



March 19, 2002

Mr. Scott M. Sheplak, P.E.  
FDEP-Title V Section  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

RE: Payne Creek Generating Station  
DEP File No. 0490340-002-AV

Dear Mr. Sheplak:

In response to your recent request for additional information , attached please find copies of the Responsible Official Statement, Compliance Certification, and the natural gas compliance test results for the Payne Creek Generating Station.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mike Roddy', with a long horizontal stroke extending to the right.

Mike Roddy  
Senior Environmental Engineer

cc: Ed Svec-FDEP Title V Section  
Tom Davis-ECT  
Bill Thomas-FDEP SWD

RECEIVED

MAR 22 2002

BUREAU OF AIR REGULATION

**Owner/Authorized Representative or Responsible Official**

1. Name and Title of Owner/Authorized Representative or Responsible Official: <u>Michael P. Opalinski, Director, Environmental &amp; Engineering Services</u>
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: <u>Seminole Electric Cooperative, Inc</u> Street Address: <u>16313 N Dale Mabry Hwy</u> City: <u>Tampa</u> State: <u>FL</u> Zip Code: <u>33618</u>
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: <u>(813 ) 963-0994</u> - Fax: <u>(813 ) 264-7906</u>
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [ ], if so) or the responsible official (check here [ X ], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i> <u>M.P. Opalinski</u> <u>3/19/02</u> Signature Date

\* Attach letter of authorization if not currently on file.

## **Compliance Report and Plan**

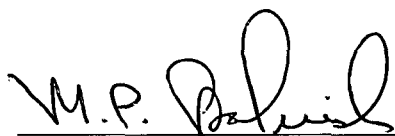
On the date specified below, the facility and emission units are in compliance with the applicable regulations identified in the application, including the requirements of permit PSD-FL-214A regarding operation on gas. The attached emission tests verify compliance when operating on gas. Emissions testing on fuel oil is scheduled for the fall of 2002. Once completed, and prior to regular operation on oil, Seminole will submit the test report showing compliance.

Compliance with the conditions set forth in the operation permit will be certified on an annual basis (by March 1 for the prior calendar year) by the submittal of the Statement of Compliance DEP Form No. 62-213.900(7), F.A.C.

We understand that we are responding to a Department request for additional information pursuant to 403.0872(2)(c).

## **Compliance Certification**

I, the undersigned, am the responsible official as defined in Chapter 62-210.200(247), F.A.C., of the Title V source for which this report is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate and complete.

  
\_\_\_\_\_

Michael P. Opalinski  
Director, Environmental & Engineering Services

3/19/02  
Date

**Table 3-1. Emissions Test Results - Payne Creek**  
**CT - 1 Gas Fired**  
**3-hour Tests at Baseload**  
**Date: 12/10/01**

Parameter	Units	Run #1	Run #2	Run #3	Average	Emission Limit
Start Time:		15:35	17:04	18:23		
Stop Time:		16:35	18:04	19:23		
<b>Operating Parameters:</b>						
Load:	MW	167.2	168.6	170.5	168.8	
Fuel Flow:	KSCFH	1785.6	1796.8	1812.9	1798.4	
Gross Heating Value:	Btu/scf	1026.0	1026.0	1026.0	1026.0	
Gross Heat Input:	MMBtu/hr	1832.0	1843.5	1860.0	1845.2	
Volumetric Flow (Method 19 based)(a)	dsfm	779570	780084	787073	782242	
NH3 Injection Rate	GPM	22.99	22.28	22.05	22.44	
Flue Gas Measured Moisture (b)	%V, wet	7.80%	7.80%	7.80%	7.80%	
<b>Ambient Data:</b>						
Dry Bulb Temp.	degrees F	78.0	76.0	73.0	75.7	
Wet Bulb Temp.	degrees F	66.0	65.0	62.0	64.3	
Barometric Pressure:	"Hg	29.80	29.80	29.90	29.83	
Specific Humidity (Hobs):	# H2O/# DA	0.01094	0.01070	0.00936	0.01033	
<b>Emissions Data:</b>						
Oxygen (O2)	%V, dry	13.77	13.73	13.73	13.74	
Carbon Dioxide (CO2) (d)	%V, dry	3	3	3	3	
Nitrogen Oxides (NOx)	ppmV, dry	5.2	5.4	5.2	5.3	
	lb/MMBtu	0.01588	0.01649	0.01579	0.01606	
	ppmV@15% O2	4.3	4.5	4.3	4.4	12
	ppmV@15% O2 & ISO Conditions	4.5	4.6	4.4	4.5	108
	lb/hr (a)	29.1	30.4	29.4	29.6	68
Carbon Monoxide (CO)	ppmV, dry	0.0	0.0	0.0	0.0	20
	lb/MMBtu	0.00000	0.00000	0.00004	0.00001	
	ppmV@15% O2	0.0	0.0	0.0	0.0	
	lb/hr (a)	0.0	0.0	0.1	0.0	71
Total Sulphur (c)	ppm-mol (in fuel)	0.4	0.3	0.4	0.4	
Sulfur Dioxide (SO2) (c)	ppmVd (in flue gas)	0.016	0.012	0.016	0.015	
	lb/MMBtu	0.000068	0.000051	0.000067	0.00006	
	ppmV@15% O2	0.013	0.010	0.013	0.012	
	lb/hr (a)	0.124	0.093	0.126	0.114	5
Sulfuric Acid Mist & SO3(f)	lb/hr	0	0	0	0	1
Total Hydrocarbons (THC)	ppmCH4	0.0	0.0	0.0	0.0	
Methane in Sample	ppmCH4	0.0	0.0	0.0	0.0	
Ethane in Sample	ppmC2H6	0.0	0.0	0.0	0.0	
Total Non-Reactives to Subtract for VOC	ppmCH4	0.0	0.0	0.0	0.0	
Volatile Organic Compounds (VOC) (e)	ppmCH4	0.0	0.0	0.0	0.0	5
(non-methane, non-ethane)	ppmC3H8, dry	0.0	0.0	0.0	0.0	
	lb/MMBtu	0.00000	0.00000	0.00000	0.00000	
	ppmCH4@15% O2	0.0	0.0	0.0	0.0	
	lbCH4/hr (a)	0.0	0.0	0.0	0.0	10
Visible Emissions Results (EPA M-9)		0.0	0.0	0.0	0.0	10

Notes:

Fuel Factor (Fd) = 8710scf@0%O2/MMBtu from 40CFR60 Appendix A, Method 19

(a) - Mass Emission Rates Calculated using the Volumetric Flowrate determined from the Method 19 approach.

(b) - Moisture determined gravimetrically from M8 runs

(c) - Sulphur/Sulfur Dioxide determined from fuel analysis

(d) - CO2 determined from fyrite analysis

(e) - VOC determined from GC-FID M18 analysis - all values non-detect

**Table 3-2. Emissions Test Results - Payne Creek**  
**CT - 2 Gas Fired**  
**3-1hour Tests at Baseload**  
**Date: 12/10/01**

Parameter	Units	Run #1	Run #2	Run #3	Average	Emission Limit
Start Time:		15:35	17:04	18:23		
Stop Time:		16:35	18:04	19:23		
<b>Operating Parameters:</b>						
Load:	MW	168.0	170.8	172.3	170.4	
Fuel Flow:	KSCFH	1755.0	1768.0	1780.0	1767.7	
Gross Heating Value:	Btu/scf	1026.0	1026.0	1026.0	1026.0	
Gross Heat Input:	MMBtu/hr	1800.6	1814.0	1826.3	1813.6	
Volumetric Flow (Method 19 based)(a)	dscfm	761936	767580	772790	767435	
NH3 Injection Rate	GPM	23.24	21.79	22.72	22.58	
Flue Gas Calculated Moisture(b)	%V, wet	7.70%	7.80%	7.90%	7.80%	
<b>Ambient Data:</b>						
Dry Bulb Temp.	degrees F	78	76	73	75.7	
Wet Bulb Temp.	degrees F	66	65	62	64.3	
Barometric Pressure:	"Hg	29.8	29.8	29.9	29.83	
Specific Humidity (Hobs):	# H2O/# DA	0.01094	0.0107	0.00936	0.01033	
<b>Emissions Data:</b>						
Oxygen (O2)	%V, dry	13.73	13.73	13.73	13.73	
Carbon Dioxide (CO2) (d)	%V, dry	3	3	3	3	
Nitrogen Oxides (NOx)	ppmV, dry	6.0	5.8	6.5	6.1	
	lb/MMBtu	0.01808	0.01764	0.01970	0.01847	
	ppmV@15% O2	4.9	4.8	5.3	5.0	12
	ppmV@15% O2 & ISO Conditions	5.1	5.0	5.4	5.2	108
Carbon Monoxide (CO)	lb/hr (a)	32.6	32.0	36.0	33.5	68
	ppmV, dry	0.0	0.0	0.0	0.0	20
	lb/MMBtu	0.00000	0.00000	0.00004	0.00001	
	ppmV@15% O2	0.0	0.0	0.0	0.0	
Total Sulphur (c)	lb/hr (a)	0.0	0.0	0.1	0.0	
	ppm-mol (in fuel)	0.4	0.3	0.4	0.4	
Sulfur Dioxide (SO2) (e)	ppmVd (in flue gas)	0.016	0.012	0.016	0.015	
	lb/MMBtu	0.000067	0.000051	0.000067	0.00006	
	ppmV@15%O2	0.013	0.010	0.013	0.012	
	lb/hr (a)	0.121	0.092	0.123	0.112	5
Sulfuric Acid Mist & SO3 (f)	lb/hr	0	0	0	0	1
Total Hydrocarbons (THC)	ppmCH4	0.0	0.0	0.0	0.0	
Methane in Sample	ppmCH4	0.0	0.0	0.0	0.0	
Ethane in Sample	ppmC2H6	0.0	0.0	0.0	0.0	
Total Non-Reactives to Subtract for VOC	ppmCH4	0.0	0.0	0.0	0.0	
Volatile Organic Compounds (VOC) (e) (non-methane, non-ethane)	ppmCH4	0.0	0.0	0.0	0.0	5
	ppmC3H8, dry	0.0	0.0	0.0	0.0	
	lb/MMBtu	0.00000	0.00000	0.00000	0.00000	
	ppmCH4@15%O2	0.0	0.0	0.0	0.0	
Visible Emissions Results (EPA M-9)	lbCH4/hr (a)	0.0	0.0	0.0	0.0	10
		0.0	0.0	0.0	0.0	10

**Notes:**

Fuel Factor (Fd) = 8710scf@0%O2/MMBtu from 40CFR60 Appendix A, Method 19

(a) - Mass Emission Rates Calculated using the Volumetric Flowrate determined from the Method 19 approach.

(b) - Moisture determined gravimetrically from M8 runs

(c) - Sulphur/Sulfur Dioxide determined from fuel analysis

(d) - CO2 determined from fyrite analysis

(e) - VOC determined from GC-FID M18 analysis - all values non-detect

(f) - See Table 3-4 for details and run times

Table 3-3.

Summary of Emissions Testing Data - Combined SO<sub>3</sub> & H<sub>2</sub>SO<sub>4</sub>  
 Payne Creek  
 Bowling Green Fla

Base Load - Unit 1

Parameter	Units	Run #		AVERAGE	
		1	2		
		Date:	12/11/01	12/11/01	
		Start Time:	3:40	6:58	
		Stop Time:	6:49	10:06	
<b>Sampling Train &amp; Analytical Parameters:</b>					
<b>SO<sub>3</sub>/H<sub>2</sub>SO<sub>4</sub> Titration Data:</b>					
Normality of Barium Perchlorate Solution:	meq/ml	0.0099	0.0099	0.0099	
Volume of Sample Solution:	ml	336.00	262.00	299.00	
Volume of Sample Aliquot:	ml	100.00	100.00	100.00	
Volume of Titrant:	ml	0.00	0.00	0.00	
Volume of Titrant for Blank:	ml	0.00	0.00	0.00	
Total milliequivalents:	meq	0.000	0.000	0.000	
<b>Sampling Train Parameters:</b>					
Metered Volume:	dscf	114.725	116.993	115.859	
Gas Stream Volumetric Flowrate:	dscfm	827988.8	851798.1	839893.4	
Oxygen:	%V, dry	13.8	13.7	13.7	
<b>SO<sub>3</sub>/H<sub>2</sub>SO<sub>4</sub> Emissions Data:</b>					
SO <sub>3</sub> /H <sub>2</sub> SO <sub>4</sub> Concentration:	lb/dscf	0.00E+00	0.00E+00	0.00E+00	
SO <sub>3</sub> /H <sub>2</sub> SO <sub>4</sub> Concentration:	ppmV, dry	0.000	0.000	0.000	
SO <sub>3</sub> /H <sub>2</sub> SO <sub>4</sub> Concentration:	ppmV@15%O <sub>2</sub>	0.000	0.000	0.000	
SO <sub>3</sub> /H <sub>2</sub> SO <sub>4</sub> Mass Emission Rate:	lb/hr	0.00	0.00	0.00	

Table 3-4.

Summary of Emissions Testing Data - Combined SO<sub>3</sub> & H<sub>2</sub>SO<sub>4</sub>  
 Payne Creek  
 Bowling Green Fla

Base Load - Unit 2

Parameter	Units	Run #	1	2	3	AVERAGE
		Date:	12/13/01	12/13/01	12/13/01	
		Start Time:	9:17	1:08	4:52	
		Stop Time:	12:37	4:25	8:05	
<b>Sampling Train &amp; Analytical Parameters:</b>						
<b>SO<sub>3</sub>/H<sub>2</sub>SO<sub>4</sub> Titration Data:</b>						
Normality of Barium Perchlorate Solution:	meq/ml		0.0099	0.0099	0.0099	0.0099
Volume of Sample Solution:	ml		273.00	268.00	281.00	274.00
Volume of Sample Aliquot:	ml		100.00	100.00	100.00	100.00
Volume of Titrant:	ml		0.00	0.00	0.00	0.00
Volume of Titrant for Blank:	ml		0.00	0.00	0.00	0.00
Total milliequivalents:	meq		0.000	0.000	0.000	0.000
<b>Sampling Train Parameters:</b>						
Metered Volume:	dscf		114.732	111.494	114.447	113.113
Gas Stream Volumetric Flowrate:	dscfm		838223.8	846793.2	832251.3	842508.5
Oxygen:	%V, dry		13.8	13.7	13.7	13.7
<b>SO<sub>3</sub>/H<sub>2</sub>SO<sub>4</sub> Emissions Data:</b>						
SO <sub>3</sub> /H <sub>2</sub> SO <sub>4</sub> Concentration:	lb/dscf		0.00E+00	0.00E+00	0.00E+00	0.00E+00
SO <sub>3</sub> /H <sub>2</sub> SO <sub>4</sub> Concentration:	ppmV, dry		0.000	0.000	0.000	0.000
SO <sub>3</sub> /H <sub>2</sub> SO <sub>4</sub> Concentration:	ppmV@15%O <sub>2</sub>		0.000	0.000	0.000	0.000
SO <sub>3</sub> /H <sub>2</sub> SO <sub>4</sub> Mass Emission Rate:	lb/hr		0.00	0.00	0.00	0.00