

Part 70 Operating Permit Amendment

Permit Amendment No.: 2676-095-0071-V-01-7 **Effective Date:**

Facility Name: **The Procter & Gamble Paper Manufacturing Company**

Facility Address: 512 Liberty Expressway Southeast
Albany, Georgia 31705-4147 (Dougherty County)

Mailing Address: P.O. Box 1747
Albany, Georgia 31702-1747

Parent/Holding Company: The Procter & Gamble Paper Products Company

Facility AIRS Number: 04-13-095-00071

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Georgia Rules for Air Quality Control, Chapter 391-3-1, adopted pursuant to and in effect under the Act, the Permittee described above is issued a construction permit for:

Modification on the 216 million Btu per hour Waste Fuel Boiler (Source Code: B002) to conduct repair and maintenance activities, so that this equipment is able to operate at its full rated capacity on a consistent basis.

This Permit Amendment shall also serve as a final amendment to the Part 70 Permit unless objected to by the U.S. EPA or withdrawn by the Division. The Division will issue a letter when this Operating Permit amendment is finalized.

This Permit Amendment is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Permit Amendment and Permit No. 2676-095-0071-V-01-0. Unless modified or revoked, this Permit Amendment expires upon issuance of the next Part 70 Permit for this source.

This Permit Amendment may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in Application No. 17242 dated February 1, 2007; any other applications upon which this Permit Amendment or Permit No. 2676-095-0071-V-01-0 are based; supporting data entered therein or attached thereto; or any subsequent submittal or supporting data; or for any alterations affecting the emissions from this source.

This Permit Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **11** pages.

Director
Environmental Protection Division

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PART 1.0 FACILITY DESCRIPTION

1.3 Process Description of Modification

Application No. 17242 is processed as a significant modification with construction because the proposed modification will require PSD/NSR review. Nitrogen Oxides (NO_x) emissions from this modification will exceed the significant threshold of 40 tons per year.

Application No. 17242 is being submitted to modify the Waste Fuel Boiler No. 2 (Source Code: B002) at the Albany, Georgia Plant. This 216 million Btu per hour boiler is permitted to burn fuel oil and biomass (wood waste, peanut hull, pecan hull, fines, plastic, and agricultural refuse). Particulate Matter (PM) emissions from this boiler are currently controlled by a wet electrostatic precipitator (APCD No. B002ESP). The proposed project will allow Boiler 2 to operate at its full rated capacity on a consistent basis. Boiler 2, installed in 1981, has been experiencing reliability and capacity derating problems in the recent years due to aging. This Boiler 2 project will consist of a major upgrade of the overfire air system, controls and instrumentation, induced draft fan, the bottom ash handling system, and the fuel delivery system. The objective of the proposed Boiler 2 upgrade project is to conduct the repair and maintenance activities necessary to allow the operation of the boiler at its full rated capacity on a consistent basis.

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PART 3.0 REQUIREMENTS FOR EMISSION UNITS

Note: Except where an applicable requirement specifically states otherwise, the averaging times of any of the Emissions Limitations or Standards included in this permit are tied to or based on the run time(s) specified for the applicable reference test method(s) or procedures required for demonstrating compliance.

3.1.1 Modified Emission Units

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
B002	Boiler No. 2 Steam Plant 216 10 ⁶ Btu/hr boiler	40 CFR 52.21, 391-3-1-.02(2)(d), 391-3-1-.02(2)(g)	3.2.1, 3.3.10, <u>3.3.11</u> , <u>3.3.17</u> , <u>3.3.18</u> , <u>3.3.19</u> , <u>3.3.20</u> , <u>3.3.21</u> , <u>3.3.22</u> , 3.4.1, 3.4.4, 3.5.2, <u>3.5.4</u> , <u>4.2.3</u> , <u>4.2.5</u> , <u>4.2.7</u> , <u>4.2.8</u> , <u>5.2.2</u> , <u>5.2.3</u> , <u>5.2.6</u> , <u>5.2.7</u> , <u>5.2.8</u> , 6.1.7, 6.2.2, 6.2.5, <u>6.2.14</u>	B002ESP	Wet Electrostatic Precipitator

* Generally applicable requirements contained in this permit may also apply to emission units listed above.

3.3 Equipment Federal Rule Standards

3.3.11 The Permittee shall not discharge or cause the discharge into the atmosphere from Boiler B002, any emissions, which contain NO_x in excess of 0.28 pounds per million Btu heat input, for any 30 consecutive day period.
[BACT, 40 CFR 52.21]

3.3.17 The Permittee shall not discharge or cause the discharge into the atmosphere from Boiler B002, when firing fuel oil, any emissions which:
[PSD Avoidance, 40 CFR 52.21]

- a. Contain PM in excess of 0.024 pounds per million Btu heat input.
- b. Contain CO in excess of 0.0363 pounds per million Btu heat input.
- c. Contain VOCs in excess of 0.0015 pounds per million Btu heat input.

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- 3.3.18 The Permittee shall not discharge or cause the discharge into the atmosphere from Boiler B002, when firing any solid fuels listed in Table 3.2.a, any emissions which:
[PSD Avoidance, 40 CFR 52.21]
- a. Contain PM in excess of 0.03 pounds per million Btu heat input.
 - b. Contain CO in excess of 0.5 pounds per million Btu heat input.
 - c. Contain VOCs in excess of 0.017 pounds per million Btu heat input.
 - d. Contain SO₂ in excess of 0.025 pounds per million Btu heat input.
- 3.3.19 The Permittee shall not combust more than 2,340,000 gallons of fuel oil in Boiler B002 during any 12 consecutive month period.
[PSD Avoidance, 40 CFR 52.21]
- 3.3.20 The Permittee shall use the Overfire Air (OFA) System in Boiler B002 along with good combustion and work practice measures to minimize NO_x emissions.
[BACT, 40 CFR 52.21]

3.4 Equipment SIP Rule Standards

- 3.4.5 The Permittee shall not discharge or cause the discharge into the atmosphere from Boiler B002, any emissions, which contain acrolein in excess of 0.75 pounds per hour.
[Toxic Impact Assessment, 391-3-3.02(2)(a)3(ii)]

3.5 Equipment Standards Not Covered by a Federal or SIP Rule and Not Instituted as an Emission Cap or Operating Limit

- 3.5.4 The Permittee shall commence construction on this proposed modification to Boiler B002 within 18 months of the issuance of this permit amendment.
[391-3-1-.02(2)(a)3(ii)]

PART 4.0 REQUIREMENTS FOR TESTING**4.2 Specific Testing Requirements**

4.2.3 Within twelve (12) months of the date of issuance of this permit, the Permittee shall conduct performance tests for Total Particulate Matter (PM) and Nitrogen Oxides (NO_x) emissions from Boiler B002. Following the first performance test for PM and NO_x emissions, performance tests shall be conducted at least once every two years. If the Condensable PM emissions are less than 10 percent of the Total PM emissions, future PM tests do not need to include Method 202. The tests shall be performed under the following conditions:

[391-3-1-.02(6)(b)1]

- a. The steam generator is firing a combination of wood bark, peanut hulls, pecan hulls, fines and biomass materials with the percentage of peanut and pecan hulls to be at least the highest level expected until the next test. Should the Permittee expect to fire plastic waste prior to the next test, the plastic waste would be fired at the highest rate expected until the next test.
- b. The steam generator test shall be performed at the maximum operating rate expected until the next test. The Permittee shall maintain steam production records to verify the operating rate of the boiler during each test.
- c. The wet electrostatic precipitator serving the steam generator shall be operated during the PM test at the lowest total power and at the lowest water flow rates to the pre-
quench chamber.
- d. One test run during each PM performance test shall be conducted while grate raking and soot blowing. The Permittee shall report the frequency and duration of soot blowing and grate raking during normal operation with each PM test report.
- e. One test run during each PM performance test shall be conducted during a wash cycle for B002ESP.

4.2.7 Within 60 days after achieving the maximum production rate at which the affected equipment will be operated, but no later than 180 days after initial startup of the boiler following completion of the upgrade project, the Permittee shall conduct performance tests for Particulate Matter (PM) and Nitrogen Oxides (NO_x) emissions from Boiler B002. Following the first performance test for PM and NO_x emissions, performance tests shall be conducted at least once every two years as required in accordance with Condition 4.2.3. All the tests shall be done in accordance with the requirements in Condition 4.2.3(a-e).

[391-3-1-.02(6)(b)1 and 40 CFR 60.14]

- a. The initial test shall be used to show that the hourly emissions for PM and NO_x (in pounds per hour) will not increase after this boiler upgrade project. This test emissions data shall be compared with the results from the last pre-modification performance test approved by the Division.

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- b. If this initial test shows that post modification hourly emissions for PM and NO_x increase, then the facility must comply with all applicable provisions of the New Source Performance Standards (NSPS) as found in 40 CFR 60 Subpart Db - "Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units," for Boiler B002.
- c. The initial and subsequent tests shall be used to show compliance with the applicable NO_x and PM limits in Conditions 3.3.11, 3.3.17 and 3.3.18. These tests shall also be used to develop excursion values for the average total power and flow rate for the pre-quench chamber.

4.2.8 Within 60 days after achieving the maximum production rate at which the affected equipment will be operated, but no later than 180 days after initial startup of the boiler following completion of the upgrade project, the Permittee shall conduct performance test for Carbon Monoxide (CO) emissions from Boiler B002. The tests shall be performed under the following conditions:
[391-3-1-.02(6)(b)1]

- a. A three-run performance test, as per Condition 4.1.3.i, shall be conducted while firing solid fuels (i.e., a combination of wood bark, peanut hulls, pecan hulls, fines and biomass materials)

This test shall be used to show compliance with the applicable CO limit in Condition 3.3.18.

4.2.9 Within 60 days after achieving the maximum production rate at which the affected equipment will be operated, but no later than 180 days after initial startup of the boiler following completion of the upgrade project, the Permittee shall conduct a performance test for acrolein emissions from Boiler B002. This test shall be used to show compliance with the applicable acrolein limit in Condition 3.4.5.

PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)

5.2 Specific Monitoring Requirements

5.2.2 The Permittee shall install, calibrate, maintain, and operate monitoring devices for the measurement of the indicated parameters on the following equipment. Data shall be recorded at the frequency specified below. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

- h. Secondary current (mA) for each electrical isolatable section (bus section) of the electrostatic precipitator for Boiler B002 (ESP Source Code B002ESP). Data shall be recorded once per each hour of operation.
- i. Average total power for each electrical isolatable section (bus section) of the electrostatic precipitator for Boiler B002 (ESP Source Code B002ESP) using the data collected for the secondary voltage and the secondary current. Data shall be recorded once per each hour of operation.

5.2.3 The Permittee shall, within 90 days following the date of issuance of this permit, monitor emissions of nitrogen oxides from the Paper Machine Burners (Emission Unit ID Nos. 2AYD, 3AYD, 4AYD, 5APD, 5AYD, 6APD, and 6AYD) and Boiler B002 using the following protocol:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

- a. Measurements of nitrogen oxides (NO_x) and oxygen concentrations shall be conducted according to ASTM D 6522 – Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable analyzers. The measurement period shall consist of one (1) test run thirty minutes in duration.
- c. For Boiler B002 firing fuel oil, wood waste, peanut hulls, pecan hulls, finer, and/or biomass materials, nitrogen oxide emissions (lb/MM Btu) shall be determined using the following equation:

$$E = K C_d F_d \frac{20.9}{20.9 - O_2}$$

where,

- E = Nitrogen oxides emissions (lb/MM Btu)
- K = Conversion factor for nitrogen oxides, 1.194 x 10⁻⁷ ([lb/scf]/ppm)
- C_d = Concentration of nitrogen oxides (ppm by volume, dry basis)
- F_d = F-factor for fuel oil = 9190 (dscf/MMBTU)
(F-factor for wood waste/peanut hulls/pecan hulls/finer/biomass materials = as determined by fuel analysis)
- O₂ = Exhaust Gas Oxygen Concentration (percent by volume, dry basis)

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5.2.4 The Permittee shall, within 90 days following the date of issuance of this permit, monitor emissions of carbon monoxide from Paper Machine Burners (Emission Unit ID Nos. 2AYD, 3AYD, 4AYD, 5APD, 5AYD, 6APD, and 6AYD) and Boiler B003 using the following protocol:[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

- a. Measurements of carbon monoxide (CO) and oxygen concentrations shall be conducted according to ASTM D 6522 – Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable analyzers. The measurement period shall consist of one (1) test run thirty minutes in duration.

5.2.6 The Permittee shall, within 90 days following the date of issuance of this permit, monitor emissions of carbon monoxide from Boiler B002 using the following protocol: [391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

- a. Measurements of carbon monoxide (CO) and oxygen concentrations shall be conducted according to ASTM D 6522 – Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable analyzers. The measurement period shall consist of one (1) test run thirty minutes in duration.
- b. Carbon monoxide emissions (lb/MM Btu) from Boiler B002 shall be determined using the following equation:

$$E = K C_d F_d \frac{20.9}{20.9 - O_2}$$

where,

E = Carbon monoxide emissions (lb/MM Btu)

K = Conversion factor for carbon monoxide, 7.263×10^{-8} ([lb/scf]/ppm)

C_d = Concentration of carbon monoxide (ppm by volume, dry basis)

F_d = F-factor for fuel oil = 9190 (dscf/MMBTU)

(F-factor for solid fuels (wood waste/peanut hulls/pecan hulls/fines/biomass materials) = as determined by fuel analysis)

O_2 = Exhaust Gas Oxygen Concentration (percent by volume, dry basis)

- c. Following any measurement that is determined to be greater than the applicable CO emissions limit for an emission unit, the Permittee shall make adjustments to the unit and conduct a new measurement within one day. Daily measurements shall be continued until a measurement shows that the CO emissions are less than the applicable CO emissions limit.
- d. Following the initial measurement required by this condition, the Permittee shall conduct measurements of carbon monoxide and oxygen concentrations at a frequency

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of one per calendar quarter (quarters ending March 31, June 30, September 30 and December 31). Measurements shall be conducted on Boiler B002 during any calendar quarter that the unit is operated for 168 hours or more. Following any quarterly measurement determined to be greater than the applicable CO emission limit for an emission unit, the Permittee shall make adjustments to the emission unit and conduct a new measurement within one day. Daily measurements shall be continued until a measurement shows that the monitoring CO emission limit is less than the applicable CO emission limit for the unit at which time quarterly measurements may be resumed.

- e. Records of carbon monoxide monitoring shall be kept in a form suitable for inspection or submittal for a period of five (5) years. The record shall at a minimum contain the cause and corrective action for all excursions, and all measurements of concentration of carbon monoxide and oxygen.

5.2.7 The following pollutant specific emission unit(s) (PSEU) is/are subject to the Compliance Assurance Monitoring (CAM) Rule in 40 CFR 64.

Emission Unit	Pollutant
Boiler B002	PM

Permit conditions in this permit for the PSEU(s) listed above with regulatory citation 40 CFR 70.6(a)(3)(i) are included for the purpose of complying with 40 CFR 64. In addition, the Permittee shall meet the requirements, as applicable, of 40 CFR 64.7, 64.8, and 64.9. [40 CFR 64]

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5.2.8 The Permittee shall comply with the performance criteria listed in the table below for the PM emissions from Boiler B002.
 [40 CFR 64.6(c)(1)(iii)]

Performance Criteria [64.4(a)(3)]	Indicator No. 1 Total Power	Indicator No. 2 Prequench Chamber Water Flowrate
A. Data Representativeness [64.3(b)(1)]	Average secondary voltage, secondary current, and total power for the Wet Electrostatic Precipitator (B002ESP)	Prequench chamber water flowrate on the Wet Electrostatic Precipitator (B002ESP)
B. Verification of Operational Status (new/modified monitoring equipment only) [64.3(b)(2)]	Confirm the operational status of the secondary voltage, secondary current, and total power meters as per manufacturer's specifications	N/A
C. QA/QC Practices and Criteria [64.3(b)(3)]	Follow calibration and maintenance procedures recommended by the manufacturer	Follow calibration and maintenance procedures recommended by the manufacturer
D. Monitoring Frequency [64.3(b)(4)]	Each hour	Each hour
Data Collection Procedures [64.3(b)(4)]	Computerized data logger	Computerized data logger
Averaging Period [64.3(b)(4)]	3 hour period	3 hour period

PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS**6.1 General Record Keeping and Reporting Requirements**

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:

[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

- b. Exceedances: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard consistent with the averaging period specified for averaging the results of the monitoring)
 - ix. Any twelve consecutive month period during which fuel oil burned in Boiler B002 exceeds 2,340,000 gallons.
- c. Excursions: (means for the purpose of this Condition and Condition 6.1.4, any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring)
 - ii. Any three hour period during which the average total power for the Wet Electrostatic Precipitator (ID No. B002ESP) is less than 90% of the average total power during the last complying performance test.
 - vii. Any measurement of Nitrogen Oxides emissions from Boiler B002, conducted in accordance with the requirements of Condition 5.2.3, which is greater than 0.28 pounds per million Btu.
 - xiv. Any measurement of Carbon Monoxide emissions from Boiler B002, conducted in accordance with the requirements of Condition 5.2.6, which is greater than 0.5 pounds per million Btu, while firing solid fuels.
 - xv. Any measurement of Carbon Monoxide emissions from Boiler B002, conducted in accordance with the requirements of Condition 5.2.6, which is greater than 0.0363 pounds per million Btu, while firing fuel oil.
- d. In addition to the excess emissions, exceedances and excursions specified above, the following should also be included with the report required in Condition 6.1.4:
 - iv. Any occurrence when good combustion practices are not followed to minimize NO_x emissions in accordance with Condition 3.3.20.

6.2 Specific Record Keeping and Reporting Requirements

6.2.14 The Permittee shall maintain the following records regarding fuel fired in Boiler B002.

- a. Quantity of fuel oil combusted monthly
- b. Quantity of each solid fuel combusted monthly

PART 7.0 OTHER SPECIFIC REQUIREMENTS

7.14 Specific Conditions Associated with this Amendment

7.14.1 This permit amendment shall become null and void if construction of the modification is not commenced within eighteen (18) months of the effective date of this amendment.

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The Procter & Gamble Paper Products Company, Albany

Permit No.: 2676-095-0071-V-01-7
