TECO
TAMPA ELECTRIC

October 17, 2005

Mr. Jeff Koerner
Florida Department of Environmental Protection
Division of Air Resource Management
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Via Email Notification
Jeff.Koerner@dep.state.fl.us

Re: Tampa Electric Company
Polk Power Station
Polk Unit 4 & 5 Construction Permit Application RAI Comments
Project No. 1050233-018- AC, PSD-FL-363

Dear Mr. Koerner:

The purpose of this letter is to provide you with information discussed on the November 21, 2006 conversations regarding permit limits and conditions to be included in the draft Air Construction Permit for Polk Power Station Unit 4 and 5. This correspondence is intended to provide the responses to each item raised by the Florida Department of Environmental Protection (FDEP).

1. **NO_x emissions limit** – TEC accepts a NO_x limit of 9.0 ppmvd @ 15% O_2. In addition TEC requests language be included on the draft permit referring to allowable tuning through out the year.

2. **CO emissions limit** – TEC accepts an annual CO tons cap of 99 tons.

3. **Hours of Operation** – TEC accepts a 4,380 hr/yr/CT annual operating hour limit

4. **Excess Emissions** – TEC accepts up to 30-minutes of data exclusion allowed per startup event with no limits on the number of startup events. Similarly, up to 20-minutes of data exclusion would be allowed per shutdown events with no limits on the number of shutdown events. For malfunctions, up to 120 minutes of excess emissions would be allowed in any 24 hr period.

5. **Heat Input Margin** – TEC recognizes Mr. Koerner's concern of the footnote in the AC application regarding the use of a 3.5% margin for heat input rates to allow for future CT heat rate degradation. The pollutant mass emission rate estimates were not calculated using the heat input rate with the 3.5% margin. TEC will submit the corrected pollutant mass emission rate estimates by March 3, 2006.

TEC appreciates the Departments timely review and processing of the air construction permit application and this modification. If you should have any questions, please feel free to call Raiza Calderon or me at (813) 228-4369.

Sincerely,

(No Electronic Signature Available)

Raiza Calderon for
Byron Burrows, P.E. BCEE
Manager - Air Programs
Environmental, Health, and Safety

EA/rlk/RC/RC211

ECOtek

ESTIMATED PERFORMANCE PG7241(FA)

Load Condition		BASE	BASE	BASE	BASE	BASE
Ambient Temp.	Deg F.	45.	50.	59.	75.	95.
Fuel Type		Dist.	Dist.	Dist.	Dist.	Dist.
Fuel LHV	Btu/lb	18,300	18,300	18,300	18,300	18,300
Fuel Temperature	Deg F	80	80	80	80	80
Liquid Fuel H/C Ratio		1.8	1.8	1.8	1.8	1.8
Output	kW	185,500.	183,800.	180,300.	172,500.	158,600.
Heat Rate (LHV)	Btu/kWh	10,010.	10,020.	10,030.	10,090.	10,260.
Heat Cons. (LHV) X 10^6	Btu/h	1,856.9	1,841.7	1,808.4	1,740.5	1,627.2
Exhaust Flow X 10^3	lb/h	3794.	3758.	3690.	3559.	3372.
Exhaust Temp.	Deg F.	1084.	1089.	1097.	1113.	1132.
Exhaust Heat (LHV) X 10^6	Btu/h	1026.8	1019.5	1002.5	972.0	927.7
Water Flow	lb/h	126,840.	125,150.	121,590.	112,780.	95,100.

EMISSIONS

NOx	ppmvd @ 15% O2	42.	42.	42.	42.	42.
NOx AS NO2	lb/h	330.	327.	321.	309.	289.
CO	ppmvd	20.	20.	20.	20.	20.
CO	lb/h	67.	66.	65.	62.	59.
UHC	ppmvw	7.	7.	7.	7.	7.
UHC	lb/h	15.	15.	15.	14.	13.
SO2	ppmvw	115.0	115.0	115.0	115.0	113.0
SO2	lb/h	964.0	956.0	939.0	904.0	845.0
SO3	ppmvw	6.0	6.0	6.0	6.0	6.0
SO3	lb/h	63.0	63.0	62.0	59.0	55.0
Sulfur Mist	lb/h	101.0	101.0	99.0	95.0	89.0
Particulates	lb/h	17.0	17.0	17.0	17.0	17.0

EXHAUST ANALYSIS % VOL.

Argon		0.85	0.86	0.84	0.85	0.84
Nitrogen		71.54	71.46	71.31	70.94	70.26
Oxygen		11.10	11.08	11.04	10.98	10.93
Carbon Dioxide		5.61	5.61	5.61	5.58	5.49
Water		10.90	11.00	11.20	11.66	12.48

SITE CONDITIONS

Elevation	ft.	0.0
Site Pressure	psia	14.7
Inlet Loss	in Water	3.0
Exhaust Loss	in Water	5.5
Relative Humidity	%	60
Application		7FH2 Hydrogen-Cooled Generator
Combustion System		9/42 DLN Combustor

Emission information based on GE recommended measurement methods. NOx emissions are corrected to 15% O2 without heat rate correction and are not corrected to ISO reference condition per 40CFR 60.335(c)(1). NOx levels shown will be controlled by algorithms within the SPEEDTRONIC control system.

Distillate Fuel is Assumed to have 0.015% Fuel-Bound Nitrogen, or less.
FBN Amounts Greater Than 0.015% Will Add to the Reported NOx Value.
Sulfur Emissions Based On 0.5 WT% Sulfur Content in the Fuel.

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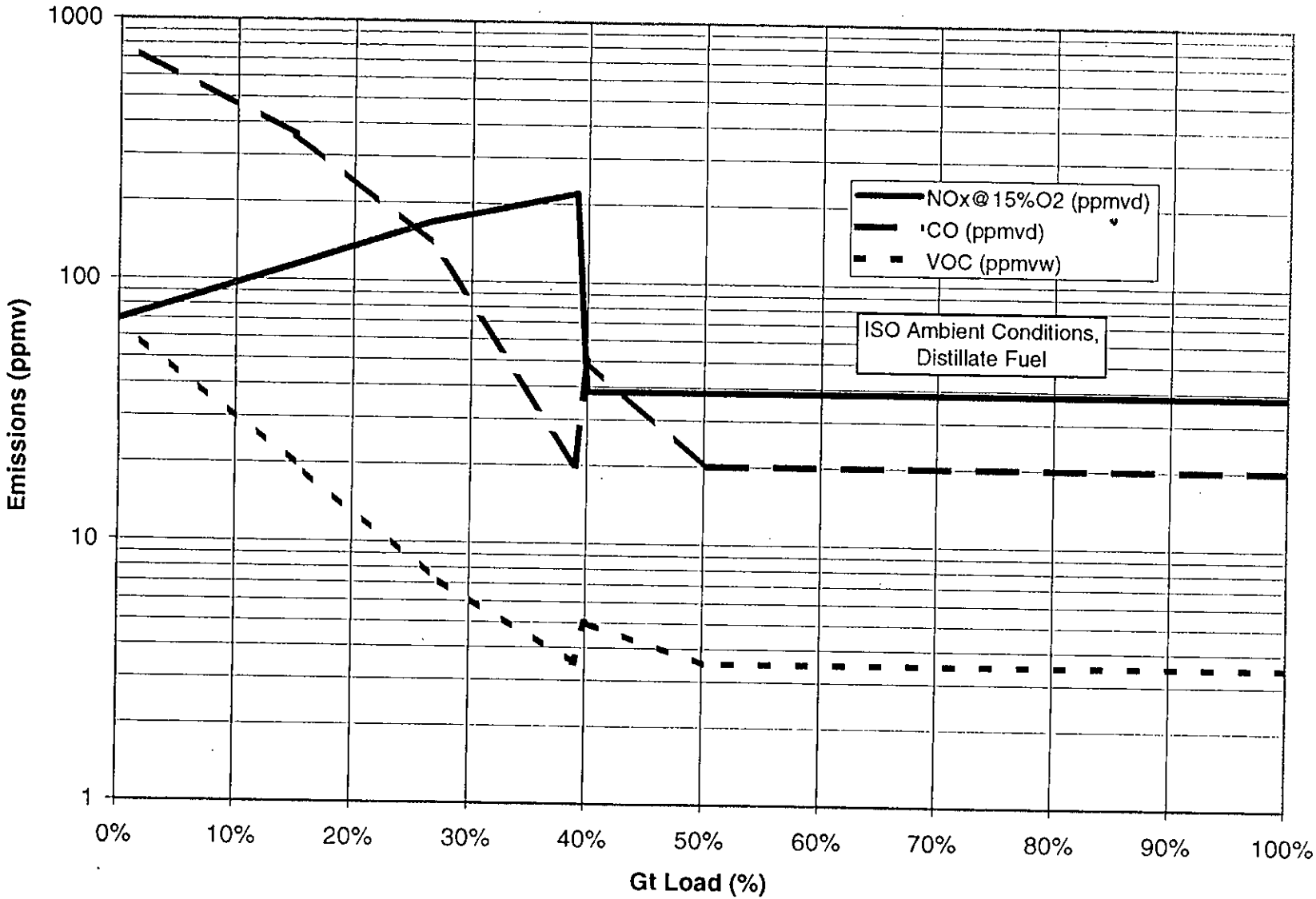
7241FA with DLN2.6 Combustor
Estimated Emissions - Liquid Fuel / Water Injection



Prepared by GE Power Systems 5/3/99

Lake Worth Generation, LLC 4 Mar 99

ESTIMATED PERFORMANCE PG7241(FA)

Load Condition		BASE	75%	50%	25%
Ambient Temp.	Deg F.	55.	55.	55.	55.
Fuel Type		Methane	Methane	Methane	Methane
Fuel LHV	Btu/lb	21,515	21,515	21,515	21,515
Fuel Temperature	Deg F	80	80	80	80
Output	kW	171,400.	128,500.	85,700.	42,800.
Heat Rate (LHV)	Btu/kWh	9,410.	10,240.	12,330.	17,070.
Heat Cons. (LHV) X 10^6	Btu/h	1,612.9	1,315.8	1,056.7	730.6
Exhaust Flow X 10^3	lb/h	3556.	2895.	2398.	2154.
Exhaust Temp.	Deg F.	1118.	1155.	1200.	1041.
Exhaust Heat (LHV) X 10^6	Btu/h	969.2	829.0	724.4	555.0

EMISSIONS

NOx	ppmvd @ 15% O2	9.	9.	9.	81.
NOx AS NO2	lb/h	60.	48.	38.	236.
CO	ppmvd	9.	9.	9.	47.
CO	lb/h	29.	24.	20.	92.
UHC	ppmvw	7.	7.	7.	21.
UHC	lb/h	14.	11.	9.	26.
Particulates	lb/h	9.0	9.0	9.0	9.0

EXHAUST ANALYSIS	% VOL.				
Argon		0.90	0.89	0.89	0.90
Nitrogen		74.35	74.37	74.48	75.14
Oxygen		12.32	12.38	12.72	14.59
Carbon Dioxide		3.84	3.81	3.66	2.81
Water		8.60	8.55	8.25	6.56

SITE CONDITIONS

Elevation	ft.	50.0
Site Pressure	psia	14.67
Inlet Loss	in Water	4.0
Exhaust Loss	in Water	12.0
Relative Humidity	%	70
Application		
Combustion System		9/42 DLN Combustor

Emission information based on GE recommended measurement methods. NOx emissions are corrected to 15% O2 without heat rate correction and are not corrected to ISO reference condition per 40CFR 60.335(c)(1). NOx levels shown will be controlled by algorithms within the SPEEDTRONIC control system.

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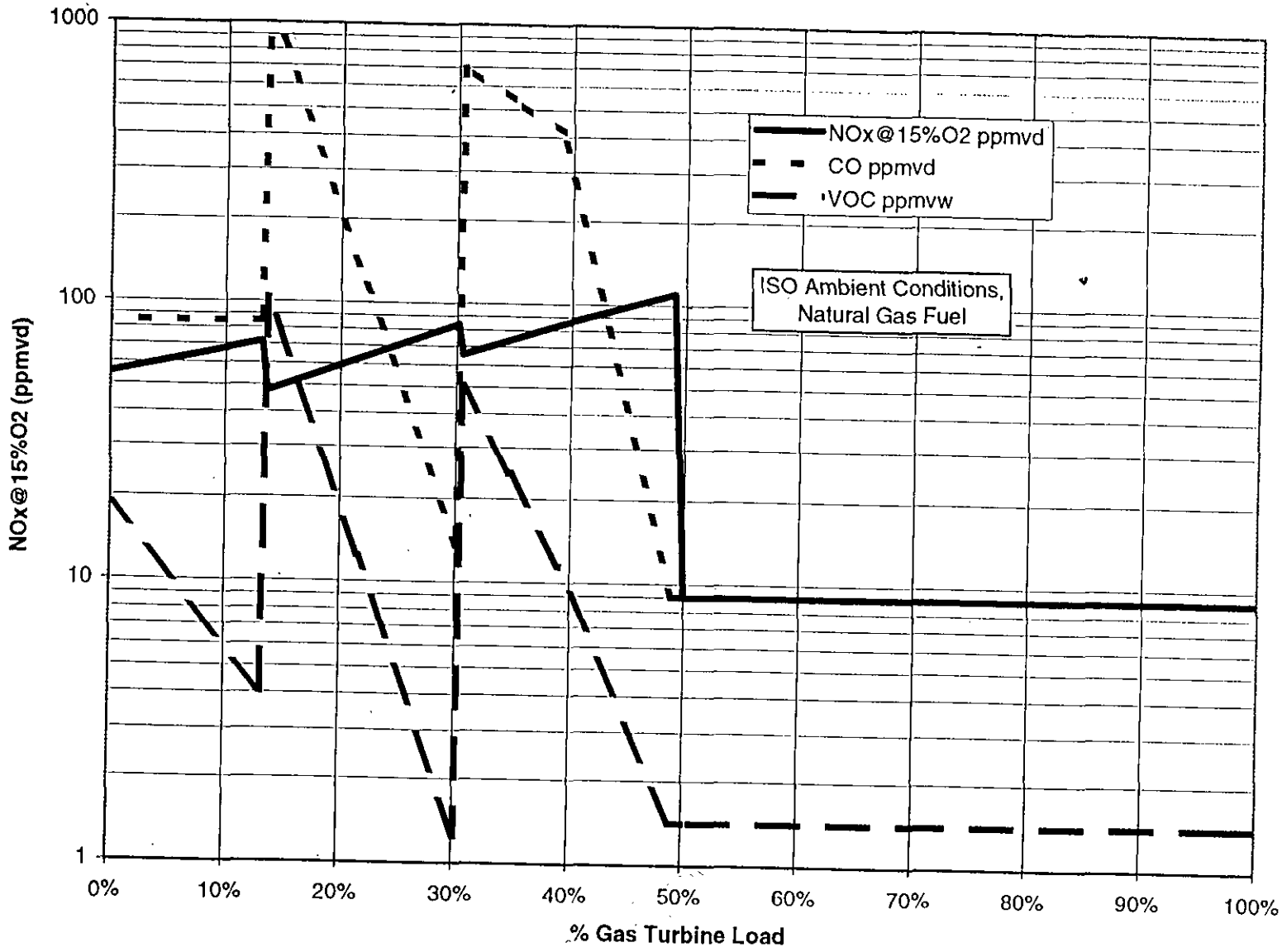
PG7241FA with DLN2.6 Combustor
Estimated Emissions vs Gas Turbine Load



prepared by GEPS, 5/3/99