Progress Energy

July 8, 2004

Jonathan Holtom
Division of Air Resource Management
2600 Blair Stone Road MS 5500
Tallahassee, Florida 32399-2400

Re: Progress Energy – Revision to the Tiger Bay Application - Facility ID 1050223

Dear Jonathan Holtom:

During your review of the Title V air permit renewal for Tiger Bay you requested either a CAM plan or a commitment to use the existing CEMS system as a continuous compliance method for NOx.

We will use the existing CEMS system as the compliance method for NOx for the combustion turbine.

I, the undersigned, am the responsible official as defined in Chapter 62-210.200, 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.

If you have any questions, please contact Dave Meyer at (727) 826-4187.

Sincerely,

Roger Zirkle
Plant Manager

P.O. Box 14042, HE44 • St. Petersburg • Florida 33733-4042 • (727) 820-5151
A Progress Energy Company

values to vary between 8,000 and 17,500 Btu/lb.

Alkaline sludges, such as soda tar and neutralized sludge, are less troublesome to fire since they are less variable in character than acid sludge.

GASEOUS FUELS

Gaseous fuels, when available, are ideal for steam generation because of the ease of control, the presence of little or no solid residue, and the low excess-air requirement, which contributes to high efficiency.

Properties of fuel gas considered to be of prime importance are composition, heating value, and specific gravity.

ANALYSIS

The analysis of fuel gas is expressed in terms of volume percentages of the component gases. Determinations can be made by selective absorption in chemical solutions, by separation of components through distillation, by infrared or mass spectrometry, or by means of gas chromatography. Typical analyses of various gases are given under their specific headings.

HEATING VALUE

The heating value refers to the quantity of heat released during combustion of a unit amount of fuel gas. Determinations are made with a continuous flow (constant pressure) gas calorimeter. The heating value as determined in calorimeters is termed *high heating value* and is the quantity of heat evolved when the products of combustion are cooled to 60°F and the water vapor produced is completely condensed to a liquid at that temperature. The *low heating value* differs from the high heating value by the latent heat of evaporation of water

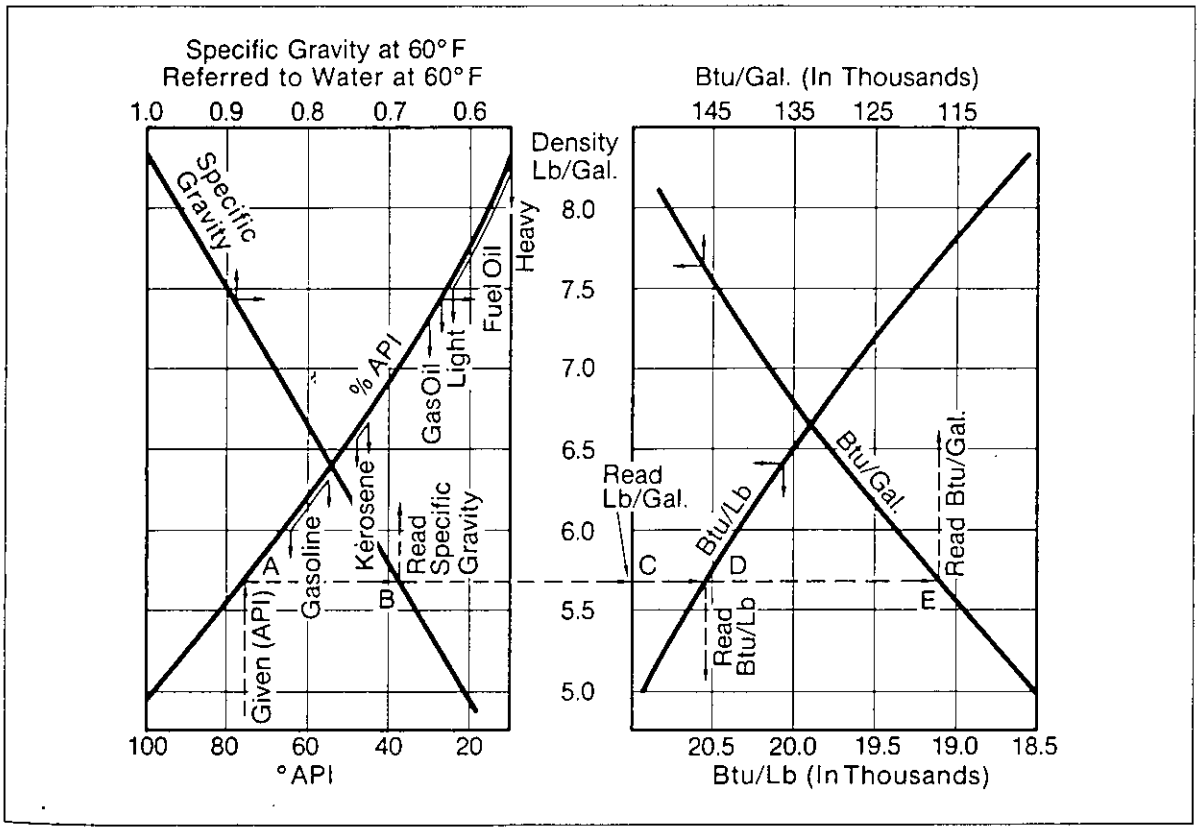


Fig. 10 **Chart showing the relationships of important characteristics of liquid fuels**

formed in the combustion process, as described on Page 2–12.

The heating value of manufactured gas is expressed as Btu per cu ft when measured at 60°F and 30 in. Hg, saturated with water vapor. The values for natural gas, however, are commonly reported at a pressure of 14.7 psia (pounds per square inch absolute) or 30 in. Hg, at a temperature of 80°F, and generally on a dry basis.

The heating value of gaseous fuels varies considerably, depending on the constituents present. When not obtainable by test, H_f can be calculated by summing up the heat evolved by the individual combustible fractions of the gas.

In Table XVII are shown the principal components, together with their properties at 60° and 30 in. Hg. moisture-free. When present i different proportions, these make up variou fuel gases.

ANSI/*ASTM Standards* D 3588 gives method for calculating calorific value and spe cific gravity of gaseous fuels and includes method for determining the repeatability an reproducibility of the calculated values.

SPECIFIC GRAVITY

Various methods for determining the specific gravity of a fuel gas are available but three

Table XVII. Combustion Constants of Dry Gases at 60°F and 30 In. Hg

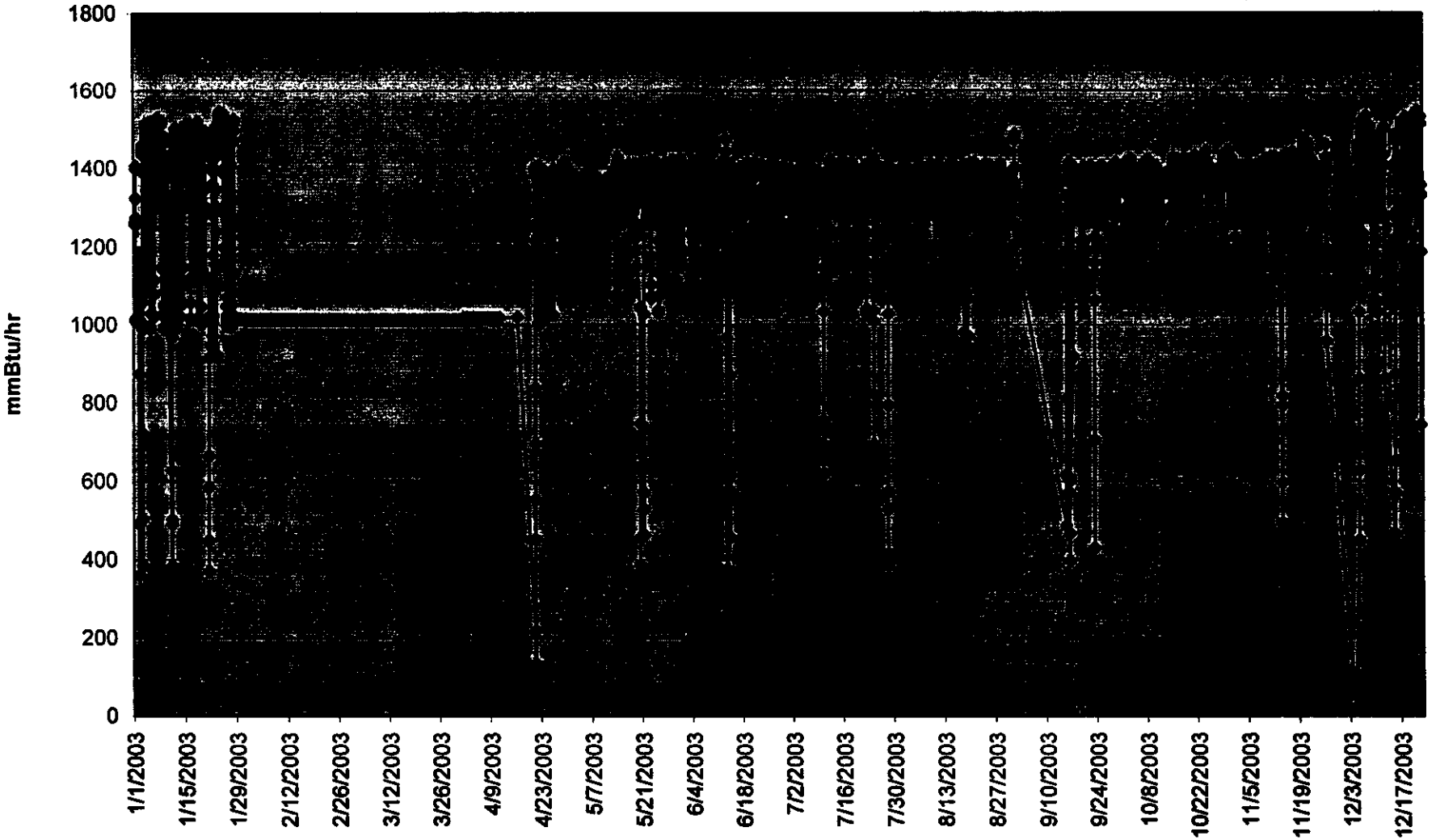
	Chemical Formula	O_2 Reqd./ Cu Ft of Dry Gas, Cu Ft	CO_2 Formed/ Cu Ft of Dry Gas, Cu Ft	H_2O Formed/ Cu Ft of Dry Gas, Cu Ft	Density of Dry Gas, Lb/Cu Ft	HHV of Dry Gas Btu/Cu Ft*	HHV of Dry Gas Btu/Lb
Gas							
Oxygen	O_2	...	...	...	0.08461	...	...
Nitrogen (atmospheric)	N_2	...	...	...	0.07439	...	...
Air	...	...	...	...	0.07655	...	...
Carbon dioxide	CO_2	...	...	...	0.1170	...	...
Water vapor	H_2O	...	...	...	0.04758	...	...
Hydrogen	H_2	0.5	...	1.0	0.005327	325	60,991
Hydrogen sulfide	H_2S	1.5	1.0**	1.0	0.09109	647	7,100
Carbon monoxide	CO	0.5	1.0	...	0.07404	321	4,323
Saturated Hydrocarbons							
Methane	CH_4	2.0	1.0	2.0	0.04246	1014	23,896
Ethane	C_2H_6	3.5	2.0	3.0	0.08029	1789	22,282
Propane	C_3H_8	5.0	3.0	4.0	0.1196	2573	21,523
Butane	C_4H_{10}	6.5	4.0	5.0	0.1582	3392	21,441
Pentane	C_5H_{12}	8.0	5.0	6.0	0.1904	4200	22,058
Unsaturated Hydrocarbons or Illuminants							
Ethylene	C_2H_4	3.0	2.0	2.0	0.07421	1614	21,647
Propylene	C_3H_6	4.5	3.0	3.0	0.1110	2383	21,464
Butylene	C_4H_8	6.0	4.0	4.0	0.1480	3190	21,552
Pentylene	C_5H_{10}	7.5	5.0	5.0	0.1852	4000	21,600
Acetylene	C_2H_2	2.5	2.0	1.0	0.06971	1488	21,344
Benzene	C_6H_6	7.5	6.0	3.0	0.2060	3930	19,068
Toluene	C_7H_8	9.0	7.0	4.0	0.2431	4750	19,537

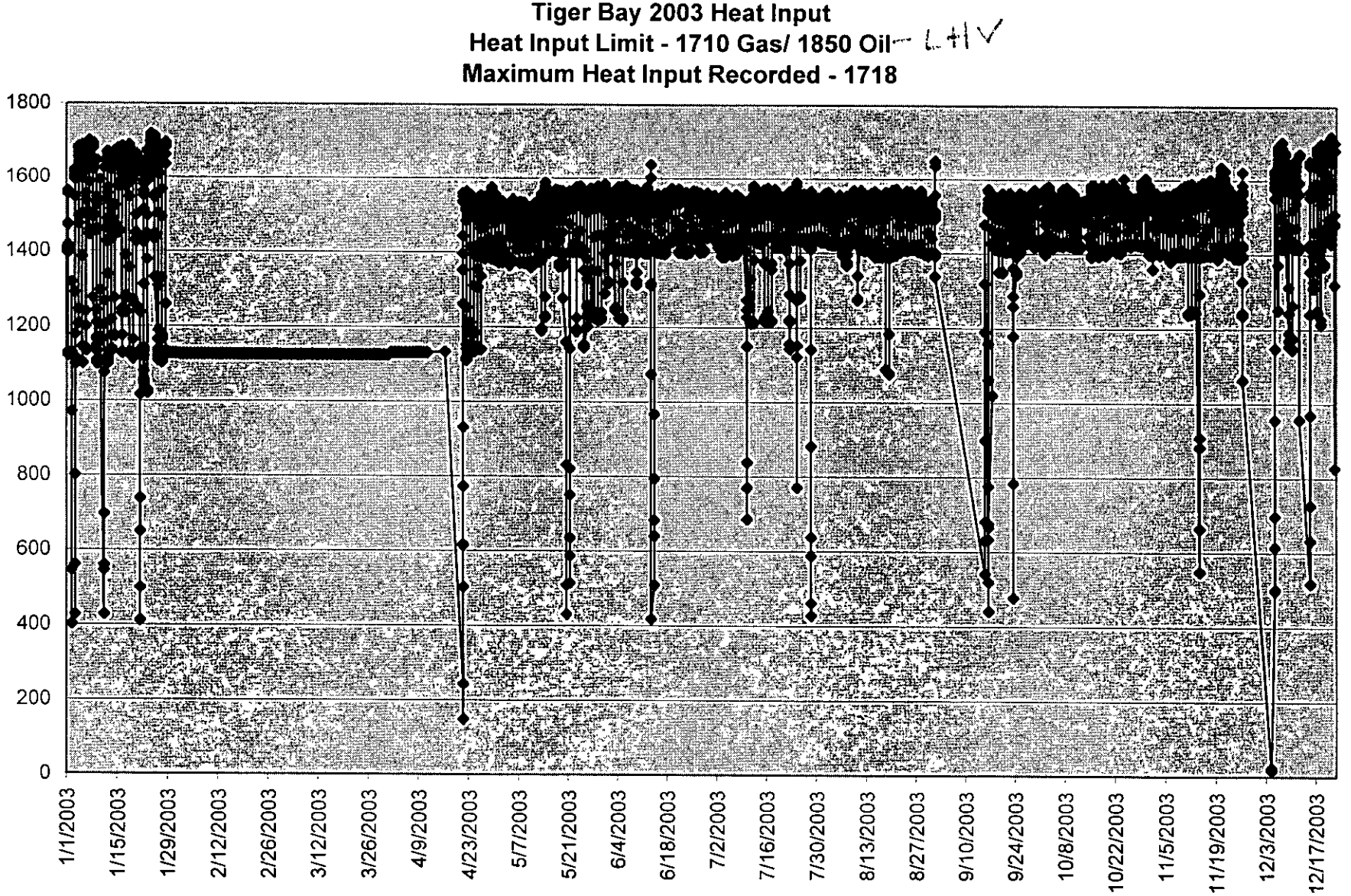
* If gas is saturated with moisture at 60°F and 30.0 in. Hg, reduce by 1.74%.
** SO_2 rather than CO_2

* Typical NG will also have a little of the higher weight hydrocarbons, so maybe values around 1040 make sense.

The LHV would therefore be roughly 910. It would take fair amount of higher weight HC's to raise that number to 1000+.

Tiger Bay 2003 Heat Input LHV
Heat Input Limit 1710 Gas/1850 Oil LHV
Maximum Heat Input Recorded - 1269 LHV




Tiger Bay 2003 Heat Input
Heat Input Limit - 1710 Gas/ 1850 Oil
Maximum Heat Input Recorded - 1718
1800
1600
1400
1200
1000
800
600
400
200
0
1/1/2003
1/15/2003
1/29/2003
2/12/2003
2/26/2003
3/12/2003
3/26/2003
4/9/2003
4/23/2003
5/7/2003
5/21/2003
6/4/2003
6/18/2003
7/2/2003
7/16/2003
7/30/2003
8/13/2003
8/27/2003
9/10/2003
9/24/2003
10/8/2003
10/22/2003
11/5/2003
11/19/2003
12/3/2003
12/17/2003

Florida Department of Environmental Protection

Southwest District • 3804 Coconut Palm Dr • Tampa Florida 33619

Lawton Chiles, Governor 813-744-6100 Virginia Wetherell, Secretary

PERMITTEE:
Central Florida Power Limited Partnership
2500 City West Boulevard, Suite 150
Houston, Texas 77042

PERMIT/PROJECT:
Permit No: AC53-230744
County: Polk
Expiration Date: 01/01/96
Project: Wastewater Treatment System Spray Dryer w/Baghouse

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-200 through 297, and Chapter 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the department and made a part hereof and specifically described as follows:

For the construction of a natural gas fired spray dryer unit and baghouse associated with the wastewater treatment system for a cogeneration facility. This equipment is used to process the concentrated wastewater brine from two falling-film evaporator units. The effluent from the evaporators is pumped to the spray dryer module where it is atomized into a spray and contacted by heated air to evaporate the liquid, thus resulting in the formation of dry particles from the remaining solids. The exhaust gas stream from the spray dryer is sent through a baghouse dust collector where the particulate matter is removed with a removal efficiency of at least 99.9% (based on vendor's guarantee). Design gas flow rate to the baghouse is 5,050 acfm @ 340°F. The spray dryer air heater is fired with natural gas at a maximum heat input rate of 3.07 MMBtu/hr.

Location: Tiger Bay Cogeneration Facility
County 630 Road, 3 miles west of Ft. Meade

UTM: 17-416.3 E 3069.3 N **NEDS No:** 0223 **Point ID No:** 02

Replaces Permit No.: N/A

NOx 15 ppm, 97.2 lb/hr 425.7 TPY

CO 15 ppm, 48.8 lb/hr 213.7 TPY

?? Are these all occurrences?
- Are shut down the same magnitude?
- 3/27 - 28/02 abnormal?
- why pick a close worst hour instead of using related data?
- 1 2 Hr period, not avg 24 with 1 hr. in it.
- Can the HRSG Bo Bypassed? NO

Excess Emissions Due to SU/SD

On April 30, 2003, Progress Energy requested an increase in the allowable time provided for startup and shutdown at Tiger Bay. This request was made in accordance with a provision in the current TV permit for this facility. On April 26, 2004, the Department responded that the establishment of a SU/SD protocol was no longer the mechanism by which the Department would respond to the SU issues that have arisen on many combined cycle gas turbines. Instead, the Department has been addressing these situations by consideration and establishment of alternate emission limits, during periods of SU/SD, in power plant construction permits.

Therefore, this application for a construction permit and a TV revision will address the issue of excess emissions during SU/SD activities. This request for a permit modification was made separately from the TV renewal process, so as to not delay the processing of the renewal. If this issue can be resolved in a timely manner, it is requested that these revisions be included in the TV permit that is issued through the renewal process. The attachment to the renewal application that summarizes SU/SD procedures (Attachment TB-EU1-L6), was intended only as a placeholder, until such time as this separate permit modification application could be filed with respect to this issue.

Background

Tiger Bay has compiled operations and emissions data from several recent startups in order to document the allowable time and emissions levels required for a safe startup. Progress Energy Florida proposes to use this information in the consideration and establishment of alternate emission limits during periods of startup. This will better reflect actual unit operating characteristics and will reduce the immediate reporting burden of a startup event for both Tiger Bay and the DEP.

Attached is a spreadsheet summarizing the operating and emissions data from recent startup events. In the majority of cases, after a period of five hours, either the unit has achieved a load of >50% (i.e., in the normal operating range and the startup has been completed) or the unit has achieved compliance with the applicable permit limit. Therefore, for each of the startup events, the worst case hourly emissions value, for hours 1 through 5, was used in the establishment of a 24-hour rolling average. The permit limit for NOx is 97.2 lb/hr. The emissions data provided indicates a NOx range from a high of 357.6 lb/hr (worst case Hour 3) to a low of 128.3 lb/hr (worst case for Hour 1) during the typical 5 hour startup. As the calculated 24-hour average shows, potential emissions during startup could be as high as 124.6 lb/hr during the first hour of a 24-hour average during a startup event. Therefore, Progress Energy Florida is requesting an allowable NOx limit of 125 lb/hr. The requested permit language to implement this alternate limit is detailed below.

The applicant requests that the following changes be made to the current permit language:

Excess Emissions

{Permitting note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of an NSPS or NESHAP provision.}

A.29.
Excess emissions resulting from startup, shutdown, fuel switching, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period, with the following exception: during any 24-hour period in which an hour of start-up or shutdown occurs, the following alternative emission limits shall apply on the basis of a 24-hour rolling average:

a) An alternative NO_X limit of 125 lb/hr shall apply if natural gas is the exclusively fired fuel;
b) An alternative NO_X limit (lb/hr) shall apply for fuel oil firing; the limit shall be determined once the facility has established an operating history on fuel oil.

Deleted: Excess emissions resulting from startup, shutdown, or malfunction of any emissions unit shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. See Appendix PSS-1, Protocol for Start-up and Shutdown.

In addition, excess emissions resulting from a combustor tuning session shall be permitted provided the tuning session is performed in accordance with the manufacturer's specifications and in no case shall exceed 72 hours in any calendar year. A "tuning session" would occur after a combustor change-out, a repair to a combustor, or as required to maintain compliance. Prior to performing any tuning session, the permittee shall provide the Compliance Authority with an advance notice that details the activity and proposed tuning schedule. The notice may be made by telephone, facsimile transmittal, or electronic mail.

The 24-hour averages shall be based on all available data excluding calibration data.
[Rule 62-210.700(1), F.A.C.]

Deleted: {Permitting Note: Once a written agreement between the Permittee and the Department's Southwest District has been acquired approving a "Protocol for Start-up and Shutdown", the protocol is automatically incorporated by reference and is a part of the permit. The protocol shall be used where applicable and where there is/are conflict(s) with the rule.}¶

Continuous Monitoring Requirements

A.37. The permittee shall have installed and shall calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxide emissions from this source. The continuous emissions monitoring systems must comply with the certification and quality assurance, and other applicable requirements from 40 CFR 60, Appendix B, Performance Specification 2 (July 2, 1992) or 40 CFR 75, whichever is more stringent. Periods of startup, shutdown, malfunction, and fuel switching shall be monitored, recorded, and reported as excess emissions when emission levels exceed the standards in specific conditions **A.8. – A.11 and A.29,** following the format of 40 CFR 60.7 (1997 version).
[AC53-214903; PSD-FL-190]

Deleted: .

Date	Hour	NOx (ppmvd @ 15% O2)	MW	NOx (lb/MMBtu)	Heat Input (MMBtu/hr)	NOx (lb/hr)	Hours Off	24 hr avg w/SU data
04/15/01	13	32.9	17.8	0.121	431.8	52.2	13.0	88.99311
04/15/01	14	48.6	16.1	0.179	580.6	103.9		
04/15/01	15	13.0	79.0	0.048	1,098.1	52.7		
04/15/01	16	7.1	115.1	0.026	1,348.1	35.1		
04/15/01	17	8.2	134.0	0.030	1,503.4	45.1		
05/10/01	12	67.9	5.1	0.250	431.3	107.8	59.0	101.4191
05/10/01	13	80.0	0.0	0.295	450.2	132.8		
05/10/01	14	70.6	7.3	0.260	499.5	129.9		
05/10/01	15	37.9	59.9	0.140	966.1	135.3		
05/10/01	16	14.7	133.7	0.054	1,509.0	81.5		
10/18/01	11	15.8	25.7	0.058	410.1	23.8	131.0	93.53845
10/18/01	12	63.2	4.8	0.233	547.2	127.5		
10/18/01	13	56.8	25.9	0.209	721.9	150.9		
10/18/01	14	10.4	72.7	0.038	1,106.9	42.1		
10/18/01	15	10.2	122.5	0.038	1,420.7	53.9		
01/08/02	21	18.2	25.3	0.067	425.1	28.5	32.0	97.5878
01/08/02	22	75.7	6.0	0.279	548.4	153.0		
01/08/02	23	66.6	21.4	0.245	652.5	159.9		
01/09/02	0	22.9	79.2	0.085	1,120.7	95.3		
01/09/02	1	11.3	120.8	0.042	1,396.7	58.7		
03/27/02	21	29.7	25.6	0.109	792.0	86.3	455.0	118.3315
03/27/02	22	63.8	5.8	0.235	1,268.1	298.0		
03/27/02	23	76.5	11.4	0.282	1,268.1	357.6		
03/28/02	0	50.7	43.3	0.187	1,121.5	209.7		
03/28/02	1	10.0	77.0	0.037	1,121.5	41.5		
01/03/03	2	47.9	25.3	0.177	426.9	75.6	18.0	94.17903
01/03/03	3	63.2	10.5	0.233	559.8	130.4		
01/03/03	4	46.7	37.6	0.172	801.5	137.9		
01/03/03	5	9.0	74.0	0.033	1,098.3	36.2		
01/03/03	6	8.1	76.8	0.030	1,114.6	33.4		
01/11/03	12	42.4	25.3	0.156	427.3	66.7	26.0	103.2096
01/11/03	13	80.1	11.5	0.295	558.3	164.7		
01/11/03	14	85.7	12.0	0.316	545.4	172.3		
01/11/03	15	63.6	29.1	0.234	696.7	163.0		
01/11/03	16	15.9	74.3	0.059	1,075.4	63.5		
01/21/03	16	58.1	25.7	0.214	411.4	88.0	14.0	102.7174
01/21/03	17	77.5	8.1	0.286	498.8	142.7		
01/21/03	18	48.3	22.9	0.178	650.1	115.7		
01/21/03	19	64.0	33.6	0.236	739.0	174.4		
01/21/03	20	26.1	66.7	0.096	1,016.4	97.6		
06/14/03	10	37.1	25.8	0.137	508.2	69.6	10.0	103.3305
06/14/03	11	57.1	9.7	0.210	639.5	134.3		
06/14/03	12	58.1	15.1	0.214	682.6	146.1		
06/14/03	13	45.8	29.2	0.169	794.3	134.2		
06/14/03	14	41.9	47.4	0.154	967.2	148.9		

Date	Hour	NOx	MW	NOx	Heat Input	NOx	Hours Off	24 hr avg w/SU data
09/16/03	2	41.4	23.5	0.153	518.2	79.3	8.0	96.72122
09/16/03	3	58.0	12.8	0.214	666.4	142.6		
09/16/03	4	31.9	23.4	0.117	775.4	90.7		
09/16/03	5	30.2	59.1	0.111	1,061.2	117.8		
09/16/03	6	7.5	129.3	0.028	1,573.0	44.1		
12/05/03	10	28.2	25.4	0.104	501.2	52.1	205.0	88.61208
12/05/03	11	38.8	8.9	0.143	614.3	87.8		
12/05/03	12	27.1	17.9	0.100	697.6	69.8		
12/05/03	13	12.7	49.6	0.047	956.6	45.0		
12/05/03	14	6.0	82.8	0.022	1,147.7	25.2		
12/15/03	8	3.4	25.3	0.139	517.6	71.9	68.0	88.47964
12/15/03	9	25.5	9.5	0.094	631.7	59.4		
12/15/03	10	26.5	19.3	0.098	726.4	71.2		
12/15/03	11	11.3	46.9	0.042	969.0	40.7		
12/15/03	12	7.3	94.5	0.027	1,240.9	33.5		
01/07/04	3	28.5	25.2	0.105	498.2	52.3	376.0	90.34842
01/07/04	4	42.4	4.1	0.156	563.2	87.9		
01/07/04	5	33.2	5.5	0.122	574.1	70.0		
01/07/04	6	31.6	13.1	0.116	640.1	74.3		
01/07/04	7	12.4	32.2	0.046	804.8	37.1		
03/29/04	7	72.0	9.9	0.265	484.3	128.3	151.0	104.1956
03/29/04	8	82.8	11.6	0.305	571.1	174.2		
03/29/04	9	75.9	16.8	0.280	619.3	173.4		
03/29/04	10	40.1	55.2	0.148	940.3	139.2		
03/29/04	11	8.6	92.5	0.032	1,213.6	38.8		
04/22/04	7	30.9	17.2	0.114	490.2	55.9	244.0	99.80259
04/22/04	8	64.4	6.9	0.237	544.1	129.0		
04/22/04	9	72.3	11.9	0.266	614.4	163.4		
04/22/04	10	48.8	42.9	0.180	888.3	159.9		
04/22/04	11	8.4	100.8	0.031	1,300.7	40.3		

High Hr 1	72.0	128.3
High Hr 2	82.8	298.0
High Hr 3	85.7	357.6
High Hr 4	64.0	209.7
High Hr 5	41.9	148.9

24- hour Avg.

1	72.0	128.3
2	82.8	298.0
3	85.7	357.6
4	64.0	209.7
5	41.9	148.9
6	15.0	97.2
7	15.0	97.2
8	15.0	97.2

Date	Hour	NOx	MW	NOx	Heat Input	NOx	Hours Off	24 hr avg w/SU data
9		15.0				97.2		
10		15.0				97.2		
11		15.0				97.2		
12		15.0				97.2		
13		15.0				97.2		
14		15.0				97.2		
15		15.0				97.2		
16		15.0				97.2		
17		15.0				97.2		
18		15.0				97.2		
19		15.0				97.2		
20		15.0				97.2		
21		15.0				97.2		
22		15.0				97.2		
23		15.0				97.2		
24		15.0	26.3			97.2	124.6	
1		15.0	23.9			97.2	123.3	
2		15.0	21.1			97.2	114.9	
3		15.0	18.2			97.2	104.0	
4		15.0	16.1			97.2	99.4	
5		15.0	15.0			97.2	97.2	
6		15.0	15.0			97.2	97.2	
7		15.0	15.0			97.2	97.2	
8		15.0	15.0			97.2	97.2	
9		15.0	15.0			97.2	97.2	
10		15.0	15.0			97.2	97.2	
11		15.0	15.0			97.2	97.2	
12		15.0	15.0			97.2	97.2	

Are these all startups?

Date	Hour	NOx (ppmvd @ 15% O2)	MW	NOx (lb/MMBtu)	Heat Input (MMBtu/hr)	NOx (lb/hr)	Hours Off
04/15/01	13	32.9	17.8	0.121	431.8	52.2	13.0
04/15/01	14	48.6	16.1	0.179	580.6	103.9	
04/15/01	15	13.0	79.0	0.048	1,098.1	52.7	
04/15/01	16	7.1	115.1	0.026	1,348.1	35.1	
04/15/01	17	8.2	134.0	0.030	1,503.4	45.1	
05/10/01	12	67.9	5.1	0.250	431.3	107.8	59.0
05/10/01	13	80.0	0.0	0.295	450.2	132.8	
05/10/01	14	70.6	7.3	0.260	499.5	129.9	
05/10/01	15	37.9	59.9	0.140	966.1	135.3	
05/10/01	16	14.7	133.7	0.054	1,509.0	81.5	
10/18/01	11	15.8	25.7	0.058	410.1	23.8	131.0
10/18/01	12	63.2	4.8	0.233	547.2	127.5	
10/18/01	13	56.8	25.9	0.209	721.9	150.9	
10/18/01	14	10.4	72.7	0.038	1,106.9	42.1	
10/18/01	15	10.2	122.5	0.038	1,420.7	53.9	
01/08/02	21	18.2	25.3	0.067	425.1	28.5	32.0
01/08/02	22	75.7	6.0	0.279	548.4	153.0	
01/08/02	23	66.6	21.4	0.245	652.5	159.9	
01/09/02	0	22.9	79.2	0.085	1,120.7	95.3	
01/09/02	1	11.3	120.8	0.042	1,396.7	58.7	
03/27/02	21	29.7	25.6	0.109	792.0	86.3	455.0
03/27/02	22	63.8	5.8	0.235	1,268.1	298.0	
03/27/02	23	76.5	11.4	0.282	1,268.1	357.6	
03/28/02	0	50.7	43.3	0.187	1,121.5	209.7	
03/28/02	1	10.0	77.0	0.037	1,121.5	41.5	
01/03/03	2	47.9	25.3	0.177	426.9	75.6	18.0
01/03/03	3	63.2	10.5	0.233	559.8	130.4	
01/03/03	4	46.7	37.6	0.172	801.5	137.9	
01/03/03	5	9.0	74.0	0.033	1,098.3	36.2	
01/03/03	6	8.1	76.8	0.030	1,114.6	33.4	
01/11/03	12	42.4	25.3	0.156	427.3	66.7	26.0
01/11/03	13	80.1	11.5	0.295	558.3	164.7	
01/11/03	14	85.7	12.0	0.316	545.4	172.3	
01/11/03	15	63.6	29.1	0.234	696.7	163.0	
01/11/03	16	15.9	74.3	0.059	1,075.4	63.5	
01/21/03	16	58.1	25.7	0.214	411.4	88.0	14.0
01/21/03	17	77.5	8.1	0.286	498.8	142.7	
01/21/03	18	48.3	22.9	0.178	650.1	115.7	
01/21/03	19	64.0	33.6	0.236	739.0	174.4	
01/21/03	20	26.1	66.7	0.096	1,016.4	97.6	
06/14/03	10	37.1	25.8	0.137	508.2	69.6	10.0
06/14/03	11	57.1	9.7	0.210	639.5	134.3	
06/14/03	12	58.1	15.1	0.214	682.6	146.1	
06/14/03	13	45.8	29.2	0.169	794.3	134.2	
06/14/03	14	41.9	47.4	0.154	967.2	148.9	
09/16/03	2	41.4	23.5	0.153	518.2	79.3	8.0

Date	Hour	NOx	MW	NOx	Heat Input	NOx	Hours Off
09/16/03	3	58.0	12.8	0.214	666.4	142.6	
09/16/03	4	31.9	23.4	0.117	775.4	90.7	
09/16/03	5	30.2	59.1	0.111	1,061.2	117.8	
09/16/03	6	7.5	129.3	0.028	1,573.0	44.1	
12/05/03	10	28.2	25.4	0.104	501.2	52.1	205.0
12/05/03	11	38.8	8.9	0.143	614.3	87.8	
12/05/03	12	27.1	17.9	0.100	697.6	69.8	
12/05/03	13	12.7	49.6	0.047	956.6	45.0	
12/05/03	14	6.0	82.8	0.022	1,147.7	25.2	
12/15/03	8	3.4	25.3	0.139	517.6	71.9	68.0
12/15/03	9	25.5	9.5	0.094	631.7	59.4	
12/15/03	10	26.5	19.3	0.098	726.4	71.2	
12/15/03	11	11.3	46.9	0.042	969.0	40.7	
12/15/03	12	7.3	94.5	0.027	1,240.9	33.5	
01/07/04	3	28.5	25.2	0.105	498.2	52.3	376.0
01/07/04	4	42.4	4.1	0.156	563.2	87.9	
01/07/04	5	33.2	5.5	0.122	574.1	70.0	
01/07/04	6	31.6	13.1	0.116	640.1	74.3	
01/07/04	7	12.4	32.2	0.046	804.8	37.1	
03/29/04	7	72.0	9.9	0.265	484.3	128.3	151.0
03/29/04	8	82.8	11.6	0.305	571.1	174.2	
03/29/04	9	75.9	16.8	0.280	619.3	173.4	
03/29/04	10	40.1	55.2	0.148	940.3	139.2	
03/29/04	11	8.6	92.5	0.032	1,213.6	38.8	
04/22/04	7	30.9	17.2	0.114	490.2	55.9	244.0
04/22/04	8	64.4	6.9	0.237	544.1	129.0	
04/22/04	9	72.3	11.9	0.266	614.4	163.4	
04/22/04	10	48.8	42.9	0.180	888.3	159.9	
04/22/04	11	8.4	100.8	0.031	1,300.7	40.3	

High Hr 1	72.0	128.3
High Hr 2	82.8	298.0
High Hr 3	85.7	357.6
High Hr 4	64.0	209.7
High Hr 5	41.9	148.9

24- hour Avg.

1	72.0	128.3
2	82.8	298.0
3	85.7	357.6
4	64.0	209.7
5	41.9	148.9
6	15.0	97.2
7	15.0	97.2
8	15.0	97.2
9	15.0	97.2
10	15.0	97.2
11	15.0	97.2
12	15.0	97.2

Date	Hour	NOx		MW	NOx	Heat Input	NOx	Hours Off
13			15.0				97.2	
14			15.0				97.2	
15			15.0				97.2	
16			15.0				97.2	
17			15.0				97.2	
18			15.0				97.2	
19			15.0				97.2	
20			15.0				97.2	
21			15.0				97.2	
22			15.0				97.2	
23			15.0				97.2	
24			15.0	26.3			97.2	124.6
1			15.0	23.9			97.2	123.3
2			15.0	21.1			97.2	114.9
3			15.0	18.2			97.2	104.0
4			15.0	16.1			97.2	99.4
5			15.0	15.0			97.2	97.2
6			15.0	15.0			97.2	97.2
7			15.0	15.0			97.2	97.2
8			15.0	15.0			97.2	97.2
9			15.0	15.0			97.2	97.2
10			15.0	15.0			97.2	97.2
11			15.0	15.0			97.2	97.2
12			15.0	15.0			97.2	97.2