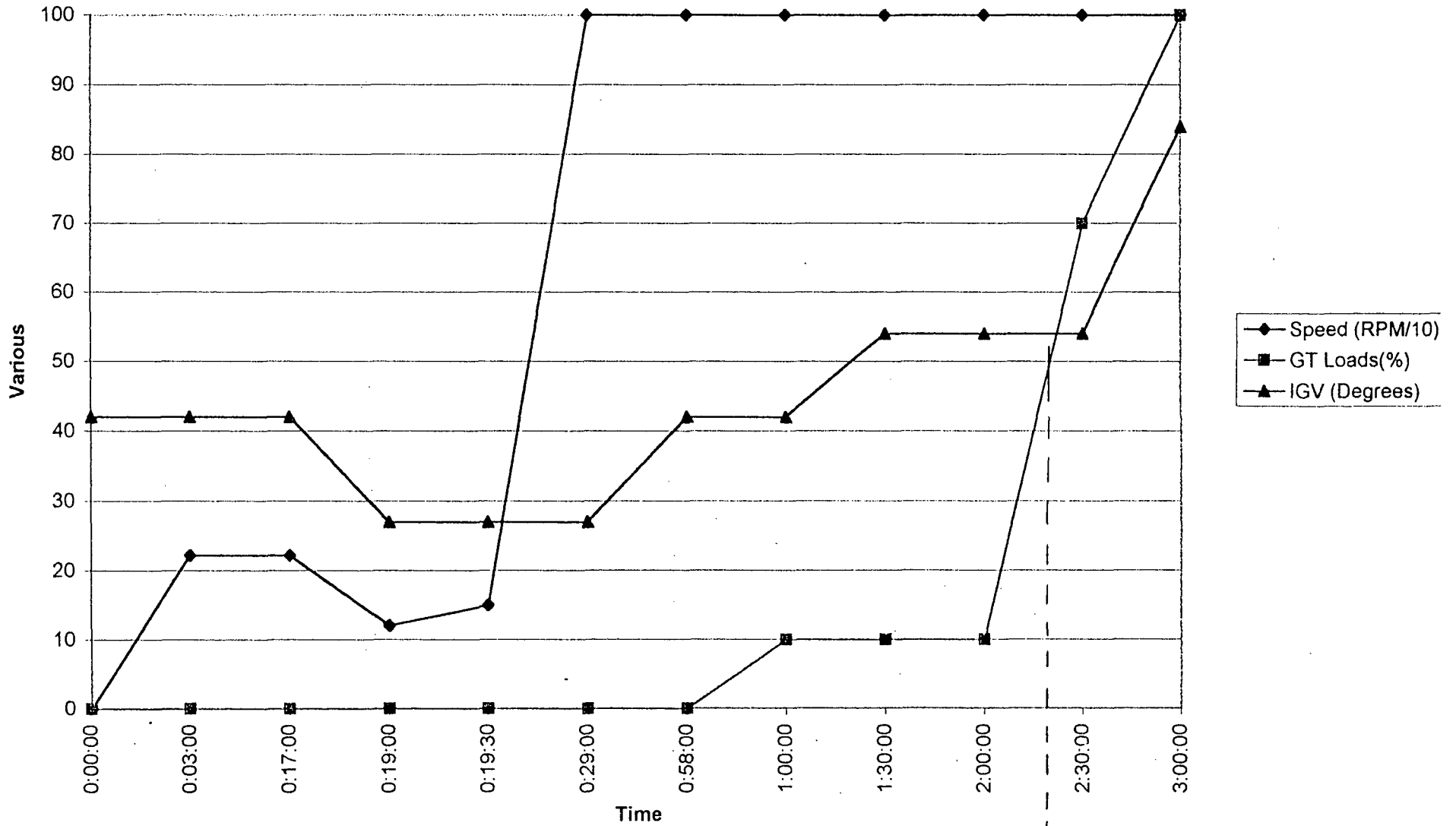
Regards,

Todd Nass

Copy to Letterbook

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7F/FA MSCC W/IBH



Approx Transition
to Pre-mix
Steady State
(Low NO_x)