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 (4)	
			lbs/hour	TPY (5)
7*	Kiln Line 1, Bypass Baghouse, and Coal Mill Baghouse	CO	1,939	3,556
		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_2SO_4	180	20
		VOC	292	438
		Speciated Compounds	see Attachment I	
7*, 62*	Combined Kiln Lines 1 and 2 NO_x Emission Limits	**Compliance Period (6)**	**Tons/day**	**Total tons**
		November 1 through March 30	15.3	2,310
		March 31 through October 31	5.3	1,140
		Annual (12-month rolling)	--	3,450
62*	Kiln Line 2, Bypass Baghouse, and Coal Mill Baghouse	CO	1,939	3,556
		PM/PM_{10} (filterable)	32	138
		PM/PM_{10} (condensable)	353	103
		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

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		H_2SO_4	180	20
		VOC	292	438
		Speciated Compounds	see Attachment I	
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 Baghouse Stack	PM	0.70	1.53
		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

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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 Baghouse Stack	PM	0.16	0.36
		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

Emission Sources - Maximum Allowable Emission Rates

31*	Cement Silo No. 2 Discharge Baghouse Stack	PM	0.37	0.81
		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
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 Baghouse Stack	PM	0.24	0.52
		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

Emission Sources - Maximum Allowable Emission Rates

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 Point 1 Baghouse Stack	PM	0.38	0.83
		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

Emission Sources - Maximum Allowable Emission Rates

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 Baghouse Stack	PM	0.48	1.04
		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. 3	PM	0.27	0.59
		PM_{10}	0.27	0.59

Emission Sources - Maximum Allowable Emission Rates

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 (7)	PM	15.44	67.59
		PM_{10}	7.72	33.82
PLANTFUG	Plant-Wide Fugitives (7)	PM	5.94	15.12
		PM_{10}	2.90	7.43
MSSFUG1	Inherently Low Emitting (ILE) Planned Maintenance Activities (7)	NO_x	0.03	0.02
		CO	0.34	0.04
		SO_2	<0.01	<0.01
		VOC	68.07	0.06
		PM	14.69	0.41
		PM_{10}	6.93	0.16
		$PM_{2.5}$	1.06	0.03
MSSFUG2	Non-ILE Planned Maintenance Activities (Vacuum truck loading and unloading) (7)	PM	6.17	1.78
		PM_{10}	3.19	1.24
		$PM_{2.5}$	0.67	0.45

(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) PM - particulate matter emissions, as defined in Title 30 Texas Administrative Code (TAC) § 101.1, including PM_{10} and $PM_{2.5}$
PM_{10} - particulate matter emissions equal to or less than 10 microns in diameter, including $PM_{2.5}$
$PM_{2.5}$ - direct particulate matter emissions equal to or less than 2.5 microns in diameter
NO_x - total oxides of nitrogen, collectively expressed (calculated) as nitrogen dioxide
SO_2 - sulfur dioxide
CO - carbon monoxide
VOC - volatile organic compounds as defined in Title 30 TAC § 101.1

Emission Sources - Maximum Allowable Emission Rates

TRS - total reduced sulfur
H_2SO_4 - sulfuric acid
HF - hydrogen fluoride

(4) Planned maintenance, startup, and shutdown (MSS) emissions are included.
(5) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
(6) Demonstration of compliance with 30-day rolling limit begins on first day of stated period. The control period for the March 31 limit effectively begins on March 1. Reference: 30 TAC § 117.3123.
(7) Emission rate is an estimate and is enforceable through compliance with the applicable special conditions and permit representations.

Date: October 15, 2014

Emission Sources - Maximum Allowable Emission Rates

Attachment I

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
7*	Kiln Line 1, Bypass Baghouse, and Coal Mill Baghouse	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
		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

Emission Sources - Maximum Allowable Emission Rates

		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
		Xylenes	4.85	18.57
		Zinc	0.07	0.27
62*	Kiln Line 2, Bypass Baghouse, and Coal Mill Baghouse	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
		Mercury	0.01	0.04
		Methyl Indene	2.02	7.74
		Methyl Mercaptan	0.46	1.76
		Methyl Styrene	0.01	0.04

Emission Sources - Maximum Allowable Emission Rates

		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
		Xylenes	4.85	18.57
		Zinc	0.07	0.27

Date: October 15, 2014

OCDD - Octachlorodibenzo- p-dioxin
OCDF - Octachlorodibenzofuran
HpCCD - Heptachlorodibenzo- p-dioxin
HpCDF - Heptachlorodibenzofuran
HxCDD - Hexachlorodibenzo- p-dioxin
HxCDF - Hexachlorodibenzofuran
PeCDD - Pentachlorodibenzo- p-dioxin
PeCDF - Pentachlorodibenzofuran
TCDD - Tetrachlorodibenzo- p-dioxin
TCDF - Tetrachlorodibenzofuran