

EMISSIONS CALCULATIONS SUMMARY

Source ID	Description	Annual PER		Hourly PER	
		TSP tpy	PM ₁₀ tpy	TSP lb/hr	PM ₁₀ lb/hr
EPN01	Railcar Unloading	3.768	1.782	0.860	0.407
EPN02	Drop onto Bucket Elevator	0.903	0.427	0.206	0.098
	Sum	4.671	2.209	1.066	0.504
EPN03(a)	Drop onto Blender Bin 1	0.151	0.071	0.034	0.016
EPN03(b)	Drop onto Blender Bin 2	0.151	0.071	0.034	0.016
EPN03(c)	Drop onto Blender Bin 3	0.151	0.071	0.034	0.016
EPN03(d)	Drop onto Blender Bin 4	0.151	0.071	0.034	0.016
EPN03(e)	Drop onto Blender Bin 5	0.151	0.071	0.034	0.016
EPN03(f)	Drop onto Blender Bin 6	0.151	0.071	0.034	0.016
EPN03(g)	Drop onto Blender Bin 7	0.151	0.071	0.034	0.016
EPN03(h)	Drop onto Blender Bin 8	0.151	0.071	0.034	0.016
	Max	0.151	0.071	0.034	0.016
EPN04	Other Building Fugitives	4.517	2.136	1.031	0.488
EPN05	Screener	1.971	1.971	0.450	0.325
EPN06a	Truck Loading (Inside)	0.723	0.342	0.165	0.078
EPN06b	Truck Loading (Outside)	3.014	1.426	0.688	0.325
EPN06c	Truck Unloading	0.903	0.427	0.206	0.098
	Max	3.014	1.426	0.688	0.325
EPN08	Storage Piles	0.963	0.481	0.220	0.110
Total		16.912	9.064	3.861	1.945
Total		12.121	6.798	2.767	1.428

- Notes: 1) Due to physical limitations (i.e. elevator system), the facility cannot conduct multiple operations concurrently. Due to this, the PER is calculated as the maximum operations that can occur simultaneously.
- 2) The maximum annual PER for the facility is the sum of EPN01, EPN02, EPN03 (The max of one single bin since these cannot be loaded concurrently), EPN04, EPN05, and EPN08.
- 3) All PTE Calculations are based equipment capacity
- 4) All sources except for outdoor truck unloading have inherent mitigation factors.
- 5) A 0 % mitigation factor was used for all sources located within the building.
- EPN02 through EPN05 is within the building and has inherent mitigation factors.
 - EPN06a and 6c is within the building and has inherent mitigation factors.
 - EPN08 is within the building and has inherent controls.
- 6) A 0 % mitigation factor was used for railcar unloading due to choke feeding.
- EPN01 is mitigated via choke feeding, which is inherent to the operation.
- Other building fugitives accounts for 4 additional drop points within the process. The 5th drop point was used to estimate emissions from daily cleaning/sweeping operations within the building.

MATERIAL TRANSFER EMISSIONS CALCULATIONS

Mitigation Factor for building 0.00%
 Mitigation factor for choke feeding 0.00%

EPN	Description	Location	Quantity	k(PM)	k(PM ₁₀)	Windspeed (U) (mph)	Moisture Content (%)	Mitigation Factor (%)	TSP Emission Factor (lb/ton)	PM ₁₀ Emission Factor (lb/ton)
EPN01	Railcar Unloading	Outdoors	1	0.74	0.35	15.0	0.93	0%	0.029	0.014
EPN02	Drop from Conveyor onto Bucket Elevator	Indoors	1	0.74	0.35	5.0	0.93	0%	0.007	0.003
EPN03(a)	Drop onto Blender Bin 1	Indoors	1	0.74	0.35	5.0	0.93	0%	0.007	0.003
EPN03(b)	Drop onto Blender Bin 2	Indoors	1	0.74	0.35	5.0	0.93	0%	0.007	0.003
EPN03(c)	Drop onto Blender Bin 3	Indoors	1	0.74	0.35	5.0	0.93	0%	0.007	0.003
EPN03(d)	Drop onto Blender Bin 4	Indoors	1	0.74	0.35	5.0	0.93	0%	0.007	0.003
EPN03(e)	Drop onto Blender Bin 5	Indoors	1	0.74	0.35	5.0	0.93	0%	0.007	0.003
EPN03(f)	Drop onto Blender Bin 6	Indoors	1	0.74	0.35	5.0	0.93	0%	0.007	0.003
EPN03(g)	Drop onto Blender Bin 7	Indoors	1	0.74	0.35	5.0	0.93	0%	0.007	0.003
EPN03(h)	Drop onto Blender Bin 8	Indoors	1	0.74	0.35	5.0	0.93	0%	0.007	0.003
EPN04	Other Building Fugitives	Indoors	5	0.74	0.35	5.0	0.93	0%	0.007	0.003
EPN05	Screener	Indoors	1	N/A	N/A	N/A	0.93	0%	0.015	0.015
EPN06a	Truck Loading (Inside)	Indoors	1	0.74	0.35	5.0	0.93	0%	0.007	0.003
EPN06b	Truck Loading (Outside)	Outdoors	1	0.74	0.35	15.0	0.93	0%	0.029	0.014
EPN06c	Truck Unloading	Indoors	1	0.74	0.35	5.0	0.93	0%	0.007	0.003

EPN	Description	Maximum Potential Material Throughput (tph)	Maximum Potential Material Throughput (tpy)	PER		PER	
				TSP Emission Rate (lb/hr)	PM ₁₀ Emission Rate (lb/hr)	TSP Emission Rate (tpy)	PM ₁₀ Emission Rate (tpy)
EPN01	Railcar Unloading	30	262,800	0.860	0.407	3.768	1.782
EPN02	Drop from Conveyor onto Bucket Elevator	30	262,800	0.206	0.098	0.903	0.427
EPN03(a)	Drop onto Blender Bin 1	5	43,800	0.034	0.016	0.151	0.071
EPN03(b)	Drop onto Blender Bin 2	5	43,800	0.034	0.016	0.151	0.071
EPN03(c)	Drop onto Blender Bin 3	5	43,800	0.034	0.016	0.151	0.071
EPN03(d)	Drop onto Blender Bin 4	5	43,800	0.034	0.016	0.151	0.071
EPN03(e)	Drop onto Blender Bin 5	5	43,800	0.034	0.016	0.151	0.071
EPN03(f)	Drop onto Blender Bin 6	5	43,800	0.034	0.016	0.151	0.071
EPN03(g)	Drop onto Blender Bin 7	5	43,800	0.034	0.016	0.151	0.071
EPN03(h)	Drop onto Blender Bin 8	5	43,800	0.034	0.016	0.151	0.071
EPN04	Other Building Fugitives	30	262,800	1.031	0.488	4.517	2.136
EPN05	Screener	30	262,800	0.450	0.450	1.971	1.971
EPN06a	Truck Loading (Inside)	24	210,240	0.165	0.078	0.723	0.342
EPN06b	Truck Loading (Outside)	24	210,240	0.688	0.325	3.014	1.426
EPN06c	Truck Unloading	30	262,800	0.206	0.098	0.903	0.427

- Notes: 1) A 0 % mitigation factor was used for all sources located within the building.
 2) A 0 % mitigation factor was used for railcar unloading due to choke feeding.
 3) The 5 mph wind speed for sources with the building is from the May 2008 CTEH study, where a met tower was placed inside the building to determine the maximum wind speed.
 4) All emissions in this table were calculated using AP-42 Section 13.2.4 - Aggregate Handling and Storage Piles. Specifically, the drop equation on page 4 of this document was used. A complete copy of this document is included in Section D.
 5) Moisture content was determined via analytical sampling of the materials. This data is included in Section D.

