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November 12, 2003

Mr. Jeffery F. Koerner, P.E.
New Source Review Section
Florida Department of
Environmental Protection
111 South Magnolia Drive, Suite 4
Tallahassee, FL 32301

Via FedEx
Airbill No. 7910 6057 2127

Re: Tampa Electric Company
Bayside Power Station, Unit 3
Project No. 0570040-019-AC
Request for Additional Information

Dear Mr. Koerner:

In response to the request for additional information (received on August 18, 2003) regarding Tampa Electric Company's (TEC) Bayside Unit 3 – Simple Cycle Plus Distillate Oil application, TEC requests additional time to respond pursuant to Rule 62-4.055(1), F.A.C.

> *"Within thirty days after receipt of an application for a permit and the correct processing fee the Department shall review the application and shall request submittal of additional information the Department is authorized by law to request. The applicant shall have ninety days after the Department mails a timely request for additional information to submit that information to the Department. If an applicant requires more than ninety days in which to respond to a request for additional information, the applicant may notify the Department in writing of the circumstances, at which time the application shall be held in active status for one additional period of up to ninety days."*

TAMPA ELECTRIC COMPANY
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TEC hereby requests an additional 90 days to fully respond to all questions. An e-mail notification of TEC's request has been sent to you, and a FedEx copy will be sent for your files. TEC appreciates the cooperation and consideration of the Department in this matter. If you have any questions, please contact Ms. Greer Briggs or me at (813) 641-5034.

Sincerely,

for,

Laura R. Crouch
Manager - Air Programs
Environmental, Health & Safety

EA/bmr/GMB128

cc: Mr. Jerry Kissel, FDEP-SW
Mr. Jerry Campbell, EPCHC
Mr. Jim Little, EPA Region 4
Mr. John Bunyak, NPS

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

November 7, 2003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Wade A. Maye, General Manager
F. J. Gannon Station
Port Sutton Road
Tampa, FL 33619

Re: **Request for Additional Information - Reminder**
Project No. 0570040-019-AC
Permit No. PSD-FL-301B
Bayside Unit 3 – Simple Cycle Operation Plus Distillate Oil

Dear Mr. Maye:

On July 22, 2003, the Department received your application and sufficient fee for an air construction permit to add simple cycle operation and restricted distillate oil firing to proposed gas turbine units 3A and 3B at the existing Bayside Power Station in Tampa, Florida. The application was incomplete. On August 13, 2003, the Department requested additional information that would allow continued processing of your application. To date, we have not received the requested additional information. Rule 62-4.055(1) of the Florida Administrative Code requires the following:

> *"The applicant shall have ninety days after the Department mails a timely request for additional information to submit that information to the Department. If an applicant requires more than ninety days in which to respond to a request for additional information, the applicant may notify the Department in writing of the circumstances, at which time the application shall be held in active status for one additional period of up to ninety days. Additional extensions shall be granted for good cause shown by the applicant. A showing that the applicant is making a diligent effort to obtain the requested additional information shall constitute good cause. Failure of an applicant to provide the timely requested information by the applicable deadline shall result in denial of the application."*

It has been more than 80 days since our request for additional information (copy attached). You are reminded that the permit processing time clock has stopped for this project and that we will not continue our review until we receive the additional information. If you require a period of time in addition to the 90 days allowed by rule, please submit a written request indicating the amount of time necessary. If you fail to provide the additional information or request additional time to submit the additional information, the Department will deny your application. If you have any questions regarding this matter, please call me at 850/921-9536.

Sincerely,

Jeffery F. Koerner
New Source Review Section

cc: Ms. Karen Sheffield, TECO
Ms. Dru Latchman, TECO
Mr. Tom Davis, ECT
Mr. Jerry Kissel, SWD
Mr. Jerry Campbell, HEPC
Mr. Jim Little, EPA Region 4
Mr. John Bunyak, NPS

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

August ~~July~~ 13, 2003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Wade A. Maye, General Manager
F. J. Gannon Station
Port Sutton Road
Tampa, FL 33619

Re: **Request for Additional Information**
Project No. 0570040-019-AC
Permit No. PSD-FL-301B
Bayside Unit 3 – Simple Cycle Operation Plus Distillate Oil

Dear Mr. Maye:

On July 22, 2003, the Department received your application and sufficient fee for an air construction permit for the Bayside Power Station located in Tampa, Florida. The request is to add simple cycle operation and restricted distillate oil firing to proposed gas turbine units 3A and 3B. The application is incomplete. In order to continue processing your application, the Department will need the additional information requested below. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. The application requests 8760 hours per year of operation. Will these two gas turbines be used to meet peaking power demands? Provide an estimate of such use based on predicted demands.
2. Provide information that supports the request for carbon monoxide emissions of 30.3 ppmvd when firing oil. The Department has information suggesting that such emissions are typically less than 3 ppmvd and recent permits have established CO standards of 15 ppmvd @ 15% oxygen based on a 24-hour average.
3. Provide information that supports the estimated PM/PM_{10} emissions of 18/34 pounds per hour for gas/oil firing. General Electric typically guarantees particulate matter emission rates of 9/18 pounds per hour when firing gas/oil.
4. Please describe and quantify (if possible) any fugitive emissions associated with this proposed project.
5. The application states that Hillsborough County is currently in attainment/unclassifiable with respect to the State and Federal AAQS. Specifically, what are the current ambient air quality concentrations in the vicinity of the project?
6. The proposed modification will increase emissions of carbon monoxide (CO), particulate matter (PM/PM_{10}), and volatile organic compounds (VOC) in excess of PSD significant emission rates (Table 62-212.400-2, F.A.C.) The regulations define significant impact levels for CO and PM as well as PSD increments for PM_{10}. Please evaluate the maximum air quality impacts for CO and PM_{10} from the proposed project and compare to the PSD Class II Significant Impact Levels. If required, also provide a PSD increment analysis for PM_{10}.
7. Compare the maximum predicted impacts for all PSD pollutants from the proposed project with the respective *de minimis* ambient impact levels? Is preconstruction ambient air quality monitoring required for the proposed modification?

8. Please identify any PSD Class I areas within 150 km of the project and the approximate distance. If required, please provide an air quality impact analysis for any affected PSD Class I areas including regional haze.

9. Please submit an analysis of impacts on soils, vegetation, and visibility.

10. Pursuant to Rule 62-212.400(3)(h)(5), F.A.C., please provide *information relating to the air quality impacts of, and the nature and extent of, all general commercial, residential, industrial and other growth which has occurred since August 7, 1977, in the area the facility or modification would affect.*

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. For any material changes to the application, please include a new certification statement by the authorized representative or responsible official. You are reminded that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days or provide a written request for an additional period of time to submit the information.

If you have any questions regarding this matter, please call me at 850/921-9536.

Sincerely,

Jeffery F. Koerner
New Source Review Section

cc: Ms. Karen Sheffield, TECO
Ms. Dru Latchman, TECO
Mr. Tom Davis, ECT
Mr. Jerry Kissel, SWD
Mr. Jerry Campbell, HEPC
Mr. Jim Little, EPA Region 4
Mr. John Bunyak, NPS

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February 23, 2004

Mr. Jeffery F. Koerner, P.E.
New Source Review Section
Florida Department of
Environmental Protection
111 South Magnolia Drive, Suite 4
Tallahassee, FL 32301

Via FedEx
Airbill No. 7911 5753 4751

Re: Tampa Electric Company
Bayside Power Station, Unit 3
Project No. 0570040-019-AC
Request for Additional Information

Dear Mr. Koerner:

Tampa Electric Co. (TEC) is requesting an extension to fully respond to the Florida Department of Environmental Protection's (the Department) Request for Additional Information (RAI) received by TEC on August 18, 2003. TEC first requested an extension on November 12, 2003 and was granted an additional ninety days to respond to the Department's RAI.

TEC is fervently working to complete its responses to the Department, and at this time would like to submit a draft of its responses. Additional modeling will be necessary to completely address all of the Department's questions, and TEC requests an extension of time to complete this portion of the responses. TEC hereby requests an additional 90 days to fully respond to all questions. An e-mail notification of TEC's request was sent to you on February 12, 2004, and this correspondence is being sent as a formal copy for your files.

Attached, please find TEC's draft responses to the Department's RAI dated August 13, 2003 and a summary of Hillsborough County's available ambient monitoring data - Attachment A. TEC appreciates the cooperation and consideration of the Department in this matter.

If you have any questions, please contact Ms. Greer Briggs or me at (813) 228-4302.

Sincerely,

Laura R. Crouch
Manager - Air Programs
Environmental, Health & Safety

EA/bmr/GMB165

Attachment

cc/attach.: Mr. Jerry Kissel, FDEP-SW
Mr. Jerry Campbell, EPCHC
Mr. Jim Little, EPA Region 4
Mr. John Bunyak, NPS

TECO
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February 12, 2004 **DRAFT**

Mr. Jeffery F. Koerner, P.E.
New Source Review Section
Florida Department of Environmental Protection
111 South Magnolia Avenue, Suite 4
Tallahassee, Florida 32301

Via FedEx
Airbill No.

Re: Request for Additional Information
Project No. 0570040-019-AC
Permit No. PSD-FL-301B
Bayside Unit 3 – Simple Cycle Operation Plus Distillate Oil

Dear Mr. Koerner:

Tampa Electric Company (TEC) has received your letter dated August 13, 2003 (received by TEC on August 16, 2003), and the Hillsborough County Environmental Protection Commission (EPC) e-mail from Mr. Ronald Day dated August 18, 2003, requesting additional information with regards to Bayside Power Station simple cycle Unit 3. This correspondence is intended to provide a response to each specific issue raised by the Department and the Hillsborough County EPC. For your convenience, TEC has restated each point and provided a response below each specific issue.

FDEP Item 1.
The application requests 8,760 hours per year operation. Will these two gas turbines be used to meet peaking power demands? Provide an estimate of such use based on predicted demands.

TEC Response
Bayside Unit 3 is being constructed to meet general area electric power demands. To provide flexibility in operations, TEC requests authorization to operate each Unit 3 combustion turbine (Units 3A and 3B) in simple cycle mode for up to 8,760 hours per year.

FDEP Item 2.
Provide information that supports the request for carbon monoxide emissions of 30.3 ppmvd when firing oil. The Department has information suggesting that emissions are typically less than 3 ppmvd and recent permits have established CO standards of 15 ppmvd @ 15% oxygen based on a 24-hour average.

TEC Response
The requested CO exhaust concentration of 30.3 ppmvd @ 15% O_2 during oil-firing was based on vendor estimated performance data obtained for the dual fuel, General Electric (GE) 7FA simple cycle combustion turbine (CT) units recently installed at TEC's Polk Power Station (PPS). The Department's PSD permit for the PPS simple cycle CTs established an initial (first 12 months of operation) CO exhaust concentration limit of 33 ppmvd and a CO concentration limit thereafter of 20 ppmvd during oil-firing. Compliance with these CO limits is based on the average of three, one-

hour test runs using EPA Reference Method 10. Consistent with the Department's PSD permit for the PPS simple cycle CTs, TEC requests a CO exhaust concentration limit of 20 ppmvd (based on the average of three, one-hour test runs using EPA RM 10) for Bayside simple cycle Units 3A and 3B during oil-firing.

FDEP Item 3.
Provide information that supports the estimated PM/PM_{10} emissions of 18/34 pounds per hour for gas/oil firing. General Electric typically guarantees particulate matter emission rates of 9/18 pounds per hour when firing gas/oil.

TEC Response
The estimated PM/PM_{10} emissions of 18/34 pounds per hour for gas/oil firing represent PM/PM_{10} emission rates based on stack testing using EPA Reference Methods 201 and 202; i.e., the estimated emissions include both front half filterable and back half condensible PM. The GE PM guarantees of 9/18 pounds per hour when firing gas/oil represent front half filterable PM only; e.g., based on stack testing using EPA Reference Method 5 or 17.

FDEP Item 4.
Please describe and quantify (if possible) any fugitive emissions associated with this proposed project.

TEC Response
Fugitive emissions associated with the project will occur during both the construction phase and during routine operations. Construction related fugitive emissions include PM due to land clearing and grading activities, and mobile construction equipment travel on the project site. Construction will also result in fugitive VOC due to surface coating activities; e.g., equipment painting. These construction related fugitive emissions will be insignificant and temporary in nature.

Fugitive emissions occurring during routine operations include VOC due to fuel equipment leaks; i.e., leaks from pipe flanges, valves, pump seals, storage tanks, etc. Fuels that will be used at Unit 3 include pipeline natural gas (primary fuel) and low sulfur distillate fuel oil (secondary fuel). Fugitive VOC emissions due to leaks from natural gas fuel equipment will be insignificant due to the low number of components in natural gas service and since natural gas is composed primarily of non-VOC methane and ethane. Fugitive VOC emissions from the storage and handling of distillate fuel oil will also be insignificant due to its very low volatility; i.e., distillate fuel oil has a true vapor pressure of only 0.0090 pounds per square inch (psi) at 70°F.

FDEP Item 5.
The application states that Hillsborough County is currently in attainment/unclassifiable with respect to State and Federal AAQS. Specifically, what are the current ambient air quality concentrations in the vicinity of the project?

TEC Response
Available ambient air monitoring data Hillsborough County for 2002 collected by the Department and Hillsborough County EPC are summarized on Attachment A. [Attachment A]

FDEP Item 6.
The proposed modification will increase emissions of carbon monoxide (CO), particulate matter (PM/PM_{10}), and volatile organic compounds (VOC) in excess of PSD significant emission rates (Table

62-212.400-2, F.A.C.) The regulations define significant impact levels for CO and PM as well as PSD increments for PM_{10}. Please evaluate the maximum air quality impacts for CO and PM_{10} from the proposed project and compare to the PSD Class II Significant Impact Levels. If required, also provide a PSD increment analysis for PM_{10}.

TEC Response
To be provided

FDEP Item 7.
Compare the maximum predicted impacts for all PSD pollutants with the respective *de minimis* ambient impact levels? Is preconstruction ambient air quality monitoring required for the proposed project?

TEC Response
To be provided

FDEP Item 8.
Please identify any PSD Class I areas within 150 km of the project and the approximate distance. If required, please provide an air quality impact analysis for any affected PSD Class I areas including regional haze.

TEC Response
The only PSD Class I area located within 150 km of the project is the Chassahowitzka National Wildlife Refuge (CNWR). The CNWA is located approximately 80 km north, northwest (NNW) of the project site.

PSD Class I increments have been established for SO_2, NO_2, and PM_{10}. Potential emissions from the proposed project will be below the PSD significant emission rates for SO_2 and NO_2 and therefore a Class I area air quality analysis is not required for these two pollutants. Since regional haze is caused primarily by secondary nitrate and sulfate formation due to precursor SO_2 and NO_x emissions, a Class I analysis for regional haze is not considered necessary for the proposed Unit 3 simple cycle project.

Class I area air quality analyses are also not considered to be required for the project due to the large decreases in actual emissions that have occurred due to cessation of operations at the adjacent TEC F.J. Gannon Station. For example, actual 2002 SO_2 and NO_x emissions for F.J. Gannon Station Units 1 through 6 totaled 47,103 and 20,694 tons, respectively, based on Acid Rain Program data. In contrast, potential (i.e., at a 100 percent capacity factor) Unit 3 simple cycle CT annual SO_2 and NO_x emissions are estimated to be 148 and 781 tons, respectively. These potential project annual SO_2 and NO_x emissions are only 0.3 and 3.8 percent, respectively, of the F.J. Gannon Station Units 1 through 6 actual 2002 emission rates. Accordingly, there will be a substantial net decrease in actual air quality impacts at the CNWR due to the cessation of operations at the F.J. Gannon Station, including the future operation of Bayside Unit 3.

FDEP Issue 9.
Please submit an analysis of impacts on soils, vegetation, and visibility.

TEC Response

As noted in the response to FDEP Issue 6. above, project CO and PM_{10} impacts will be below the PSD Class II SILs. The PSD Class II SILs are only a small fraction of the ambient air quality standards (AAQS). For example, the 24-hour PM_{10} PSD Class II SIL is 5 $\mu g/m^3$, or only 3.3 percent of the 150 $\mu g/m^3$ PM_{10} 24-hour AAQS. The AAQS are set at levels that protect the welfare of the public, including impacts on soils and vegetation. Accordingly, the proposed Unit 3 project will have insignificant impacts on soils and vegetation. As noted in the response to FDEP Issue 8. above, there will also be a substantial decrease in actual SO_2 and NO_x emissions due to the cessation of operations at the adjacent F.J. Gannon Station.

No visibility impairment is expected due to the types and quantities of emissions projected for the project. Visible emissions from the Unit 3 simple cycle CTs will be 10 percent opacity or less, excluding water. Emissions of primary particulates and sulfur oxides from the simple cycle units will be low due to the primary use of pipeline quality natural gas. The proposed project will comply with all applicable FDEP requirements pertaining to visible emissions.

FDEP Issue 10.
Pursuant to Rule 62-212.400(3)(h)(5), F.A.C., please provide information relating to the air quality impacts of, and the nature and extent of, all general commercial, residential, industrial and other growth which has occurred since August 7, 1977, in the area the facility or modification would affect.

TEC Response
The project is located in an industrial area that has not experienced significant general growth since August 7, 1977. The air quality impacts of any major industrial project in the area of the Bayside Power Station would have been subject to a detailed regulatory agency assessment under the PSD permitting program.

Impacts associated with construction of the proposed project will be minor. While not readily quantifiable, the temporary increase in vehicular miles traveled in the area would be insignificant, as would any temporary increase in vehicular emissions.

Bayside Unit 3 is being constructed to meet general area electric power demands and, therefore, no significant secondary growth effects due to operation of the simple cycle units are anticipated. When operational, Unit 3 is projected to generate less than five new jobs; this number of new personnel will not significantly affect growth in the area. The increase in natural gas and distillate fuel oil demand due to operation of the simple cycle units will have no major impact on local fuel markets. No significant air quality impacts due to associated industrial/commercial growth are expected.

EPC Issue 1(a).
On Page 1-2, TECO talks about their initial plans to construct and operate Bayside Units 3A and 3B in dual-fuel, simple-cycle (SC) mode operation and their future plans to convert these units to combined-cycle (CC) mode by adding HRSG's as currently authorized by Air Permit No. PSD-FL-301A. TECO then states that the timing of this conversion will depend on market conditions.

a) What are the market conditions that will determine when the conversion takes place and what is TECO's best estimate as to when this might occur? What are the market conditions that will determine when the conversion to combined cycle operation takes place and what is TECO's best estimate as to when this might occur?

TEC Response
Our plans for conversion of simple cycle Units 3A and 3B to combined cycle mode are uncertain at this time. TEC will provide EPC and the Department with all required permitting information regarding combined cycle operation when our conversion plans become final.

EPC Issue 1(b).
The conversion of Units 3A and 3B to the combined-cycle (CC) mode by adding HRSG's may not be the same as that authorized by Air Permit No. PSD-FL-301A. This is because the combustor used in CC mode is only fueled by natural gas from the pipeline (see Figure 2-4 in the Bayside Power Units 3 and 4 Air Construction Permit Application dated June 2001). It is not clear as to what will happen to the use of distillate fuel oil in Units 3A and 3B after the conversion takes place. Will there be an option to bypass the HRSG and run in the SC mode? On the other hand, would it be possible to operate the HRSG by combusting distillate fuel oil instead of natural gas? If so, should this be considered as a third alternative operating scenario?

TEC Response
As note in response to EPC Issue 1(a) above, our plans for conversion of simple cycle Units 3A and 3B to combined cycle mode are uncertain at this time. TEC will provide EPC and the Department with all required permitting information regarding combined cycle operation, including any combined cycle bypass and distillate fuel oil use, when our conversion plans become final.

EPC Issue 1(c).
It is not clear as to what the ambient air quality difference is with respect to the SC mode with either natural gas or distillate fuel oil versus the authorized CC mode. A direct comparison of SC mode, which includes both natural gas and distillate fuel oil, versus CC mode for the various temperatures and loading percentages with respect to emission rates and ambient air concentrations would be helpful.

TEC Response
To be provided

EPC Issue 2.
On Pages 26 and 47 of Appendix A (Application for Air Permit Title V Source), both the EM and O2 parameters state that specific CEMS information will be provided to FDEP when available. How soon is when available? In other words, when can we expect this information to be forthcoming?

TEC Response
Specific CEMS information for Units 3A and 3B is expected to become available in the last half of 2004.

EPC Issue 3.
Our Appendix C (Dispersion Modeling Files) did not contain a CD. How do the dispersion modeling files for the PSD Permit Revision compare with those submitted with the Air Construction Permit Application dated June 2001? Do the newer dispersion modeling files only contain data on Units 3A and 3B for the SC mode or do these files contain data for all eleven Bayside units in their respective operating modes?

TEC Response
To be provided

TEC understands that with the submission of this additional information, the Department will continue processing our request for an air construction permit for Bayside Power Station simple cycle Units 3A and 3B. If you have any further questions regarding this matter, please contact me at (813) 641-5034.

Sincerely,

Greer Briggs
Environmental Engineer
Environmental, Health & Safety
Tampa Electric Company

EP\gm\

Attachments

Attachment A

Attachment A Summary of 2002 Hillsborough County Air Quality Data (Page 1 of 2)

Pollutant	Site Location		Site Address	Site No	Site UTM Coordinates		Distance From Bayside Unit 3 (km)	Direction From Bayside Unit 3 (Vector °)	Averaging Period	Sampling Period	No of Observations	Ambient Concentration (ug/m^3)			
	County	City			Easting	Northing						1st High	2nd High	Arithmetic Mean	Standard
PM_{10}	Hillsborough	Tampa	3910 Morrison	12-057-0030	351,455	3,085,360	9	255	24-Hr	Jan-Dec	58	35	32		150[1]
									Annual					20	50[2]
	Hillsborough	Ruskin	US 41 CWU	12-057-0066	362,014	3,086,140	2	129	24-Hr	Jan-Dec	61	59	55		150[1]
									Annual					25	50[2]
	Hillsborough	Tampa	Gardinier	12-057-0083	363,890	3,082,701	6	143	24-Hr	Jan-Dec	45	50 0	36.0		150[1]
									Annual					22.0	50[2]
	Hillsborough	Tampa	Eisenhower Jr HS	12-057-0085	365,199	3,074,807	14	159	24-Hr	Jan-Dec	58	44 0	33.0		150[1]
									Annual					19 0	50[2]
	Hillsborough	Tampa	5012 Causeway Blvd	12-057-0095	362,100	3,089,240	3	50	24-Hr	Jan-Dec	46	48 0	38.0		150[1]
									Annual					24 0	50[2]
	Hillsborough	Tampa	1105 E. Kennedy	12-057-1002	357,193	3,092,154	5	327	24-Hr	Jan-Dec	60	44 0	40 0		150[1]
									Annual					24 0	50[2]
	Hillsborough	Tampa	4013 Ragg Rd	12-057-1068	352,250	3,109,300	23	340	24-Hr	Jan-Dec	61	29 0	29.0		150[1]
									Annual					17.0	50[2]
	Hillsborough	Tampa	Harbor Island Athletic Club	12-057-1069	357,150	3,090,750	4	316	24-Hr	Jan-Dec	61	46 0	38 0		150[1]
									Annual					22.0	50[2]
	Hillsborough	Brandon	2929 Kingsway	12-057-2002	374,240	3,094,200	16	65	24-Hr	Jan-Dec	60	37 0	35 0		150[1]
									Annual					20 0	50[2]
SO_2	Hillsborough	Tampa	Interbay Bld Ballst	12-057-0053	354,169	3,085,361	6	249	1-Hr	Jan-Dec	8,663	201.7	191 3		
									3-Hr			152 0	120.5		1,300[3]
									24-Hr			47.2	39.3		260[3]
									Annual					10 0	60[2]
	Hillsborough	Tampa	Simmons Park	12-057-0081	355,544	3,069,100	19	194	1-Hr	Jan-Dec	8,708	450 6	330.1		
									3-Hr			272.5	162.4		1,300[3]
									24-Hr			83 8	49.8		260[3]
									Annual					9 2	60[2]
	Hillsborough	Tampa	5012 Causeway Blvd.	12-057-0095	362,100	3,089,240	3	50	1-Hr	Jan-Dec	8,477	442 8	372 0		
									3-Hr			283 0	248.9		1,300[3]
									24-Hr			49 8	47.2		260[3]
									Annual					9 4	60[2]
	Hillsborough	Tampa	9851 Hwy 41 South	12-057-0109	363,758	3,081,853	7	148	1-Hr	Jan-Dec	8,623	429.7	421.8		
									3-Hr			335 4	311.8		1,300[3]
									24-Hr			159 8	123.1		260[3]
									Annual					11 0	60[2]
	Hillsborough	Tampa	Davis Island	12-057-1035	356,851	3,089,908	4	304	1-Hr	Jan-Dec	8,634	503 0	455.9		
									3-Hr			288 2	214 8		1,300[3]
									24-Hr			68 1	62.9		260[3]
									Annual					17.3	60[2]

Attachment A Summary of 2002 Hillsborough County Air Quality Data (Page 2 of 2)

Pollutant	Site Location		Site Address	Site No	Site UTM Coordinates		Distance From Bayside Unit 3 (km)	Direction From Bayside Unit 3 (Vector °)	Averaging Period	Sampling Period	No of Observations	Ambient Concentration (ug/m^3)			
	County	City			Easting	Northing						1st High	2nd High	Arithmetic Mean	Standard
SO_2	Hillsborough	Plant City	One Raider Place	12-057-4004	389,300	3,096,710	31	73	1-Hr	Jan-Dec	8,696	154 6	141 5		
									3-Hr			112.7	86 5		1,300[3]
									24-Hr			36 7	21 0		260[3]
									Annual					7.6	60[2]
NO_2	Hillsborough	Tampa	Simmons Park	12-057-0081	355,544	3,069,100	19	194	Annual	Jan-Dec	8,692			13 2	100[2]
	Hillsborough	Tampa	5121 Gandy Blvd	12-057-1065	348,560	3,086,060	12	262	Annual	Jan-Dec	8,000			19 9	100[2]
CO	Hillsborough	Tampa	4702 Central Ave	12-057-1070	357,000	3,096,500	9	340	1-Hr	Jan-Dec	8,723	6,095 0	6,095 0		40,000[3]
									8-Hr			5,175.0	4,370 0		10,000[3]
	Hillsborough	Plant City	One Raider Place	12-057-4004	389,300	3,096,710	31	73	1-Hr	Jan-Dec	8,273	3,105 0	2,760 0		40,000[3]
									8-Hr			1,840 0	1,610 0		10,000[3]
O_3	Hillsborough	Tampa	Simmons Park	12-057-0081	355,544	3,069,100	19	194	1-Hr	Jan-Dec	240	186 5	184 5		235[4]
									8-Hr	Jan-Dec	96	151.2	147.2		157[5]
	Hillsborough		14063 County Road 39	45-001-0110	385,500	3,073,260	29	120	1-Hr	Jan-Dec	239	186 5	180 6		235[4]
									8-Hr	Jan-Dec	97	147 2	147.2		157[5]
	Hillsborough	Tampa	Davis Island	12-057-1035	356,851	3,089,908	4	304	1-Hr	Jan-Dec	240	178 6	170 8		235[4]
									8-Hr	Jan-Dec	97	137.4	131.5		157[5]
	Hillsborough	Tampa	5121 Gandy Blvd	12-057-1065	348,560	3,086,060	12	262	1-Hr	Jan-Dec	242	202 2	182.6		235[4]
									8-Hr	Jan-Dec	99	155.1	145 3		157[5]
	Hillsborough	Plant City	One Raider Place	12-057-4004	389,300	3,096,710	31	73	1-Hr	Jan-Dec	244	214 0	178 6		235[4]
									8-Hr	Jan-Dec	99	162.9	149.2		157[5]
Lead	Hillsborough	Tampa	1700 North 66th St	12-057-1066	364,000	3,093,400	7	34	24-Hr		54				
										Jan-Mar				1 00	1 5[2]
										Apr-Jun				0.33	
										Jul-Sep				0 39	
										Oct-Dec				1.27	
	Hillsborough	Tampa	6811 E 14th Street	12-057-1073	364,310	3,093,400	7	36	24-Hr		59				
										Jan-Mar				0 22	1.5[2]
										Apr-Jun				0 23	
										Jul-Sep				0 13	
										Oct-Dec				0.41	

[1] 99th percentile
[2] Arithmetic mean
[3] 2nd high
[4] 4th highest day with hourly value exceeding standard over a 3-year period
[5] Annual 4th highest daily maximum 8-hour average exceeding standard over a 3-year period

*Indicates that the mean does not satisfy summary criteria

Source. FDEP, 2003

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

April 9, 2004

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Wade A. Maye, General Manager
Bayside Power Station / F. J. Gannon Station
P.O. Box 111
Tampa, FL 336601-0111

Re: Air Permit Project Status Updates
Bayside Power Station

Dear Mr. Maye:

This is simply a courtesy letter to provide an update on the status of two pending applications for air permits for the Bayside Power Station located on Port Sutton Road in Tampa, Florida.

Project No. 0570040-019-AC
Modification of Air Permit No. PSD-FL-301
Request for a Phase of Simple Cycle Operation for Bayside Unit 3 and the Use of Distillate Oil

Status: We received this application on July 23, 2003 and requested additional information in a letter dated August 13, 2003. On November 7, 2003 we sent a reminder. On November 11, 2003, we received an email request for an additional 90 days, which we approved on November 12, 2003. On February 12, 2004, we received a portion of the additional information marked "draft" and a second request for an additional 90 days by email, which we approved on February 13, 2004. It is our understanding that your consultant continues to work on the questions regarding modeling issues. This application remains incomplete and cannot be processed without the requested additional information. The final deadline for submitting this information is May 11, 2004.

Project No. 0570040-021-AC
Modification of Air Permit No. PSD-FL-301
Request for Minor Modification of Permit Condition 17 (Excess Emissions)

Status: We received this application on February 26, 2004 and requested additional information in a letter dated March 19, 2004. Based on several phone conversations with your staff, we believe that the additional information will be submitted shortly. This application remains incomplete and cannot be processed without the requested additional information. The final deadline for submitting this information is June 20, 2004.

We will resume processing your applications after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. For any material changes to the application, please include a new certification statement by the authorized representative or responsible official. If you have any questions regarding this matter, please call me at 850/921-9536.

Sincerely,

Jeffery F. Koerner, Air Permitting South
Bureau of Air Regulation

cc: Ms. Greer Briggs, TECO
Mr. Tom Davis, ECT
Mr. Jerry Kissel, SWD
Mr. Jerry Campbell, HEPC
Mr. Jim Little, EPA Region 4
Mr. John Bunyak, NPS

TAMPA ELECTRIC

May 10, 2004

Mr. Jeffery F. Koerner, P.E.
New Source Review Section
Florida Department of Environmental Protection
111 South Magnolia Avenue, Suite 4
Tallahassee, Florida 32301

Via FedEx
Airbill No. 7924 9548 3465

Re: Request for Additional Information
Project No. 0570040-019-AC
Permit No. PSD-FL-301A
Bayside Unit 3 – Simple Cycle Operation Plus Distillate Oil

Dear Mr. Koerner:

Tampa Electric Company (TEC) has received your letter dated August 13, 2003 (received by TEC on August 16, 2003), and the Hillsborough County Environmental Protection Commission (EPC) e-mail from Mr. Ronald Day dated August 18, 2003, requesting additional information with regards to Bayside Power Station simple cycle Unit 3. This correspondence is intended to provide a response to each specific issue raised by the Department and the Hillsborough County EPC. The Responsible Official Certification and the Professional Engineer Certification are provided in Attachment A. For your convenience, TEC has restated each point and provided a response below each specific issue.

FDEP Item 1.
The application requests 8,760 hours per year operation. Will these two gas turbines be used to meet peaking power demands? Provide an estimate of such use based on predicted demands.

TEC Response
Bayside Unit 3 is being constructed to meet general area electric power demands. To provide flexibility in operations, TEC requests authorization to operate each Unit 3 combustion turbine (Units 3A and 3B) in simple cycle mode for up to 8,760 hours per year.

FDEP Item 2.
Provide information that supports the request for carbon monoxide emissions of 30.3 ppmvd when firing oil. The Department has information suggesting that emissions are typically less than 3 ppmvd and recent permits have established CO standards of 15 ppmvd @ 15% oxygen based on a 24-hour average.

TEC Response
The requested CO exhaust concentration of 30.3 ppmvd @ 15% O_2 during oil-firing was based on vendor estimated performance data obtained for the dual fuel, General Electric (GE) 7FA simple cycle combustion turbine (CT) units recently installed at TEC's Polk Power Station (PPS). The Department's PSD permit for the PPS simple cycle CTs established an initial (first 12 months of operation) CO exhaust concentration limit of 33 ppmvd and a CO concentration limit thereafter of 20 ppmvd during oil-firing. Compliance with these CO limits is based on the average of three, one- hour test runs using EPA Reference Method 10. Consistent with the Department's PSD permit for the PPS simple cycle CTs, TEC requests a CO exhaust concentration limit of 20 ppmvd (based on the average of three, one-hour test runs using EPA RM 10) for Bayside simple cycle Units 3A and 3B during oil-firing.

FDEP Item 3.
Provide information that supports the estimated PM/PM_{10} emissions of 18/34 pounds per hour for gas/oil firing. General Electric typically guarantees particulate matter emission rates of 9/18 pounds per hour when firing gas/oil.

TEC Response
The estimated PM/PM_{10} emissions of 18/34 pounds per hour for gas/oil firing represent PM/PM_{10} emission rates based on stack testing using EPA Reference Methods 201 and 202; i.e., the estimated emissions include both front half filterable and back half condensible PM. The GE PM guarantees of 9/18 pounds per hour when firing gas/oil represent front half filterable PM only; e.g., based on stack testing using EPA Reference Method 5 or 17.

FDEP Item 4.
Please describe and quantify (if possible) any fugitive emissions associated with this proposed project.

TEC Response
Fugitive emissions associated with the project will occur during both the construction phase and during routine operations. Construction related fugitive emissions include PM due to land clearing and grading activities, and mobile construction equipment travel on the project site. Construction will also result in fugitive VOC due to surface coating activities; e.g., equipment painting. These construction related fugitive emissions will be insignificant and temporary in nature.

Fugitive emissions occurring during routine operations include VOC due to fuel equipment leaks; i.e., leaks from pipe flanges, valves, pump seals, storage tanks, etc. Fuels that will be used at Unit 3 include pipeline natural gas (primary fuel) and low sulfur distillate fuel oil (secondary fuel). Fugitive VOC emissions due to leaks from natural gas fuel equipment will be insignificant due to the low number of components in natural gas service and since natural gas is composed primarily of non-VOC methane and ethane. Fugitive VOC emissions from the storage and handling of distillate fuel oil will also be insignificant due to its very low volatility; i.e., distillate fuel oil has a true vapor pressure of only 0.0090 pounds per square inch (psi) at 70°F.

FDEP Item 5.
The application states that Hillsborough County is currently in attainment/unclassifiable with respect to State and Federal AAQS. Specifically, what are the current ambient air quality concentrations in the vicinity of the project?

TEC Response
Available ambient air monitoring data Hillsborough County for 2002 collected by the Department and Hillsborough County EPC are summarized on Attachment B.

FDEP Item 6.
The proposed modification will increase emissions of carbon monoxide (CO), particulate matter (PM/PM_{10}), and volatile organic compounds (VOC) in excess of PSD significant emission rates (Table 62-212.400-2, F.A.C.) The regulations define significant impact levels for CO and PM as well as PSD increments for PM_{10}. Please evaluate the maximum air quality impacts for CO and PM_{10} from the proposed project and compare to the PSD Class II Significant Impact Levels. If required, also provide a PSD increment analysis for PM_{10}.

TEC Response
Initial modeling indicated that CO impacts will be well below the PSD Class II SILs, but that the PSD Class II 24-hour average SIL for filterable PM_{10} would be exceeded during oil-firing. In order to keep project PM_{10} impacts below the PSD Class II SIL, the stack height for the simple cycle CTs will be increased to 150 feet above grade and oil-firing operations will be restricted to no more than a maximum of 11 hours per day. This daily operation restriction is in addition to the previously requested annual operating constraint of no more than 700 hours per year of oil-firing. Simple cycle mode Unit 3 CO and PM_{10} model results with respect to the PSD Class II Significant Impact Levels (SILs) are provided on Attachment C. Accordingly, PSD increment analyses for CO and PM_{10} are not required.

FDEP Item 7.
Compare the maximum predicted impacts for all PSD pollutants with the respective *de minimis* ambient impact levels? Is preconstruction ambient air quality monitoring required for the proposed project?

TEC Response
As shown on Attachment C, project air quality impacts for CO and PM_{10} were found to be below the PSD *de minimis* ambient impact levels for all PSD pollutants. The project net emission rate change for VOC (i.e., 62.1 ton per year [tpy]) is below the PSD *de minimis* ambient level of 100 tpy. Accordingly, preconstruction ambient air quality monitoring is not required for the Unit 3 project. Recent ambient air quality data for monitoring sites located throughout Hillsborough County is provided in Attachment B (see response to FDEP Item 5. above).

FDEP Item 8.
Please identify any PSD Class I areas within 150 km of the project and the approximate distance. If required, please provide an air quality impact analysis for any affected PSD Class I areas including regional haze.

TEC Response
The only PSD Class I area located within 150 km of the project is the Chassahowitzka National Wildlife Refuge (CNWR). The CNWA is located approximately 80 km north, northwest (NNW) of the project site.

PSD Class I increments have been established for SO_2, NO_2, and PM_{10}. Net emission rate changes for the Unit 3 project will be below the PSD significant emission rates for SO_2 and NO_2 and therefore a Class I area air quality analysis is not required for these two pollutants. Since regional haze is caused primarily by secondary nitrate and sulfate formation due to precursor SO_2 and NO_x emissions, a Class I analysis for regional haze is not considered necessary for the proposed Unit 3 simple cycle project.

Class I area air quality analyses are also not considered to be required for the project due to the large decreases in actual emissions that have occurred due to cessation of operations at the adjacent TEC F.J. Gannon Station. For example, actual 2002 SO_2 and NO_x emissions for F.J. Gannon Station Units 1 through 6 totaled 47,103 and 20,694 tons, respectively, based on Acid Rain Program data. In contrast, potential (i.e., at a 100 percent capacity factor) Unit 3 simple cycle CT annual SO_2 and NO_x emissions are estimated to be 148 and 781 tons, respectively. These potential project annual SO_2 and NO_x emissions are only 0.3 and 3.8 percent, respectively, of the F.J. Gannon Station Units 1 through 6 actual 2002 emission rates. Accordingly, there will be a substantial net decrease in actual air quality impacts at the CNWR due to the cessation of operations at the F.J. Gannon Station, including the future operation of Bayside Units 3.

FDEP Issue 9.
Please submit an analysis of impacts on soils, vegetation, and visibility.

TEC Response
As noted in the response to FDEP Issue 6. above, project CO and PM_{10} impacts will be below the PSD Class II SILs. The PSD Class II SILs are only a small fraction of the ambient air quality standards (AAQS). For example, the 24-hour PM_{10} PSD Class II SIL is 5 $\mu g/m^3$, or only 3.3 percent of the 150 $\mu g/m^3$ PM_{10} 24-hour AAQS. The AAQS are set at levels that protect the welfare of the public, including impacts on soils and vegetation. Accordingly, the proposed Unit 3 project will have insignificant impacts on soils and vegetation. As noted in the response to FDEP Issue 8. above, there will also be a substantial decrease in actual SO_2 and NO_x emissions due to the cessation of operations at the adjacent F.J. Gannon Station.

No visibility impairment is expected due to the types and quantities of emissions projected for the project. Visible emissions from the Unit 3 simple cycle CTs will be 10 percent opacity or less, excluding water. Emissions of primary particulates and sulfur oxides from the simple cycle units will be low due to the primary use of pipeline quality natural gas. The proposed project will comply with all applicable FDEP requirements pertaining to visible emissions.

FDEP Issue 10.
Pursuant to Rule 62-212.400(3)(h)(5), F.A.C., please provide information relating to the air quality impacts of, and the nature and extent of, all general commercial, residential, industrial and other growth which has occurred since August 7, 1977, in the area the facility or modification would affect.

TEC Response
The project is located in an industrial area that has not experienced significant general growth since August 7, 1977. The air quality impacts of any major industrial project in the area of the Bayside Power Station would have been subject to a detailed regulatory agency assessment under the PSD permitting program.

Impacts associated with construction of the proposed project will be minor. While not readily quantifiable, the temporary increase in vehicular miles traveled in the area would be insignificant, as would any temporary increase in vehicular emissions.

Bayside Unit 3 is being constructed to meet general area electric power demands and, therefore, no significant secondary growth effects due to operation of the simple cycle units are anticipated. When operational, Unit 3 is projected to generate less than five new jobs; this number of new personnel will not significantly affect growth in the area. The increase in natural gas and distillate fuel oil demand due to operation of the simple cycle units will have no major impact on local fuel markets. No significant air quality impacts due to associated industrial/commercial growth are expected.

EPC Issue 1(a).
On Page 1-2, TECO talks about their initial plans to construct and operate Bayside Units 3A and 3B in dual-fuel, simple-cycle (SC) mode operation and their future plans to convert these units to combined-cycle (CC) mode by adding HRSG's as currently authorized by Air Permit No. PSD-FL-301A. TECO then states that the timing of this conversion will depend on market conditions.

What are the market conditions that will determine when the conversion takes place and what is TECO's best estimate as to when this might occur? What are the market conditions that will determine when the conversion to combined cycle operation takes place and what is TECO's best estimate as to when this might occur?

TEC Response
Our plans for conversion of simple cycle Units 3A and 3B to combined cycle mode are uncertain at this time. TEC will provide EPC and the Department with all required permitting information regarding combined cycle operation when our conversion plans become final.

EPC Issue 1(b).
The conversion of Units 3A and 3B to the combined-cycle (CC) mode by adding HRSG's may not be the same as that authorized by Air Permit No. PSD-FL-301A. This is because the combustor used in CC mode is only fueled by natural gas from the pipeline (see Figure 2-4 in the Bayside Power Units 3 and 4 Air Construction Permit Application dated June 2001). It is not clear as to what will happen to the use of distillate fuel oil in Units 3A and 3B after the conversion takes place. Will there be an option to bypass the HRSG and run in the SC mode? On the other hand, would it be possible to operate the HRSG by combusting distillate fuel oil instead of natural gas? If so, should this be considered as a third alternative operating scenario?

TEC Response
As noted in response to EPC Issue 1(a) above, our plans for conversion of simple cycle Units 3A and 3B to combined cycle mode are uncertain at this time. TEC will provide EPC and the Department with all required permitting information regarding combined cycle operation, including any combined cycle bypass and distillate fuel oil use, when our conversion plans become final.

EPC Issue 1(c).
It is not clear as to what the ambient air quality difference is with respect to the SC mode with either natural gas or distillate fuel oil versus the authorized CC mode. A direct comparison of SC mode, which includes both natural gas

and distillate fuel oil, versus CC mode for the various temperatures and loading percentages with respect to emission rates and ambient air concentrations would be helpful.

TEC Response
Additional dispersion modeling for Bayside Unit 3 has been conducted as requested. The additional analysis evaluated the difference in maximum air quality impacts between the previously authorized combined cycle (natural gas-firing) and the proposed simple cycle (for both natural gas-firing and limited oil-firing)) modes of operation for Units 3A and 3B for the year of meteorology previously found to result in the highest project impacts (i.e., 1996). The results of this modeling analysis are provided on Attachment D.

EPC Issue 2.
On Pages 26 and 47 of Appendix A (Application for Air Permit Title V Source), both the EM and O2 parameters state that specific CEMS information will be provided to FDEP when available. How soon is when available? In other words, when can we expect this information to be forthcoming?

TEC Response
Specific CEMS information for Units 3A and 3B is expected to become available in the last half of 2004.

EPC Issue 3.
Our Appendix C (Dispersion Modeling Files) did not contain a CD. How do the dispersion modeling files for the PSD Permit Revision compare with those submitted with the Air Construction Permit Application dated June 2001? Do the newer dispersion modeling files only contain data on Units 3A and 3B for the SC mode or do these files contain data for all eleven Bayside units in their respective operating modes?

TEC Response
A compact disc (CD) is included with this response that contains the initial Appendix C (Dispersion Modeling Files) as well as the additional modeling discussed above in FDEP Items 6 and 7 and EPC Issue 3. The modeling files included on this CD address all eleven Bayside units in their respective operating modes.

TEC understands that with the submission of this additional information, the Department will continue processing our request for an air construction permit for Bayside Power Station simple cycle Units 3A and 3B. If you have any further questions regarding this matter, please contact me at (813) 228-4302.

Sincerely,

Greer Briggs
Environmental Engineer
Environmental, Health & Safety
Tampa Electric Company

EP\gm\GMB179

c/att: Mr. Jerry Kissel, FDEP-SW
Mr. Jerry Campbell, EPCHC
Mr. Jim Little, EPA Region 4
Mr. John Bunyak, NPS

Attachment A – Responsible Official Certification &
Professional Engineer Certification
Attachment B – 2002 Hillsborough County Air Quality Data
Attachment C – ISCST Model Results
Attachment D – ISCST Model Results

Attachment A
Responsible Official Certification
Professional Engineer Certification

Responsible Official Certification

I hereby certify that the Prevention of Significant Deterioration (PSD) Application being submitted for Bayside Power Station Unit 3A and 3B is authentic and accurate to the best of my knowledge.

Date: 5/9/04

Signature: _____

Wade A. Maye
General Manager
H.L. Culbreath Bayside Power Station

Attachment B

Summary of 2002 Hillsborough County Air Quality Data

Attachment B Summary of 2002 Hillsborough County Air Quality Data (Page 1 of 2)

Pollutant	Site Location		Site Address	Site No.	Site UTM Coordinates		Distance From Bayside Unit 3 (km)	Direction From Bayside Unit 3 (Vector °)	Averaging Period	Sampling Period	No of Observations	Ambient Concentration (ug/m³)			
	County	City			Easting	Northing						1st High	2nd High	Arithmetic Mean	Standard
PM_{10}	Hillsborough	Tampa	3910 Morrison	12-057-0030	351,455	3,085,360	9	255	24-Hr	Jan-Dec	58	35	32		150[1]
									Annual					20	50[2]
	Hillsborough	Ruskin	US 41 CWU	12-057-0066	362,014	3,086,140	2	129	24-Hr	Jan-Dec	61	59	55		150[1]
									Annual					25	50[2]
	Hillsborough	Tampa	Gardinier	12-057-0083	363,890	3,082,701	6	143	24-Hr	Jan-Dec	45	50 0	36 0		150[1]
									Annual					22 0	50[2]
	Hillsborough	Tampa	Eisenhower Jr HS	12-057-0085	365,199	3,074,807	14	159	24-Hr	Jan-Dec	58	44 0	33 0		150[1]
									Annual					19 0	50[2]
	Hillsborough	Tampa	5012 Causeway Blvd	12-057-0095	362,100	3,089,240	3	50	24-Hr	Jan-Dec	46	48 0	38 0		150[1]
									Annual					24 0	50[2]
	Hillsborough	Tampa	1105 E Kennedy	12-057-1002	357,193	3,092,154	5	327	24-Hr	Jan-Dec	60	44 0	40 0		150[1]
									Annual					24 0	50[2]
	Hillsborough	Tampa	4013 Ragg Rd	12-057-1068	352,250	3,109,300	23	340	24-Hr	Jan-Dec	61	29 0	29 0		150[1]
									Annual					17 0	50[2]
	Hillsborough	Tampa	Harbor Island Athletic Club	12-057-1069	357,150	3,090,750	4	316	24-Hr	Jan-Dec	61	46 0	38 0		150[1]
									Annual					22 0	50[2]
	Hillsborough	Brandon	2929 Kingsway	12-057-2002	374,240	3,094,200	16	65	24-Hr	Jan-Dec	60	37 0	35 0		150[1]
									Annual					20 0	50[2]
SO_2	Hillsborough	Tampa	Interbay Bld Ballst	12-057-0053	354,169	3,085,361	6	249	1-Hr	Jan-Dec	8,663	201.7	191.3		
									3-Hr			152 0	120 5		1,300[3]
									24-Hr			47.2	39 3		260[3]
									Annual					10 0	60[2]
	Hillsborough	Tampa	Simmons Park	12-057-0081	355,544	3,069,100	19	194	1-Hr	Jan-Dec	8,708	450 6	330.1		
									3-Hr			272 5	162 4		1,300[3]
									24-Hr			83 8	49 8		260[3]
									Annual					9.2	60[2]
	Hillsborough	Tampa	5012 Causeway Blvd	12-057-0095	362,100	3,089,240	3	50	1-Hr	Jan-Dec	8,477	442 8	372.0		
									3-Hr			283 0	248.9		1,300[3]
									24-Hr			49 8	47.2		260[3]
									Annual					9 4	60[2]
	Hillsborough	Tampa	9851 Hwy 41 South	12-057-0109	363,758	3,081,853	7	148	1-Hr	Jan-Dec	8,623	429 7	421.8		
									3-Hr			335 4	311.8		1,300[3]
									24-Hr			159 8	123.1		260[3]
									Annual					11.0	60[2]
	Hillsborough	Tampa	Davis Island	12-057-1035	356,851	3,089,908	4	304	1-Hr	Jan-Dec	8,634	503.0	455.9		
									3-Hr			288 2	214.8		1,300[3]
									24-Hr			68.1	62.9		260[3]
									Annual					17.3	60[2]

Attachment B. Summary of 2002 Hillsborough County Air Quality Data (Page 2 of 2)

Pollutant	Site Location		Site Address	Site No	Site UTM Coordinates		Distance From Bayside Unit 3 (km)	Direction From Bayside Unit 3 (Vector °)	Averaging Period	Sampling Period	No. of Observations	Ambient Concentration (ug/m^3)			
	County	City			Easting	Northing						1st High	2nd High	Arithmetic Mean	Standard
SO_2	Hillsborough	Plant City	One Raider Place	12-057-4004	389,300	3,096,710	31	73	1-Hr	Jan-Dec	8,696	154 6	141.5		
									3-Hr			112.7	86.5		1,300[3]
									24-Hr			36 7	21.0		260[3]
									Annual					7.6	60[2]
NO_2	Hillsborough	Tampa	Simmons Park	12-057-0081	355,544	3,069,100	19	194	Annual	Jan-Dec	8,692			13 2	100[2]
	Hillsborough	Tampa	5121 Gandy Blvd	12-057-1065	348,560	3,086,060	12	262	Annual	Jan-Dec	8,000			19.9	100[2]
CO	Hillsborough	Tampa	4702 Central Ave	12-057-1070	357,000	3,096,500	9	340	1-Hr	Jan-Dec	8,723	6,095 0	6,095 0		40,000[3]
									8-Hr			5,175 0	4,370.0		10,000[3]
	Hillsborough	Plant City	One Raider Place	12-057-4004	389,300	3,096,710	31	73	1-Hr	Jan-Dec	8,273	3,105 0	2,760.0		40,000[3]
									8-Hr			1,840 0	1,610 0		10,000[3]
O_3	Hillsborough	Tampa	Simmons Park	12-057-0081	355,544	3,069,100	19	194	1-Hr	Jan-Dec	240	186 5	184.5		235[4]
									8-Hr	Jan-Dec	96	151.2	147.2		157[5]
	Hillsborough		14063 County Road 39	45-001-0110	385,500	3,073,260	29	120	1-Hr	Jan-Dec	239	186 5	180 6		235[4]
									8-Hr	Jan-Dec	97	147.2	147.2		157[5]
	Hillsborough	Tampa	Davis Island	12-057-1035	356,851	3,089,908	4	304	1-Hr	Jan-Dec	240	178 6	170.8		235[4]
									8-Hr	Jan-Dec	97	137.4	131.5		157[5]
	Hillsborough	Tampa	5121 Gandy Blvd	12-057-1065	348,560	3,086,060	12	262	1-Hr	Jan-Dec	242	202 2	182.6		235[4]
									8-Hr	Jan-Dec	99	155 1	145 3		157[5]
	Hillsborough	Plant City	One Raider Place	12-057-4004	389,300	3,096,710	31	73	1-Hr	Jan-Dec	244	214 0	178 6		235[4]
									8-Hr	Jan-Dec	99	162.9	149 2		157[5]
Lead	Hillsborough	Tampa	1700 North 66th St	12-057-1066	364,000	3,093,400	7	34	24-Hr		54				
										Jan-Mar				1.00	1.5[2]
										Apr-Jun				0 33	
										Jul-Sep				0.39	
										Oct-Dec				1.27	
	Hillsborough	Tampa	6811 E 14th Street	12-057-1073	364,310	3,093,400	7	36	24-Hr		59				
										Jan-Mar				0 22	1.5[2]
										Apr-Jun				0 23	
										Jul-Sep				0 13	
										Oct-Dec				0 41	

[1] 99th percentile
[2] Arithmetic mean
[3] 2nd high
[4] 4th highest day with hourly value exceeding standard over a 3-year period
[5] Annual 4th highest daily maximum 8-hour average exceeding standard over a 3-year period

*Indicates that the mean does not satisfy summary criteria

Source. FDEP, 2003

Attachment C
ISCST Model Results – Bayside Unit 3
PSD Class II Significant Impact Level Analysis for CO and PM

Attachment C.
ISCST Model Results - Bayside Unit 3
PSD Class II Significant Impact Level (SIL) Analysis for CO and PM_{10}

Pollutant	Averaging Period	Highest Impacts ($\mu g/m^3$)						SIL ($\mu g/m^3$)	% of SIL (%)	Exceed SIL (Y/N)
		1992	1993	1994	1995	1996	Max.			
PM_{10}	Annual	0.104	0.084	0.121	0.095	0.107	0.121	1	12.1	N
	24-Hour	4.90	4.44	4.06	3.38	4.76	4.90	5	98.1	N
CO	1-Hour	379.4	385.1	394.6	474.9	462.7	474.9	2,000	23.7	N
	8-Hour	167.9	155.9	174.8	175.0	167.8	175.0	500	35.0	N

Source: ECT, 2004.

Attachment D

ISCST Model Results – Bayside Unit 3

Comparison Between Combine Cycle and Simple Cycle Modes

Attachment D.
ISCST Model Results - Bayside Unit 3
Comparison Between Combined Cycle and Simple Cycle Modes

A. Combined Cycle (Gas) Vs. Simple Cycle (Gas - 24 hr/day)

Pollutant	Averaging Period	Change in Impacts ($\mu g/m^3$) 1996
SO_2	Annual	0.0002
	24-Hour	0.8
	3-Hour	6.5
NO_2	Annual	0.2
PM_{10}	Annual	0.0003
	24-Hour	1.2
CO	1-Hour	84.8
	8-Hour	18.0

B. Combined Cycle (Gas) Vs. Simple Cycle (Oil - 11 hr/day)

Pollutant	Averaging Period	Change in Impacts ($\mu g/m^3$) 1996
SO_2	Annual	0.2
	24-Hour	8.1
	3-Hour	113.0
NO_2	Annual	< 0
PM_{10}	Annual	< 0
	24-Hour	0.8
CO	1-Hour	373.0
	8-Hour	119.6

Note: The ISCST3 model will not provide negative impacts, change in impacts < 0 represent lower impacts for SC vs. CC mode.

Source: ECT, 2004.

TAMPA ELECTRIC

RECEIVED
AUG 31 2004
BUREAU OF AIR REGULATION

August 30, 2004

Via FedEx
Airbill No. 7919 2164 7387

Mr. Jeffery F. Koerner, P.E.
New Source Review Section
Florida Department of Environmental Protection
111 South Magnolia Avenue, Suite 4
Tallahassee, Florida 32301

Re: Request for Additional Information
Project No. 0570040-019-AC
Permit No. PSD-FL-301A
Bayside Unit 3 – Simple Cycle Operation Plus Distillate Oil

Dear Mr. Koerner:

Tampa Electric Company (TEC) has received your letter dated May 25, 2004 (received by TEC on June 2, 2004), This correspondence is intended to provide a response to each specific issue raised by the Department. The Responsible Official Certification and the Professional Engineer Certification are provided in Attachment A. For your convenience, TEC has restated each point and provided a response below each specific issue.

FDEP Item 1.
PSD Permit No. 301A authorizes the construction of Bayside Units 1 through 4 (combined cycle gas turbine systems). Bayside Units 1 and 2 were constructed on schedule and are currently in operation. According to the schedule identified in the PSD permit, Bayside Units 3 and 4 would be complete by May of 2004. The permit also specifies the following, "The permittee shall inform the Department and Compliance Authority of any substantial changes to the construction schedule." Please provide an updated schedule of construction for Bayside Units 3 and 4.

TEC Response
TEC's current expansion plan indicates the need for additional capacity in 2006. TEC is reviewing options to either self-build or purchase simple cycle (SC) Bayside Units 3a & 3b. As a result, TEC is providing the FDEP with an updated schedule for the construction of simple cycle (SC) Bayside Units 3a & 3b:

May 2005 – Commencement of construction for SC Bayside Units 3a & 3b.

TAMPA ELECTRIC COMPANY
P. O. BOX 111 TAMPA, FL 33601-0111
(813) 228-4111

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HTTP://WWW.TAMPAELECTRIC.COM

CUSTOMER SERVICE:
HILLSBOROUGH COUNTY (813) 223-0800
OUTSIDE HILLSBOROUGH COUNTY 1 (888) 223-0800

FDEP Item 2.
TECO completed construction and began commercial operation of Bayside Unit 2D on September 19, 2003, which was the last gas turbine in the initial construction phase to come on line. Since this date, the Department understands that no additional work has been performed to add combined cycle Bayside Units 3 and 4. The authority to construct these units expires on July 1, 2005. As a result of TECO's uncertain plans, will the Bayside Unit 3 simple cycle project replace the previously permitted combined cycle Bayside Units 3-4 project? Please explain.

TEC Response
TEC began commercial operation of Bayside Unit 2 after first fire of the last Bayside combustion turbine (CT). As a result, TEC makes the following correction to FDEP Item 2 above: *TEC completed construction and began commercial operation of Bayside Unit 2C on November 19, 2003, which was the last gas turbine in the initial construction phase to come on line.* Since this date TEC has not done any additional work to add combined cycle Bayside Units 3 and 4. As stated in *FDEP Item 1* above, TEC is currently reviewing options to either self-build or purchase SC CT's and expects to complete this analysis by the Spring of 2005. Based on the most cost effective option, TEC understands that construction would need to commence by the first half of 2005, since the authority to construct these units expires on July 1, 2005, and that if the deadline to commence construction under this permit is not met, that additional permitting will be required. At this time TEC is only considering SC operation for Bayside Unit 3 (3a & 3b). Should TEC decide to convert Bayside Units 3a & 3b to combined cycle, TEC understands that additional permitting would also be required.

FDEP Item 3.
The initial PSD permit recognized the staggered construction schedule to complete Bayside Units 1-2 first and Bayside Units 3-4 would follow. Although it is possible to extend the PSD permit expiration date to complete the Bayside Unit 3 project, construction must begin before March 19, 2005 to maintain the original BACT determination. This date represents 18 months after completing construction of the last Bayside Unit (2D). If construction on Bayside Unit 3 does not begin by this time, TECO must first demonstrate the adequacy of the BACT determination prior to beginning construction. See Condition 9 in Section II of the PSD permit. As a result, a new BACT determination will likely be more stringent. Please comment and provide a schedule for the Bayside Unit 3 project.

TEC Response
Based on the revised date for FDEP Item 2 above, TEC makes the following changes: *Although it is possible to extend the PSD permit expiration date to complete the Bayside Unit 3 project, that construction must begin before May 20, 2005 to maintain the original BACT determination. This date represents 18 months after completing construction of the last Bayside Unit (2C).* As mentioned in FDEP Item 1 above, TEC's current expansion plan requires additional capacity in 2006, with construction of these SC CT's likely to begin by May 2005. TEC understands that construction must begin before May 20, 2005, to

maintain the original BACT determination, and that if construction does not begin by such a date, that a new, more stringent BACT determination may be likely.

FDEP Item 4.
Attachment A represents a schedule of completed and future activities for Gannon Units 1 through 6 and Bayside Units 1 through 4. Based on this schedule, it appears that emissions decreases from the shutdown of Gannon Units 1-6 would be available until 2008. Please comment.

TEC Response
Yes, this is the case.

FDEP Item 5.
As of your last submittal, the coal-fired Gannon units have all been permanently shut down. Please summarize the current status of, and future plans for, the coal storage and handling activities

TEC Response
The discussion of the coal-fired Gannon units is addressed in the Title V permit Renewal application. Please reference the H.L. Culbreath Bayside Title V Renewal application submitted on July 1, 2004.

FDEP Item 6.
In your response, the following project specifications were modified: the simple cycle stack heights were increased to 150 feet; the daily distillate oil firing was restricted to an equivalent 11 hours/day; and the annual distillate oil firing remained limited to an equivalent of 700 hours/year. These will become conditions of the permit. In addition, EPA Region 4 maintains that the EPA Consent Decree prohibits oil firing in any re-powered unit as long as natural gas is available. As summarized below, the Consent Decree allows only very limited firing of distillate oil as a backup fuel.

- The unit cannot fire natural gas;
- The backup fuel must be No. 2 distillate oil (or a superior grade) containing less than 0.05% sulfur by weight;
- The unit fires oil for an equivalent of no more than 875 hours per year;
- All air pollution controls are functional and used to the maximum extent possible for the unit; and
- The unit is in compliance with the emissions standards of this permit.

The Department is awaiting final comments from EPA Region 4 regarding oil firing during an initial phase of simple cycle operation for Bayside Unit 3. Please provide any comments you would like considered. Is TECO requesting the capability to fire distillate oil after Bayside Unit 3 is converted to combined cycle operation?

TEC Response

TEC submitted comments to the United States Environmental Protection Agency's (USEPA) Jim Little on July 2, 2004, for consideration regarding Bayside Unit 3 oil firing capabilities. See Attachment B.

FDEP Item 7.

The following summary is an attempt to clarify the PSD "BACT" and PSD "modeling" requirements for this project.

PSD BACT: TECO entered into settlement agreements with EPA and the Department to resolve alleged violations of the New Source Review requirements. With regard to PSD applicability and *BACT determinations*, it was determined that "past actual" emissions must be based on actual emissions *as if BACT-level controls were already installed.* For illustrative purposes, Table 1 in Attachment B shows this analysis based on decreases from the shutdown of Gannon Units 1 through 6 (past actual emissions with BACT-level controls), increases from the startup of Bayside Units 1 and 2 (potential emissions), and increases from the simple cycle startup of Bayside Unit 3 (potential emissions). The analysis shows that the project triggers PSD BACT review for CO, PM, and VOC, which is consistent with TECO's conclusion.

PSD Modeling: For purposes of determining the PSD *modeling requirements*, the actual emissions from Gannon Units 1 through 6 *does not* consider the actual emissions as if BACT-level controls were already installed. Instead, the full decreases from shutdown of these units were allowed. For illustrative purposes, Table 2 in Attachment B summarizes this analysis, which shows that the project triggers the PSD *modeling requirements* for CO and VOC. There are no modeling requirements for VOC. However, TECO did perform a PSD significant impact analysis that shows modeled impacts from the project are not significant for CO or PM. Therefore, no additional modeling was necessary.

Please provide any comments.

TEC Response

PSD BACT: TEC has no further comment.

PSD Modeling: **TEC agrees that no additional modeling is necessary.**

FDEP Item 8.

TECO also has an open application to make minor revisions to the existing PSD permit (Project No. 0570040-021-AC). Does TECO request that these two projects be merged into a single project with final permit modification?

TEC Response

No. TEC does not request that these two projects be merged into a single project. TEC would like to keep these two projects separate.

TEC understands that with the submission of this additional information, the Department will continue processing our request for an air construction permit for Bayside Power Station simple cycle Units 3A and 3B. If you have any further questions regarding this matter, please contact me at (813) 228-4302.

Sincerely,

Greer Briggs
Environmental Engineer
Environmental, Health & Safety

EHS\bmr\GMB202

c/att: Mr. Jerry Kissel, FDEP-SW
Mr. Jerry Campbell, EPCHC
Mr. Jim Little, EPA Region 4
Mr. John Bunyak, NPS

Attachment A
Responsible Official Certification
Professional Engineer Certification

I, the undersigned, am the responsible official as defined in Chapter 62-213, F.A.C., of the Title V source for which this document is being submitted. I hereby certify, based on the information and belief formed after reasonable inquiry, that the statements made and data contained in this document are true, accurate, and complete.

Wade A Maye — 8/30/04

Signature — Date

Wade A. Maye — General Manager, Bayside Power Station

Name — Title

Attachment B

AP2 6

TAMPA ELECTRIC

July 2, 2004

Mr. Jim Little
U.S. Environmental Protection Agency – Region 4
Acid Rain Program (6204J)
401 M St., SW
Washington, D.C. 20460

Via FedEx
Airbill No. 7901 9691 0918

Re: Tampa Electric Company
H.L. Culbreath Bayside Power Station
Unit 3 Simple Cycle plus Distillate Oil Operation
Permit Number: PSD-FL-301A
AIRS 0570040

Dear Mr. Little:

Per Tampa Electric Company's (TEC) telephone conversation with Mr. David Lloyd from the United States Environmental Protection Agency (USEPA) on May 28, 2004, this correspondence is being sent to address the Consent Decree requirements for oil firing for the H.L. Culbreath Bayside Power Station (Bayside) Unit 3 project, which will add simple cycle operation and restricted distillate oil firing to the proposed gas turbine units 3A and 3B.

On June 2, 2004, TEC received a request for additional information (RAI) No. 2 from the Florida Department of Environmental Protection (FDEP). Question 6 provided a summary of oil firing that is allowed under the Consent Decree. FDEP has stated that it is awaiting comments from EPA Region 4 regarding oil firing during an initial phase of simple cycle (SC) operation for Bayside Unit 3, but has requested that TEC provide any comments that it would like the Department to consider. To address the oil firing issue at Bayside, TEC has re-stated the requirements of the Consent Decree as it applies to the re-powering of Gannon Station below:

Under Consent Decree Paragraph 26.C,

A Unit Re-Powered under this or any other provision of this Consent Decree may be fired with No. 2 fuel oil if and only if: (1) the Unit cannot be fired with natural gas; (2) the Unit has not yet been fired with No. 2 fuel oil as a back-up fuel for more than 875 full load

equivalent hours in the calendar year in which Tampa Electric wishes to fire the Unit with such oil; (3) the oil to be used in firing the Unit has a sulphur content of less than 0.05 percent (by weight);, (4) Tampa Electric uses all emission control equipment for that Unit when it is fired with such oil to the maximum extent possible; and (5) Tampa Electric complies with all applicable permit conditions, including emission rates for firing with No. 2 fuel oil, as set forth in applicable preconstruction and operating permits.

Re-Power is defined by the Consent Decree in Paragraph 18, as follows:

Re-Power shall mean the removal or permanent disabling of devices, systems, equipment, and ancillary or supporting systems at a Gannon or Big Bend Unit such that the Unit cannot be fired with coal; and the installation of all devices, systems, equipment, and ancillary or supporting systems needed to fire such Unit with natural gas under the limits set in this Consent Decree (or with No. 2 fuel oil, as a back up fuel only, and under the limits specified by this Consent Decree) plus installation of the control technology and compliance with the Emission Rates called for under this Consent Decree.

Based upon this information, the requirements of the Consent Decree apply only to the re-powering of a Gannon or Big Bend Station unit. Bayside Unit 3 is a stand alone, SC combustion turbine (CT) that will not require re-powering of a Gannon Station unit. TEC understands that if Bayside Unit 3 is converted to combined cycle operation and a Gannon Station unit is re-powered, then the requirements of limited oil firing under the Consent Decree may become applicable. At this time, TEC is only considering SC operation for Bayside Unit 3. TEC does not believe that any of the requirements of the Consent Decree apply.

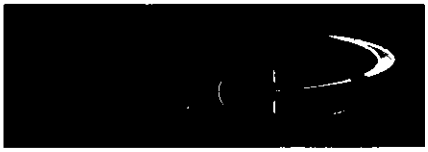
If you have any questions, please call Ms. Greer Briggs or me at (813) 228-4302.

Sincerely,

Laura R. Crouch
Manager – Air Programs
Environmental, Health & Safety

EA/bmr/GMB192

c: Mr. Jerry Campbell, EPCHC
Ms. Trina Vielhauer, FDEP
Mr. Jerry Kissel - FDEP SW
Mr. Jeffery Koerner - FDEP



TAMPA ELECTRIC
November 23, 2004

Mr. Jeffery F. Koerner, P.E.
New Source Review Section
Florida Department of Environmental Protection
111 South Magnolia Avenue, Suite 4
Tallahassee, Florida 32301

Via FedEx
Airbill No. 7919 8664 4661

Re: Request for Additional Information
Project No. 0570040-019-AC
Permit No. PSD-FL-301A
Bayside Unit 3 – Simple Cycle Operation Plus Distillate Oil

Dear Mr. Koerner:

Tampa Electric Company (TEC) has received your letter dated September 28, 2004 (received by TEC on October 25, 2004), requesting additional information with regards to Bayside Power Station simple cycle Unit 3. This correspondence is intended to provide a response to each specific issue raised by the Department. The Responsible Official Certification is provided in Attachment A. For your convenience, TEC has restated each point and provided a response below each specific issue.

FDEP Item 1.
Your response indicates that you will proceed with firm plans for simple cycle operation for Bayside Units 3 and 4 to begin construction in May of 2005. Future conversion of Units 3 and 4 to combined cycle operation is uncertain and will require additional permitting. Therefore, the Department intends to modify the PSD permit to reflect only simple cycle operation of Units 3 and 4.

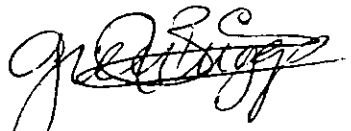
TEC Response
After speaking with the Department's Jeff Koerner on November 3, 2004, and receiving e-mailed correspondence on November 8, 2004, TEC understands that the Department will issue the PSD permit for BPS Units 3 and 4 to reflect both simple cycle (SC) and combined cycle (CC) operation. The Department has agreed to re-authorize construction of the CC Units 3 and 4, authorizing distillate oil firing in accordance with the EPA-TECO Consent Decree. The BACT determinations for both SC and CC operation will be valid for 18 months from final permit issuance. If Units 3A and 3B begin construction within this period, the BACT determination is valid for SC operation (phase I), and once Units 3A and 3B are in operation, the BACT determination will remain valid for CC operation (phase II) for an additional 18 months provided the emissions decreases from the retired Gannon Units are still within the 5-year contemporaneous period. These start to fall out beginning in 2008.

FDEP Item 2.
On July 2, 2004, TECO sent EPA Region 4 a letter describing the use of distillate oil for Bayside Units 3 and 4 simple cycle project. Please provide EPA Region 4's response.

TEC Response
TEC received a copy of the e-mailed response from EPA to the Department on October 13, 2004. A copy of the e-mail is attached for reference.

TEC understands that with the submission of this additional information, the Department will continue processing our request for an air construction permit for Bayside Power Station simple cycle Units 3A and 3B. If you have any further questions regarding this matter, please contact me at (813) 228-4302.

Sincerely,



Greer Briggs
Environmental Engineer
Environmental, Health & Safety

EHS/bmr/GMB209

Attachments

c/att: Mr. Jerry Kissel, FDEP-SW
Mr. Jerry Campbell, EPCHC
Mr. Jim Little, EPA Region 4
Mr. John Bunyak, NPS
Mr. David Lloyd, EPA Region 4

Attachment A
Responsible Official Certification

Responsible Official Certification

I, the undersigned, am the Responsible Official as defined in Chapter 62-213, F.A.C., of the Title V source for which this document is being submitted. I hereby certify, based on the information and belief formed after reasonable inquiry, that the statements made and data contained in this document are true, accurate, and complete.

Date: 11/23/04

Signature: Wade A. Maye

Wade A. Maye
General Manager
H.L. Culbreath Bayside Power Station

Attachment B
Response to Item #2 from EPA Region 4

From: "Koerner, Jeff" <Jeff.Koerner@dep.state.fl.us>
To: "Greer Briggs" <gmbriggs@tecoenergy.com>, <tdavis@ectinc.com>
Date: 10/14/2004 3:17:13 PM
Subject: FW: TECO Bayside Station - Addition of Simple Cycle Units w/Distillate Oil Firing

Greer and Tom,

Below is the response I got from David Lloyd at EPA Region 4.

Jeff Koerner, BAR - Air Permitting South
Florida Department of Environmental Protection
850/921-9536

-----Original Message-----
From: Lloyd.David@epamail.epa.gov [mailto:Lloyd.David@epamail.epa.gov]
Sent: Wednesday, October 13, 2004 4:05 PM
To: Koerner, Jeff
Cc: Little.James@epamail.epa.gov; TMariani@enrd.usdoj.gov
Subject: Re: TECO Bayside Station - Addition of Simple Cycle Units w/Distillate Oil Firing

Jeff,

I am in agreement with the assessment that until the new turbines are incorporated into a repowering project, the terms of the Consent Decree addressing fuel oil do not apply. I will add that we interpret the "cannot be fired with natural gas" language for the repowered units in a strict manner and that natural gas costs alone would not be sufficient reason to use oil. A breach in a natural gas pipeline disrupting flow, for example, would be sufficient rationale to satisfy the "cannot be fired with..." language.

The other issue I requested information on in my May 28, 2004 conversation with TECO was concerning how the Consent Decree might impact the level of emissions control applied to the two CTs (BACT or something less) . I was concerned about whether or not any CD-required emissions reductions could be used to offset or net against increases from the turbines. TECO's letter is silent on this issue.

Therefore, my questions are...has there been a determination that the new combustion turbines will have BACT installed? If not, what was the rationale? If netting was used was it based on CD-required reductions? I will seek input from others at EPA and DOJ on these issues depending on the input here.

David

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

May 25, 2004

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Wade A. Maye, General Manager
F. J. Gannon Station
Port Sutton Road
Tampa, FL 33619

Re: **Request for Additional Information No. 2**
Project No. 0570040-019-AC
Permit No. PSD-FL-301B
Bayside Unit 3 – Simple Cycle Operation Plus Distillate Oil

Dear Mr. Maye:

On July 22, 2003, the Department received your application for an air construction permit for the Bayside Power Station located in Tampa, Florida. The request is to add simple cycle operation and restricted distillate oil firing to proposed gas turbine units 3A and 3B. On August 13, 2003, the Department requested additional information. On May 11, 2004, the Department received your response to this request. The application remains incomplete. In order to continue processing your application, the Department will need the additional information requested below. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. PSD Permit No. 301A authorizes the construction of Bayside Units 1 through 4 (combined cycle gas turbine systems). Bayside Units 1 and 2 were constructed on schedule and are currently in operation. According to the schedule identified in the PSD permit, Bayside Units 3 and 4 would be complete by May of 2004. The permit also specifies the following, "The permittee shall inform the Department and Compliance Authority of any substantial changes to the construction schedule." Please provide an updated schedule of construction for Bayside Units 3 and 4.

2. TECO completed construction and began commercial operation of Bayside Unit 2D on September 19, 2003, which was the last gas turbine in the initial construction phase to come on line. Since this date, the Department understands that no additional work has been performed to add combined cycle Bayside Units 3 and 4. The authority to construct these units expires on July 1, 2005. As a result of TECO's uncertain plans, will the Bayside Unit 3 simple cycle project replace the previously permitted combined cycle Bayside Units 3-4 project? Please explain.

3. The initial PSD permit recognized the staggered construction schedule to complete Bayside Units 1-2 first and Bayside Units 3-4 would follow. Although it is possible to extend the PSD permit expiration date to complete the Bayside Unit 3 project, construction must begin before March 19, 2005 to maintain the original BACT determination. This date represents 18 months after completing construction of the last Bayside Unit (2D). If construction on Bayside Unit 3 does not begin by this time, TECO must first demonstrate the adequacy of the BACT determination prior to beginning construction. See Condition 9 in Section II of the PSD permit. As a result, a new BACT determination will likely be more stringent. Please comment and provide a schedule for the Bayside Unit 3 project.

4. Attachment A represents a schedule of completed and future activities for Gannon Units 1 through 6 and Bayside Units 1 through 4. Based on this schedule, it appears that emissions decreases from the shutdown of Gannon Units 1-6 would be available until 2008. Please comment.

5. As of your last submittal, the coal-fired Gannon units have all been permanently shut down. Please summarize the current status of, and future plans for, the coal storage and handling activities.

6. In your response, the following project specifications were modified: the simple cycle stack heights were increased to 150 feet; the daily distillate oil firing was restricted to an equivalent 11 hours/day; and the annual distillate oil firing

remained limited to an equivalent of 700 hours/year. These will become conditions of the permit. In addition, EPA Region 4 maintains that the EPA Consent Decree prohibits oil firing in any re-powered unit as long as natural gas is available. As summarized below, the Consent Decree allows only very limited firing of distillate oil as a backup fuel.

- The unit cannot fire natural gas;
- The backup fuel must be No. 2 distillate oil (or a superior grade) containing less than 0.05% sulfur by weight;
- The unit fires oil for an equivalent of no more than 875 hours per year;
- All air pollution controls are functional and used to the maximum extent possible for the unit; and
- The unit is in compliance with the emissions standards of this permit.

The Department is awaiting final comments from EPA Region 4 regarding oil firing during an initial phase of simple cycle operation for Bayside Unit 3. Please provide any comments you would like considered. Is TECO requesting the capability to fire distillate oil after Bayside Unit 3 is converted to combined cycle operation?

7. The following summary is an attempt to clarify the PSD "BACT" and PSD "modeling" requirements for this project.

   PSD BACT: TECO entered into settlement agreements with EPA and the Department to resolve alleged violations of the New Source Review requirements. With regard to PSD applicability and *BACT determinations*, it was determined that "past actual" emissions must be based on actual emissions *as if BACT-level controls were already installed.* For illustrative purposes, Table 1 in Attachment B shows this analysis based on decreases from the shutdown of Gannon Units 1 through 6 (past actual emissions with BACT-level controls), increases from the startup of Bayside Units 1 and 2 (potential emissions), and increases from the simple cycle startup of Bayside Unit 3 (potential emissions). The analysis shows that the project triggers PSD BACT review for CO, PM, and VOC, which is consistent with TECO's conclusion.

   PSD Modeling: For purposes of determining the PSD *modeling requirements*, the actual emissions from Gannon Units 1 through 6 *does not* consider the actual emissions as if BACT-level controls were already installed. Instead, the full decreases from shutdown of these units were allowed. For illustrative purposes, Table 2 in Attachment B summarizes this analysis, which shows that the project triggers the PSD *modeling requirements* for CO and VOC. There are no modeling requirements for VOC. However, TECO did perform a PSD significant impact analysis that shows modeled impacts from the project are not significant for CO or PM. Therefore, no additional modeling was necessary.

   Please provide any comments.

8. TECO also has an open application to make minor revisions to the existing PSD permit (Project No. 0570040-021-AC). Does TECO request that these two projects be merged into a single project with final permit modification?

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. For any material changes to the application, please include a new certification statement by the authorized representative or responsible official. You are reminded that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days or provide a written request for an additional period of time to submit the information.

If you have any questions regarding this matter, please call me at 850/921-9536.

Sincerely,

Jeffery F. Koerner, Air Permitting South
DARM – Bureau of Air Regulation

cc: Ms. Karen Sheffield, TECO
Ms. Greer Briggs, TECO
Mr. Tom Davis, ECT
Mr. Jerry Kissel, SWD
Mr. Jerry Campbell, HEPC
Mr. Jim Little, EPA Region 4
Mr. John Bunyak, NPS

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Wade A. Maye
General Manager
F. J. Gannon Station
Port Sutton Road
Tampa, FL 33619

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* | B. Date of Delivery 9/19/0

C. Signature
X
☐ Agent
☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. 7001 0320 0001 3692 5405

PS Form 3811, July 1999 Domestic Return Receipt 102595-00-M-0952

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7001 0320 0001 3692 5405

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Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

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Sent To
Wade A. Maye
Street, Apt. No.; or PO Box No.
Port Sutton Road
City, State, ZIP+4
Tampa, FL 33619

PS Form 3800, January 2001 See Reverse for Instructions

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Wade A. Maye
General Manager
F. J. Gannon Station
Port Sutton Road - P.O. Box 111
Tampa, FL 33619

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* JC CLARKE B. Date of Delivery 11-13-03

C. Signature
X
☐ Agent
☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

NOV 13 2003

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)*
7000 2870 0000 7028 3451

PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7000 2870 0000 7028 3451

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Sent To
Wade A. Maye
Street, Apt. No.; or PO Box No.
Port Sutton Rd., - PO Box 111
City, State, ZIP+ 4
Tampa, FL 33619

PS Form 3800, May 2000 See Reverse for Instructions

no small Receipt

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Wade A. Maye, General Manager
Tampa Electric Company
Bayside / Gannon Station
PO Box 111
Tampa, FL 33601-0111

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

☐ Agent
☐ Addressee

B. Received by *(Printed Name)*

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number
(Transfer from service label) 7000 2870 0000 7028 3994

PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540