



August 29, 2008

Mr. Jeff Koerner  
Professional Engineer Administrator  
Florida Department of Environmental Protection  
Bureau of Air Regulation – New Source Review Section  
111 South Magnolia Drive, Suite 4  
Tallahassee, Florida 32301

Via FedEx  
**RECEIVED**  
SEP 02 2008  
BUREAU OF AIR REGULATION

**Re: Seminole Electric Cooperative, Inc. - Midulla Generating Station**  
**~~Title V Air Operation FINAL Permit No.: 0490340-006-AV~~**  
**~~Air Construction Permit PSD-FL-344~~**  
**Request for Permit Exemption - Heat Input Testing**  
**- 0490340-013-AC**

Dear Mr. Koerner:

With reference to our recent meeting in Tallahassee on August 26<sup>th</sup>, Seminole Electric Cooperative, Inc. (Seminole) requests a temporary exemption from air construction permitting pursuant to Rule 62-4.040(1)(b), F.A.C. to allow testing of the Midulla Generating Station (MGS) simple-cycle Pratt & Whitney (P&W) FT8-3 TwinPac combustion turbine (CT) peaking units at higher heat input rates than currently authorized by Air Construction Permit No. PSD-FL-344 and Title V Air Operation Permit No. 0490340-006-AV.

As indicated in our August 12<sup>th</sup> correspondence to the Department, operational data for the MGS simple cycle CTs indicates that the current permitted maximum heat inputs, which were based on P&W projections, underestimate actual fuel consumption of the units by 6.2% for natural gas firing, and by 5.0% for distillate oil firing. Accordingly, Seminole requests an exemption from permitting to allow testing of the P&W FT8-3 TwinPac peaking units at heat input rates up to of 676.2 MMBtu/hr and 606.6 MMBtu/hr higher heating value (HHV) per TwinPac for gas and oil firing, respectively.

Seminole expects that testing at the higher heat input rates will demonstrate continued compliance with all of the current emission limitations and standards specified by Air Construction Permit No. PSD-FL-344 and Final Permit No. 0490340-006-AV. Actual maximum hourly mass emission rates at base load, assuming a proportional relationship with heat input, are projected to increase by approximately 6.2 and 5.0 percent for natural gas and distillate oil firing, respectively.

The MGS simple cycle CTs commenced commercial operation in December 2006. A summary of the annual emissions for 2006 and 2007 based on Annual Operating Report (AOR) data is provided on Table 1 attached. Also shown on Table 1 are the heat input rates that occurred during the compliance tests compared to the maximum heat input levels based

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on the latest P&W heat input curves. This comparison indicates that heat input rates during the compliance stack tests had input rates within 90 percent of base load capacity for all natural gas and oil firing tests.

Your expeditious processing of this air permitting exemption request is appreciated. If you have any questions or need additional information, please contact me at (813) 739-1219 or by email at [JRamirez@seminole-electric.com](mailto:JRamirez@seminole-electric.com).

Sincerely,

A handwritten signature in black ink, appearing to read "Juan Ramirez". The signature is fluid and cursive, with a large initial "J" and "R".

Juan Ramirez  
Senior Environmental Engineer

Attachment

cc: Mr. Nedin Bahtic  
FDEP – Southwest District

**Table 1. Seminole Electric Cooperative, Inc.  
Midulla Generating Station  
Pratt & Whitney Simple-Cycle TwinPac Combustion Turbines**

Year	Parameter	Units	EU ID 005 Unit 4 CT-4A,4B	EU ID 006 Unit 5 CT-5A,5B	EU ID 007 Unit 6 CT-6A,6B	EU ID 008 Unit 7 CT-7A,7B	EU ID 009 Unit 8 CT-8A,8B	Totals
2006	Operating Hours	hrs/yr	266	241	250	285	263	1,306
	CO	tons/yr	1.63	1.43	1.37	1.50	1.49	7.42
	NO <sub>x</sub>	tons/yr	8.13	7.54	8.31	9.66	8.53	42.16
	PM/PM <sub>10</sub>	tons/yr	1.00	0.93	1.05	1.22	1.07	5.26
	SO <sub>2</sub>	tons/yr	0.10	0.10	0.12	0.14	0.12	0.57
	VOC	tons/yr	0.70	0.63	0.64	0.72	0.68	3.38
2007	Operating Hours	hrs/yr	1,561	1,384	1,463	1,729	1,249	7,386
	CO	tons/yr	6.25	3.93	5.87	6.01	5.85	27.92
	NO <sub>x</sub>	tons/yr	23.10	21.25	21.40	24.36	17.19	107.30
	PM/PM <sub>10</sub>	tons/yr	4.82	4.28	4.52	5.36	3.87	22.85
	SO <sub>2</sub>	tons/yr	0.20	0.21	0.23	0.29	0.20	1.13
	VOC	tons/yr	5.83	1.54	11.36	3.51	3.20	25.44
2007	Stack Test Data - Gas Average Temperature	°F	89.0	84.1	80.3	89.7	84.3	
	Heat Input	MMBtu/hr, HHV	600.6	611.6	608.5	595.7	604.0	N/A
	Stack Test Data - Oil Average Temperature	°F	91.4	91.2	87.3	80.9	88.9	
	Heat Input - Oil	MMBtu/hr, HHV	564.0	562.7	563.6	576.3	568.9	N/A
	Base Load Heat Input (New P&W Curves) Heat Input - Gas	MMBtu/hr, HHV	630.0	636.7	642.0	629.0	636.5	N/A
	Heat Input - Oil	MMBtu/hr, HHV	597.7	598.0	603.5	612.7	601.4	N/A
	% of Base Load - Gas	%	95.3	96.1	94.8	94.7	94.9	N/A
	% of Base Load - Oil	%	94.4	94.1	93.4	94.1	94.6	N/A

Sources: ECT, 2008.  
SECI, 2008.