

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 8996 and PSDTX454M3

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
7*	Kiln Line 1	CO	1,939	3,556
		NO _x (non-ozone season)	--	1,155 (5)
		NO _x (ozone season)	--	567 (6)
		NO _x (annual)	--	1,722
		PM/PM ₁₀ (filterable)	24	104
		PM/PM ₁₀ (condensable)	353	103
		PM/PM ₁₀ (total)	377	207
		SO ₂ (1-hour)	2,600	--
		SO ₂ (3-hour)	2,300	--
		SO ₂ (24-hour)	1,900	--
		SO ₂ (annual)	--	1,769
		TRS	15	18
		H ₂ SO ₄	180	20
		VOC	292	438
		Speciated Compounds	39	151
62*	Kiln Line 2	CO	1,939	3,556
		NO _x (non-ozone season)	--	1,155 (5)
		NO _x (ozone season)	--	567 (6)
		NO _x (annual)	--	1,722

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		PM/PM ₁₀ (filterable)	32	138
		PM/PM ₁₀ (condensable)	353	103
62*	Kiln Line 2	PM/PM ₁₀ (total)	385	241
		SO ₂ (1-hour)	2,600	--
		SO ₂ (3-hour)	2,300	--
		SO ₂ (24-hour)	1,900	--
		SO ₂ (annual)	--	1,769
		TRS	15	18
		H ₂ SO ₄	180	20
		VOC	292	438
		Speciated Compounds	39	151
1A*	Primary (Upper Bench) Limestone Crusher	PM	0.28	0.25
		PM ₁₀	0.13	0.12
1B*	Primary (Upper Bench) Limestone Crusher	PM	0.72	3.15
		PM ₁₀	0.72	3.15
		CO	11.18	48.97
		NO _x	8.09	35.43
		SO ₂	1.08	4.73
		VOC	1.43	6.26
2*	Secondary Crusher Baghouse Stack	PM	0.77	1.69
		PM ₁₀	0.77	1.69
3*	Raw Material Transfer Point Baghouse Stack	PM	0.34	0.75
		PM ₁₀	0.34	0.75
4*	Conveyor Belt Transfer	PM	0.70	1.53

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		PM ₁₀	0.70	1.53
5*	Line No. 1 Raw Mill Feed Bins Baghouse Stack No. 2	PM	0.93	2.03
		PM ₁₀	0.93	2.03
6*	Line No. 1 Raw Mill Feed Bins Baghouse Stack No. 2	PM	0.93	2.03
		PM ₁₀	0.93	2.03
8*	Rotary Kiln Feed Silo Upper Baghouse Stack	PM	1.04	2.28
		PM ₁₀	1.04	2.28
9*	Rotary Kiln Feed Silo Lower Baghouse Stack	PM	0.87	1.91
		PM ₁₀	0.87	1.91
11*	Waste Bypass Dust Baghouse Stack	PM	0.18	0.38
		PM ₁₀	0.18	0.38
12*	Coal Handling Baghouse Stack	PM	0.80	1.76
		PM ₁₀	0.80	1.76
13*	Coal Storage Bin Baghouse Stack	PM	0.33	0.71
		PM ₁₀	0.33	0.71
14*	Clinker Conveyor Transfer Point Baghouse Stack	PM	0.22	0.48
		PM ₁₀	0.22	0.48
15*	Clinker Conveyor Baghouse Stack	PM	0.29	0.64
		PM ₁₀	0.29	0.64
16*	Gypsum Silo Baghouse Stack	PM	0.12	0.27
		PM ₁₀	0.12	0.27
17*	Upper Clinker Silos Baghouse Stack	PM	0.45	0.99
		PM ₁₀	0.45	0.99
18*	Gypsum Weigh Feeder	PM	0.16	0.36

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		PM ₁₀	0.16	0.36
19*	Clinker Feeder No. 7 Baghouse Stack	PM	0.15	0.32
		PM ₁₀	0.15	0.32
20*	Clinker Feeder No. 1 Baghouse Stack	PM	0.15	0.32
		PM ₁₀	0.15	0.32
21*	Clinker Feeder No. 6 Baghouse Stack	PM	0.15	0.32
		PM ₁₀	0.15	0.32
22*	Clinker Feeder No. 4 Baghouse Stack	PM	0.15	0.32
		PM ₁₀	0.15	0.32
23* & 29*	Finish Mill System No. 1 and No. 2 Baghouse Stack	PM	13.62	59.68
		PM ₁₀	13.62	59.68
24*	Gypsum Weigh Feeder Baghouse Stack	PM	0.16	0.36
		PM ₁₀	0.16	0.36
25*	Clinker Weigh Feeder No. 2 Baghouse Stack	PM	0.15	0.32
		PM ₁₀	0.15	0.32
26*	Clinker Weigh Feeder No. 5 Baghouse Stack	PM	0.15	0.32
		PM ₁₀	0.15	0.32
27*	Clinker Weigh Feeder No. 3 Baghouse Stack	PM	0.15	0.32
		PM ₁₀	0.15	0.32
28*	Clinker Weigh Feeder No. 8 Baghouse Stack	PM	0.15	0.32
		PM ₁₀	0.15	0.32
30*	Cement Silo No. 1 Discharge Baghouse Stack	PM	0.25	0.55
		PM ₁₀	0.25	0.55
31*	Cement Silo No. 2 Discharge Baghouse	PM	0.37	0.81

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		PM ₁₀	0.37	0.81
32*	Cement Silo No. 4 Discharge Baghouse Stack	PM	0.25	0.55
		PM ₁₀	0.25	0.55
33*	Cement Silo No. 5 Discharge Baghouse Stack	PM	0.46	1.02
		PM ₁₀	0.46	1.02
34*	Cement Silo No. 7 Discharge Baghouse Stack	PM	0.25	0.55
		PM ₁₀	0.25	0.55
35*	Cement Silo No. 8 Discharge Baghouse Stack	PM	0.37	0.81
		PM ₁₀	0.37	0.81
36*	Cement Silo No. 1 Filling Baghouse Stack	PM	1.14	2.49
		PM ₁₀	1.14	2.49
37*	Cement Silo No. 7 Filling Baghouse Stack	PM	0.58	1.27
		PM ₁₀	0.58	1.27
PLANTFUG	Plant-Wide Fugitives	PM	5.94	15.12
		PM ₁₀	2.90	7.43
42*	Shale Crusher Discharge Baghouse Stack	PM	0.38	0.83
		PM ₁₀	0.38	0.83
43*	Line No. 2 Raw Mill Feed Bins Baghouse Stack No. 1	PM	0.76	1.67
		PM ₁₀	0.76	1.67
44*	Raw Mill Discharge Airslide Baghouse Stack	PM	0.24	0.52
		PM ₁₀	0.24	0.52
45*	Kiln Feed System No. 1 Baghouse Stack	PM	0.29	0.62
		PM ₁₀	0.29	0.62
46*	Blending Silo Upper	PM	0.24	0.52

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		PM ₁₀	0.24	0.52
47*	Blending Silo Lower Baghouse Stack	PM	0.48	1.04
		PM ₁₀	0.48	1.04
48*	Kiln Feed System No. 2 Baghouse Stack	PM	0.29	0.62
		PM ₁₀	0.29	0.62
49*	Pan Conveyor Under Clinker Cooler Baghouse Stack	PM	0.28	0.61
		PM ₁₀	0.28	0.61
50*	Dust Bin Baghouse Stack	PM	0.29	0.62
		PM ₁₀	0.29	0.62
51*	Clinker Silo No. 1 Discharge Baghouse Stack (North)	PM	0.07	0.15
		PM ₁₀	0.07	0.15
52*	Clinker Silo No. 1 Discharge Baghouse Stack (South)	PM	0.07	0.15
		PM ₁₀	0.07	0.15
53*	Slag/Gypsum Bins and Belt Discharge Baghouse Stack	PM	0.76	1.67
		PM ₁₀	0.76	1.67
54*	Clinker Silo No. 2 Discharge Baghouse Stack (North)	PM	0.07	0.15
		PM ₁₀	0.07	0.15
55*	Clinker Silo No. 2 Discharge Baghouse Stack (South)	PM	0.07	0.15
		PM ₁₀	0.07	0.15
56*	Clinker Silo Feeder Baghouse Stack	PM	0.76	1.67
		PM ₁₀	0.76	1.67
57*	Clinker Conveyor Transfer Point Baghouse Stack	PM	0.24	0.52
		PM ₁₀	0.24	0.52
58*	Belt-Air-Slide Transfer	PM	0.38	0.83

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		PM ₁₀	0.38	0.83
59*	Belt-Air-Slide Transfer Point 2 Baghouse Stack	PM	0.48	1.04
		PM ₁₀	0.48	1.04
60*	Bulk Loading 1 Baghouse Stack	PM	0.52	1.15
		PM ₁₀	0.52	1.15
61*	Truck Loadout- 1 Baghouse Stack	PM	0.01	0.02
		PM ₁₀	0.01	0.02
63*	Rail Loadout- 1 Baghouse Stack	PM	0.01	0.02
		PM ₁₀	0.01	0.02
64*	Coal Mill Conveyor Baghouse Stack	PM	0.24	0.52
		PM ₁₀	0.24	0.52
65*	Truck Loadout- 2 Baghouse Stack	PM	0.01	0.02
		PM ₁₀	0.01	0.02
66*	SKS & Cement Mill Baghouse Stack	PM	14.11	61.79
		PM ₁₀	14.11	61.79
67*	Cement Silo Filling Baghouse Stack (North)	PM	0.29	0.64
		PM ₁₀	0.29	0.64
68*	Cement Silo Filling Baghouse Stack (South)	PM	0.16	0.35
		PM ₁₀	0.16	0.35
69*	Truck/Rail Loadout Baghouse	PM	0.19	0.41
		PM ₁₀	0.19	0.41
70*	Truck/Rail Loadout Baghouse (North)	PM	0.19	0.41
		PM ₁₀	0.19	0.41
71*	Air-Slide Conveyor	PM	0.48	1.04

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		PM ₁₀	0.48	1.04
72*	Pulverized Coal Bin Baghouse Stack	PM	0.02	0.05
		PM ₁₀	0.02	0.05
73*	Pulverized Coal Bin CO Analyzer Baghouse Stack	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
74*	Scrubber (Reagent-Feed) System 1- Line 1	PM	0.17	0.38
		PM ₁₀	0.17	0.38
75A*	Primary (Lower Bench) Limestone Crusher	PM	0.28	0.25
		PM ₁₀	0.13	0.12
75B*	Primary (Lower Bench) Limestone Crusher Engine	PM	0.39	1.71
		PM ₁₀	0.39	1.71
		CO	8.23	36.05
		NO _x	6.64	29.08
		SO ₂	0.90	3.94
		VOC	0.94	4.12
76*	Cooling Tower	PM	2.05	8.98
		PM ₁₀	2.05	8.98
77*	Line 1 Kiln Dust Bin Baghouse Stack	PM	0.48	2.1
		PM ₁₀	0.48	2.1
78*	Line 2 Dust Bin Baghouse Stack	PM	0.48	2.1
		PM ₁₀	0.48	2.1
79*	Line No. 2 Raw Mill Feed Bins Baghouse Stack No. 2	PM	0.27	0.59
		PM ₁₀	0.27	0.59
80*	Line No. 1 Raw Mill Feed Bins Baghouse Stack No.	PM	0.27	0.59

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		PM ₁₀	0.27	0.59
81*	Clinker Silo De-Dusting Baghouse Stack No. 1	PM	0.66	1.45
		PM ₁₀	0.66	1.45
82*	Clinker Silo De-Dusting Baghouse Stack No. 2	PM	0.22	0.48
		PM ₁₀	0.22	0.48
83*	Clinker Silo De-Dusting Baghouse Stack No. 3	PM	0.22	0.48
		PM ₁₀	0.22	0.48
84*	Raw Material Handling Baghouse Stack No. 1	PM	0.54	1.18
		PM ₁₀	0.54	1.18
85*	Raw Material Handling Baghouse Stack No. 2	PM	0.27	0.59
		PM ₁₀	0.27	0.59
ROADS	Plant-Wide Roads	PM	15.44	67.59
		PM ₁₀	7.72	33.82

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- NO_x - total oxides of nitrogen, collectively expressed (calculated) as nitrogen dioxide
- SO₂ - sulfur dioxide
- PM - total particulate matter, suspended in the atmosphere, including PM₁₀
- PM₁₀ - total particulate matter equal to or less than 10 microns in diameter. Where PM is not -listed, it shall be assumed that no PM greater than 10 microns is emitted.
- CO - carbon monoxide
- TRS - total reduced sulfur
- H₂SO₄ - sulfuric acid
- Speciated Compounds - See Attachment I
- HF - hydrogen fluoride
- OCDD - Octachlorodibenzo- p-dioxin
- OCDF - Octachlorodibenzofuran
- HpCCD - Heptachlorodibenzo- p-dioxin
- HpCDF - Heptachlorodibenzofuran
- HxCDD - Hexachlorodibenzo- p-dioxin
- HxCDF - Hexachlorodibenzofuran

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PeCDD	-	Pentachlorodibenzo- p-dioxin
PeCDF	-	Pentachlorodibenzofuran
TCDD	-	Tetrachlorodibenzo- p-dioxin
TCDF	-	Tetrachlorodibenzofuran

- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
- (5) Emission rate limit only applicable from November 1 through March 31
- (6) Emission rate limit only applicable from April 1 through October 31.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

24 Hrs/day 7 Days/week 52 Weeks/year or 8,760 Hrs/year

** Compliance with annual emission and production limits is based on a rolling 12-month period.

Maximum Allowable Production Rate per kiln: 1.34 million short tons per year (tpy) of clinker.

Maximum Allowable Production Rate with both kilns operating: 2.67 million short tpy of clinker.

Date: _____

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ATTACHMENT I

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
7*	Kiln No. 1 Main Bypass Baghouse, Coal Mill Baghouse and Scrubber Stack	Aluminum	0.12	0.46
		Ammonia	2.01	7.69
		Ammonium Chloride	3.86	14.78
		Arsenic	3.53E-03	0.01
		Barium	0.09	0.34
		Benzaldehyde	0.45	1.72
		Benzene	6.30	24.12
		Benzo(a)pyrene	2.61E-05	9.99E-05
		Beryllium	1.32E-04	5.04E-04
		Boron	0.01	0.04
		Cadmium	4.41E-04	1.69E-03
		Chromium	0.03	0.11
		Copper (fume)	1.06	4.06
		Ethyl Toluene	1.69	6.47
		Ethylbenzene	1.04	3.98
		Fluorene	3.81E-03	0.01
		Fluoride (as HF)	0.18	0.69
		Hydrogen Chloride	1.94	7.43
		Iron	0.17	0.65
		Lead	0.02	0.08
		Manganese (fumes)	0.01	0.04

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		Mercury	0.01	0.04
7*	Kiln No. 1 Main Bypass Baghouse, Coal Mill Baghouse and Scrubber Stack	Methyl Indene	2.02	7.74
		Methyl Mercaptan	0.46	1.76
		Methyl Styrene	0.01	0.04
		Methylene Chloride	0.10	0.38
		Naphthalene	0.34	1.30
		Nickel	0.01	0.04
		OCDD	4.01E-07	1.54E-06
		OCDF	8.33E-08	3.20E-07
		Pentadiene (all isomers)	1.23	4.71
		Phenathrene	0.08	0.31
		Selenium	0.04	0.15
		Silver	5.00E-04	1.91E-03
		Styrene	1.38	5.28
		Thallium	1.65E-03	0.01
		Toluene	9.83	37.63
		Total HpCDD	1.69E-07	6.50E-07
		Total HpCDF	5.45E-08	2.10E-07
		Total HxCDD	7.26E-08	2.80E-07
		TotalHxCDF	7.36E-08	2.80E-07
		Total PeCDD	5.41E-06	2.07E-06
		Total PeCDF	5.82E-08	2.20E-07
		Total TCDD	9.26E-09	4.00E-08
		Total TCDF	2.27E-07	8.70E-07

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7*	Kiln No. 1 Main Bypass Baghouse, Coal Mill Baghouse and Scrubber Stack	Xylenes	4.85	18.57
		Zinc	0.07	0.27
62*	Kiln No. 2 Main Bypass Baghouse, Coal Mill Baghouse and Scrubber Stack	Aluminum	0.12	0.46
		Ammonia	2.01	7.69
		Ammonium Chloride	3.86	14.78
		Arsenic	3.53E-03	0.01
		Barium	0.09	0.34
		Benzaldehyde	0.45	1.72
		Benzene	6.30	24.12
		Benzo(a)pyrene	2.61E-05	9.99E-05
		Beryllium	1.32E-04	5.04E-04
		Boron	0.01	0.04
		Cadmium	4.41E-04	1.69E-03
		Chromium	0.03	0.11
		Copper (fume)	1.06	4.06
		Ethyl Toluene	1.69	6.47
		Ethylbenzene	1.04	3.98
		Fluorene	3.81E-03	0.01
		Fluoride (as HF)	0.18	0.69
		Hydrogen Chloride	1.94	7.43
		Iron	0.17	0.65
		Lead	0.02	0.08
		Manganese (fumes)	0.01	0.04

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62*	Kiln No. 2 Main Bypass Baghouse, Coal Mill Baghouse and Scrubber Stack	Mercury	0.01	0.04
		Methyl Indene	2.02	7.74
		Methyl Mercaptan	0.46	1.76
		Methyl Styrene	0.01	0.04
		Methylene Chloride	0.10	0.38
		Naphthalene	0.34	1.30
		Nickel	0.01	0.04
		OCDD	4.01E-07	1.54E-06
		OCDF	8.33E-08	3.20E-07
		Pentadiene (all isomers)	1.23	4.71
		Phenathrene	0.08	0.31
		Selenium	0.04	0.15
		Silver	5.00E-04	1.91E-03
		Styrene	1.38	5.28
		Thallium	1.65E-03	0.01
		Toluene	9.83	37.63
		Total HpCDD	1.69E-07	6.50E-07
		Total HpCDF	5.45E-08	2.10E-07
		Total HxCDD	7.26E-08	2.80E-07
		TotalHxCDF	7.36E-08	2.80E-07
		Total PeCDD	5.41E-06	2.07E-06
		Total PeCDF	5.82E-08	2.20E-07
		Total TCDD	9.26E-09	4.00E-08
62*	Kiln No. 2 Main Bypass Baghouse, Coal Mill	Total TCDF	2.27E-07	8.70E-07

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		Xylenes	4.85	18.57
		Zinc	0.07	0.27

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