

21 West Church Street
Jacksonville, Florida 32202-3139

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BUREAU OF AIR REGULATION



November 16, 2001

Mr. Scott M. Sheplak, P.E.
Administrator, Title V Section
Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

ELECTRIC

WATER

SEWER

RE: Brandy Branch Generating Station
Facility ID 0310485

Dear Mr. Sheplak:

In response to your letter dated October 23, 2001, enclosed please find the compliance stack test results for all three Brandy Branch CTs for both gas and oil.

If you have any questions with regard to this matter, please contact me at (904) 665-6247.

Sincerely,

N. Bert Gianazza, P.E.
Environmental Permitting
& Compliance Group

Executive Summary

On June 14 and 15, 2001 Technical Services Incorporated (TSI) conducted air emission testing on Jacksonville Electric Authority's (JEA) combustion turbine number BCT-1 *gas* located at the Brandy Branch Power Park. This test was performed in order to satisfy specific requirements as specified in the State of Florida issued air construction permit number PSD-FL-267 (0310485-001-AC). The following table presents a summary of the test results. All of the test results indicate compliance with the permit requirements.

Parameter	Test Method	Permitted Limit	Test Results	Compliance Status
Oxides of Nitrogen (NOx)	USEPA Method 20	10.5 ppm @ 15% oxygen	7.1 ppm @ 15% oxygen	Pass
Carbon Monoxide (CO)	USEPA Method 10	15 ppm	1 ppm	Pass
Volatile Organic Compounds (VOC)	USEPA Method 25a	2 ppm	0 ppm	Pass
Visible Emissions	USEPA Method 9	10 % opacity	0 % opacity	Pass
Flow	USEPA Method 1,2,3,3a, and 4	N/A	761771 scfm-dry 838163 scfm-wet	N/A
Oxygen	USEPA Method 3a	N/A	13.8 %	N/A

Executive Summary

On October 18, 2001 Technical Services Incorporated (TSI) conducted air emission testing on Jacksonville Electric Authority's (JEA) combustion turbine number BCT-1 located at the Brandy Branch Power Park. This test was performed in order to satisfy specific requirements as specified in the State of Florida issued air construction permit number PSD-FL-267 (0310485-001-AC). The following table presents a summary of the test results. All of the test results indicate compliance with the permit requirements. This test was conducted with the turbine operating at **BASE LOAD** fired with **FUEL OIL**.

Parameter	Test Method	Permitted Limit	Test Results	Compliance Status
Oxides of Nitrogen (NOx)	USEPA Method 20	42 ppm @ 15% oxygen	39.37 ppm @ 15% oxygen	Pass
Carbon Monoxide (CO)	USEPA Method 10	20 ppm and 65.0 lbs/hr	1 ppm and 2.73 lbs/hr	Pass
Volatile Organic Compounds (VOC)	USEPA Method 25a	3.5 ppm and 7.5 lbs/hr	0 ppm and 0.0 lbs/hr	Pass
Visible Emissions	USEPA Method 9	10 % opacity	0 % opacity	Pass
Flow	USEPA Method 1,2,3,3a, and 4	N/A	851119 scfm-dry 953101 scfm-wet	N/A
Oxygen	USEPA Method 3a	N/A	12.7 %	N/A

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Executive Summary

On June 18, 2001 Technical Services Incorporated (TSI) conducted air emission testing on Jacksonville Electric Authority's (JEA) combustion turbine number BCT-2 located at the Brandy Branch Power Park. This test was performed in order to satisfy specific requirements as specified in the State of Florida issued air construction permit number PSD-FL-267 (0310485-001-AC). The following table presents a summary of the test results. All of the test results indicate compliance with the permit requirements. This test was conducted with the turbine operating at **BASE LOAD** fired with **NATURAL GAS**.

Parameter	Test Method	Permitted Limit	Test Results	Compliance Status
Oxides of Nitrogen (NO _x)	USEPA Method 20	10.5 ppm @ 15% oxygen	6.8 ppm @ 15% oxygen	Pass
Carbon Monoxide (CO)	USEPA Method 10	15 ppm	1 ppm	Pass
Volatile Organic Compounds (VOC)	USEPA Method 25a	2 ppm	0 ppm	Pass
Visible Emissions	USEPA Method 9	10 % opacity	0 % opacity	Pass
Flow	USEPA Method 1,2,3,3a, and 4	N/A	821920 scfm-dry 903210 scfm-wet	N/A
Oxygen	USEPA Method 3a	N/A	13.8 %	N/A

Executive Summary

On June 22, 2001 Technical Services Incorporated (TSI) conducted air emission testing on Jacksonville Electric Authority's (JEA) combustion turbine number BCT-2 located at the Brandy Branch Power Park. This test was performed in order to satisfy specific requirements as specified in the State of Florida issued air construction permit number PSD-FL-267 (0310485-001-AC). The following table presents a summary of the test results. All of the test results indicate compliance with the permit requirements. This test was conducted with the turbine operating at **BASE LOAD** fired with **OIL**.

Parameter	Test Method	Permitted Limit	Test Results	Compliance Status
Oxides of Nitrogen (NOx)	USEPA Method 20	42 ppm @ 15% oxygen	31 ppm @ 15% oxygen	Pass
Carbon Monoxide (CO)	USEPA Method 10	20 ppm	<1 ppm	Pass
Volatile Organic Compounds (VOC)	USEPA Method 25a	3.5 ppm	<1 ppm	Pass
Visible Emissions	USEPA Method 9	10 % opacity	0 % opacity	Pass
Flow	USEPA Method 1,2,3,3a, and 4	N/A	711902 scfm-dry 805319 scfm-wet	N/A
Oxygen	USEPA Method 3a	N/A	12.5 %	N/A

Executive Summary

On October 16 - 17, 2001 Technical Services Incorporated (TSI) conducted air emission testing on Jacksonville Electric Authority's (JEA) combustion turbine number BCT-3 located at the Brandy Branch Power Park. This test was performed in order to satisfy specific requirements as specified in the State of Florida issued air construction permit number PSD-FL-267 (0310485-001-AC). The following table presents a summary of the test results. All of the test results indicate compliance with the permit requirements. This test was conducted with the turbine operating at **BASE LOAD** fired with **NATURAL GAS**.

Parameter	Test Method	Permitted Limit	Test Results	Compliance Status
Oxides of Nitrogen (NOx)	USEPA Method 20	10.5 ppm @ 15% oxygen	8.74 ppm @ 15% oxygen	Pass
Carbon Monoxide (CO)	USEPA Method 10	15 ppm and 48.0 lbs/hr	1 ppm and 2.99 lbs/hr	Pass
Volatile Organic Compounds (VOC)	USEPA Method 25a	2 ppm and 4.0 lbs/hr	0.04 ppm and 0.24 lbs/hr	Pass
Visible Emissions	USEPA Method 9	10 % opacity	0 % opacity	Pass
Flow	USEPA Method 1,2,3,3a, and 4	N/A	898964 scfm-dry 965590 scfm-wet	N/A
Oxygen	USEPA Method 3a	N/A	13.8 %	N/A

Executive Summary

On October 15 and 16, 2001 Technical Services Incorporated (TSI) conducted air emission testing on Jacksonville Electric Authority's (JEA) combustion turbine number BCT-3 located at the Brandy Branch Power Park. This test was performed in order to satisfy specific requirements as specified in the State of Florida issued air construction permit number PSD-FL-267 (0310485-001-AC). The following table presents a summary of the test results. All of the test results indicate compliance with the permit requirements. This test was conducted with the turbine operating at **BASE LOAD** fired with **FUEL OIL**.

Parameter	Test Method	Permitted Limit	Test Results	Compliance Status
Oxides of Nitrogen (NOx)	USEPA Method 20	42 ppm @ 15% oxygen	35.97 ppm @ 15% oxygen	Pass
Carbon Monoxide (CO)	USEPA Method 10	20 ppm and 65.0 lbs/hr	1 ppm and 2.66 lbs/hr	Pass
Volatile Organic Compounds (VOC)	USEPA Method 25a	3.5 ppm and 7.5 lbs/hr	0 ppm and 0.0 lbs/hr	Pass
Visible Emissions	USEPA Method 9	10 % opacity	0 % opacity	Pass
Flow	USEPA Method 1,2,3,3a, and 4	N/A	890170 scfm-dry 983613 scfm-wet	N/A
Oxygen	USEPA Method 3a	N/A	12.6 %	N/A