

**Renewable Biomass Group
Potential Emission Calculations**

Table C-2. Whole Log Receiving, Processing, and Storage Operating Parameters

Emission Source	Annual Throughput (tons/year)¹
Truck Unloading	1,100,000
Whole Log Pile	1,100,000
Drum Debarker	1,100,000
Chipper	1,100,000

1. Annual throughput based on amount of dried material needed to generate final amount of finished pellets.

Table C-3. Raw Material Handling Emission Factors

Pollutant	Emission Factor¹ (lb/ton)
Filterable PM	5.95E-05
Filterable PM ₁₀	2.81E-05
Filterable PM _{2.5}	4.26E-06

1. PM emission factor for receiving and storage calculated using continuous drop point equation from AP-42, Section 13.2.4 Aggregate Handling and Storage Piles (11/06).

$$\text{PM Emission Factor (lb/ton)} = [k * (0.0032) * (U/5)^{1.3}] / (M/2)^{1.4}$$

k - PM	0.74	Particle size multiplier for PM ₃₀ per AP-42, Section 13.2.4-4 (11/06).
k - PM ₁₀	0.35	Particle size multiplier for PM ₁₀ per AP-42, Section 13.2.4-4 (11/06).
k - PM _{2.5}	0.053	Particle size multiplier for PM _{2.5} per AP-42, Section 13.2.4.3.
M (%)	40	Moisture content indicated on moisture balance.
U	7.400	Based on EPA's TANKS 4.09d Database for Athens, GA.

Table C-4. Potential Emissions from Raw Material Handling

Emission Source	Potential Emissions¹					
	Filterable PM (lb/hr) (tpy)		Filterable PM₁₀ (lb/hr) (tpy)		Filterable PM_{2.5} (lb/hr) (tpy)	
Truck Unloading	7.47E-03	3.27E-02	3.53E-03	1.55E-02	5.35E-04	2.34E-03
Whole Log Pile	7.47E-03	3.27E-02	3.53E-03	1.55E-02	5.35E-04	2.34E-03
Drum Debarker	7.47E-03	3.27E-02	3.53E-03	1.55E-02	5.35E-04	2.34E-03
Chipper	7.47E-03	3.27E-02	3.53E-03	1.55E-02	5.35E-04	2.34E-03

1. Potential Emissions are calculated as follows:

$$\text{Potential Emissions (tons/year)} = \text{Emission Factor (lb/ton)} * \text{Annual Throughput (tons/year)} / 2,000 \text{ (lbs/ton)}$$

$$\text{Potential Emissions (lb/hour)} = \text{Emission Factor (lb/ton)} * \text{Annual Throughput (tons/year)} / \text{Annual Operation (hours/year)}$$

Annual operation assumes 8,760 hours/year of operation