Emission Sources - Maximum Allowable Emission Rates

Permit Number 6048 and PSDTX74M2

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)
PS-1	Clay Crusher Baghouse	PM	0.32	1.35
		PM_{10}	0.16	0.68
		$PM_{2.5}$	0.08	0.34
PS-2	Clay Belt Transfer Baghouse	PM	0.32	1.35
		PM_{10}	0.16	0.68
		$PM_{2.5}$	0.08	0.34
PS-3	Raw Aeropol Cyclone	PM	2.17	9.10
		PM_{10}	1.08	4.54
		$PM_{2.5}$	0.54	2.28
PS-4	Blending Silo Baghouse	PM	1.60	6.74
		PM_{10}	0.80	3.37
		$PM_{2.5}$	0.40	1.69
PS-5	Rail Hopper Belt Baghouse	PM	1.04	4.35
		PM_{10}	0.52	2.18
		$PM_{2.5}$	0.26	1.09
PS-6	Coal/Gypsum Belt Transfer Baghouse	PM	0.32	1.35
		PM_{10}	0.16	0.68
		$PM_{2.5}$	0.08	0.34
PS-7	Tri-Gate Diverter Baghouse	PM	0.32	1.35
		PM_{10}	0.16	0.68
		$PM_{2.5}$	0.08	0.34
PS-8	Coal Belt Transfer Baghouse	PM	0.56	2.36
		PM_{10}	0.28	1.18
		$PM_{2.5}$	0.14	0.59

Emission Sources - Maximum Allowable Emission Rates

PS-9	Coal/Coke Silos Baghouse	PM	0.48	2.02
		PM_{10}	0.24	1.01
		$PM_{2.5}$	0.12	0.51
PS-10	Coal Mill Cyclone Baghouse	PM	4.49	18.87
		PM_{10}	2.25	9.43
		$PM_{2.5}$	1.12	4.72
PS-11	Coal Bin Passive Bag Filter	PM	0.03	0.13
		PM_{10}	0.02	0.07
		$PM_{2.5}$	0.01	0.03
PS-12	Coke Bin Passive Bag Filter	PM	0.03	0.13
		PM_{10}	0.02	0.07
		$PM_{2.5}$	0.01	0.03
PS-13	Solid Fuel Pump Feeders Baghouse	PM	0.80	3.37
		PM_{10}	0.40	1.68
		$PM_{2.5}$	0.20	0.84
PS-14	Kiln Feed Bucket Elevator Baghouse	PM	0.48	2.02
		PM_{10}	0.24	1.01
		$PM_{2.5}$	0.12	0.51
PS-15	Kiln Feed Buffer Bin Baghouse	PM	0.80	3.37
		PM_{10}	0.40	1.68
		$PM_{2.5}$	0.20	0.84
PS-16	Kiln No. 1 Main Baghouse (10)	PM (FH +BH) (8)	22.36	84.10
		PM_{10} (FH + BH) (8)	20.49	77.83
		$PM_{2.5}$	20.49	77.83
		VOC	13.10	44.00
		NO_x (8)	744.00	(7)
		SO_2 (8)	106.00	(7)
		CO (9)	772.00	(7)
		HCl	2.11	8.86

Emission Sources - Maximum Allowable Emission Rates

		NH_3	1.31	5.50
PS-16A	Kiln 1 Main Bucket Elevator Baghouse	PM	0.04	0.17
		PM_{10}	0.02	0.08
		$PM_{2.5}$	0.01	0.04
PS-19	Clinker Cooler Drag Chain Baghouse	PM	1.11	4.68
		PM_{10}	0.56	2.34
		$PM_{2.5}$	0.28	1.17
PS-20	Kiln Line 1 Clinker Cooler Baghouse	PM	7.76	26.08
		PM_{10}	5.90	19.82
		$PM_{2.5}$	1.94	6.52
PS-21	Clinker Loadout Bin Baghouse	PM	0.60	2.63
		PM_{10}	0.30	1.31
		$PM_{2.5}$	0.15	0.66
PS-22	Clinker Silos Top Transfers Baghouse	PM	2.23	9.36
		PM_{10}	1.11	4.68
		$PM_{2.5}$	0.56	2.34
PS-23	Clinker Silo No. 1 Feeder Baghouse	PM	0.15	0.65
		PM_{10}	0.08	0.33
		$PM_{2.5}$	0.04	0.16
PS-24	Clinker Silo No. 2 Feeder Baghouse	PM	0.17	0.75
		PM_{10}	0.08	0.33
		$PM_{2.5}$	0.04	0.16
PS-25	Clinker Silo No. 3 North Baghouse	PM	0.15	0.65
		PM_{10}	0.08	0.33
		$PM_{2.5}$	0.04	0.16
PS-26	Clinker Silo No. 3 South Baghouse	PM	0.15	0.65
		PM_{10}	0.08	0.33
		$PM_{2.5}$	0.04	0.16
PS-27	Clinker Silo No. 4 Feeder Baghouse	PM	0.15	0.65

Emission Sources - Maximum Allowable Emission Rates

		PM_{10}	0.08	0.33
		$PM_{2.5}$	0.04	0.16
PS-28	Clinker Silo No. 5 Feeder Baghouse	PM	0.15	0.65
		PM_{10}	0.08	0.33
		$PM_{2.5}$	0.04	0.16
PS-29	Clinker Silo No. 6 North Baghouse	PM	0.15	0.65
		PM_{10}	0.08	0.33
		$PM_{2.5}$	0.04	0.16
PS-30	Clinker Silo No. 6 South Baghouse	PM	0.15	0.65
		PM_{10}	0.08	0.33
		$PM_{2.5}$	0.04	0.16
PS-31	Finish Mill Baghouse No. 1	PM	3.58	15.05
		PM_{10}	1.79	7.52
		$PM_{2.5}$	0.90	3.76
PS-32	Cement Cooler No. 1 Transfer Baghouse	PM	0.31	1.30
		PM_{10}	0.15	0.65
		$PM_{2.5}$	0.08	0.33
PS-33	Finish Mill No. 1 Separator Baghouse	PM	0.80	3.37
		PM_{10}	0.40	1.68
		$PM_{2.5}$	0.20	0.84
PS-34	Finish Mill Baghouse No. 2	PM	3.58	15.05
		PM_{10}	1.79	7.52
		$PM_{2.5}$	0.90	3.76
PS-35	Cement Cooler No. 2 Transfer Baghouse	PM	0.31	1.30
		PM_{10}	0.15	0.65
		$PM_{2.5}$	0.08	0.33
PS-36	Finish Mill No. 2 Separator Baghouse	PM	0.80	3.37
		PM_{10}	0.40	1.68
		$PM_{2.5}$	0.20	0.84

Emission Sources - Maximum Allowable Emission Rates

PS-37	Cement Aeropols Baghouse	PM	0.79	3.31
		PM_{10}	0.39	1.66
		$PM_{2.5}$	0.20	0.83
PS-38	South Aeropol Transfer Baghouse	PM	1.11	4.68
		PM_{10}	0.56	2.34
		$PM_{2.5}$	0.28	1.17
PS-39	North Silo Distribution Baghouse	PM	0.79	3.31
		PM_{10}	0.20	0.83
		$PM_{2.5}$	0.20	0.83
PS-40	North Aeropol Transfer Baghouse	PM	1.11	4.68
		PM_{10}	0.56	2.34
		$PM_{2.5}$	0.28	1.17
PS-41	South Silo Distribution Baghouse	PM	0.79	3.31
		PM_{10}	0.39	1.66
		$PM_{2.5}$	0.20	0.83
PS-42	Loadout Spout No. 1 Baghouse	PM	0.70	2.95
		PM_{10}	0.35	1.48
		$PM_{2.5}$	0.18	0.74
PS-43	Loadout Spout No. 2 Baghouse	PM	0.70	2.95
		PM_{10}	0.35	1.48
		$PM_{2.5}$	0.18	0.74
PS-44	Loadout Spout No. 3 Baghouse	PM	0.70	2.95
		PM_{10}	0.35	1.48
		$PM_{2.5}$	0.18	0.74
PS-45	Regrind Bin Baghouse	PM	0.07	0.27
		PM_{10}	0.03	0.14
		$PM_{2.5}$	0.02	0.07
PS-46	Regrind Cyclone Baghouse	PM	0.26	1.08
		PM_{10}	0.13	0.54

Emission Sources - Maximum Allowable Emission Rates

		$PM_{2.5}$	0.07	0.27
PS-47	Silo 13 LKD Baghouse	PM	0.19	0.79
		PM_{10}	0.10	0.40
		$PM_{2.5}$	0.05	0.20
PS-48	Silo 14 Alumina Baghouse	PM	0.21	0.18
		PM_{10}	0.10	0.09
		$PM_{2.5}$	0.05	0.05
PS-49	Slag Silo Filter Vent	PM	0.15	0.68
		PM_{10}	0.08	0.34
		$PM_{2.5}$	0.04	0.17
PS-50	North Slag Feeder Filter Vent	PM	0.15	0.68
		PM_{10}	0.08	0.34
		$PM_{2.5}$	0.04	0.17
PS-51	South Slag Feeder Filter Vent	PM	0.15	0.68
		PM_{10}	0.08	0.34
		$PM_{2.5}$	0.04	0.17
PS-61	Transfer Tower Clay Baghouse	PM	0.005	0.02
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
PS-62	Mill Scale Bin Baghouse	PM	0.01	0.03
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
PS-63	Bottom Ash Bin Baghouse	PM	0.01	0.03
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
PS-64	Limestone Bin Baghouse	PM	0.02	0.08
		PM_{10}	0.01	0.03
		$PM_{2.5}$	0.01	0.03
PS-65	Weight Feeder Mill Scale Baghouse	PM	0.01	0.05

Emission Sources - Maximum Allowable Emission Rates

		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
PS-66	Weight Feeder Bottom Ash Baghouse	PM	0.01	0.05
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
PS-67	Weight Feeder Limestone Baghouse	PM	0.01	0.05
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
PS-68	Weight Feeder Clay Baghouse	PM	0.01	0.05
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
PS-69	Additives Belt Conveyor Baghouse	PM	0.01	0.05
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
PS-70	Raw Material Rejected Baghouse	PM	<0.01	0.02
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
PS-71	Raw Material Transfer Baghouse	PM	0.01	0.05
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
PS-72	Feed to Blending Silo Baghouse	PM	0.01	0.05
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
PS-73	Blending Silo #2 Baghouse	PM	0.01	0.05
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
PS-74	K-2 Feed Buffer Bin Baghouse	PM	0.01	0.04
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02

Emission Sources - Maximum Allowable Emission Rates

PS-75	K-2 Feed Bucket Elevator Bottom Baghouse	PM	0.01	0.03
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
PS-76	K-2 Feed Bucket Elevator Top Baghouse	PM	0.01	0.04
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
PS-77	Kiln No. 2 Main Baghouse (10)	PM (FH + BH) (8)	24.61	103.35
		PM_{10} (FH + BH) (8)	22.57	95.40
		$PM_{2.5}$	22.57	95.40
		VOC	13.07	47.70
		NO_x (8)	386.00	(7)
		SO_2 (8)	106.00	(7)
		CO (9)	772.00	(7)
		HCl	2.57	11.25
		NH_3	1.63	7.15
PS-78	Airslide to Buffer Bin Baghouse	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
PS-79	Buffer Bin Baghouse	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
PS-80	Kiln Line 2 Clinker Cooler Baghouse	PM	10.36	34.81
		PM_{10}	7.87	26.45
		$PM_{2.5}$	7.87	26.45
PS-81a	Pan Conveyor No. 2 Transfer Baghouse	PM	0.01	0.06
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
PS-82a	Pan Conveyor Tower Transfer Baghouse	PM	0.01	0.06
		PM_{10}	<0.01	0.02

Emission Sources - Maximum Allowable Emission Rates

		$PM_{2.5}$	<0.01	0.02
PS-83	Clinker Silo Baghouse	PM	0.01	0.06
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
PS-84	Finish Mill No. 3 Weigh Feeder Silo 1 Baghouse	PM	0.01	0.03
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
PS-85	Finish Mill No. 3 Weigh Feeder Silo 2 Baghouse	PM	0.01	0.03
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
PS-86	Lime Dust Bin Baghouse	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
PS-87	Finish Mill Weigh Feeder Gypsum Baghouse	PM	0.01	0.03
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
PS-88	Bucket Elevator Feed FM 3 Baghouse	PM	0.01	0.03
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
PS-89	Belt Feed Finish Mill 3 Baghouse	PM	<0.01	0.01
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
PS-90	Finish Mill No. 3 Baghouse	PM	4.55	10.90
		PM_{10}	2.28	5.45
		$PM_{2.5}$	0.68	0.78
PS-91	Mill No. 3 Airslide Transfer Baghouse	PM	0.01	0.04
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
PS-92	Mill No. 3 Coolers Cement Transfer	PM	0.01	0.03

Emission Sources - Maximum Allowable Emission Rates

		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
PS-93	Gral Bucket Elevator Top Baghouse	PM	0.01	0.03
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
PS-94	Transfer Bucket Elevator Top Baghouse	PM	0.01	0.04
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
PS-95	Vent Airslide to Cement Silos Baghouse	PM	0.01	0.04
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
PS-96	Cement Silo Baghouse	PM	0.01	0.04
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
PS-97	Cement Buffer Bin Baghouse	PM	0.03	0.13
		PM_{10}	0.01	0.05
		$PM_{2.5}$	0.01	0.05
PS-98	Vent Airslide to Spout #1 Baghouse	PM	0.02	0.08
		PM_{10}	0.01	0.03
		$PM_{2.5}$	0.01	0.03
PS-99	No. 1 Loadout Spout Baghouse	PM	0.02	0.08
		PM_{10}	0.01	0.03
		$PM_{2.5}$	0.01	0.03
PS-100	Vent Airslide to Spout #2 Baghouse	PM	0.02	0.08
		PM_{10}	0.01	0.03
		$PM_{2.5}$	0.01	0.03
PS-101	No. 2 Loadout Spout Baghouse	PM	0.02	0.08
		PM_{10}	0.01	0.03
		$PM_{2.5}$	0.01	0.03

Emission Sources - Maximum Allowable Emission Rates

PS-102	No. 1 Pet Coke Transfer Baghouse	PM	0.01	0.04
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
PS-103	No. 2 Coke Belt Transfer Baghouse	PM	0.01	0.04
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
PS-104	No. 2 Coke Mill Bin 1 Baghouse	PM	<0.01	0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
PS-105	No. 2 Coke Mill Baghouse	PM	4.96	20.82
		PM_{10}	2.48	10.41
		$PM_{2.5}$	2.48	10.41
PS-106	Finish Coke No. 2 Bin 1 Baghouse	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
PS-107	Finish Coke No. 2 Bin 2 Baghouse	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
PS-108	Limestone Transfer Point Baghouse	PM	0.02	0.08
		PM_{10}	<0.01	0.03
		$PM_{2.5}$	<0.01	0.03
PS-109	Feed Slag to Finish Mill Baghouse	PM	0.01	0.03
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
AFT-1	Alternative Fuel Truck Unloading	PM	0.01	0.04
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	<0.01
PS-110 D1	Alternative Fuel Conveyor Drop #1	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01

Emission Sources - Maximum Allowable Emission Rates

		$PM_{2.5}$	<0.01	<0.01
PS-110 D2	Alternative Fuel Conveyor Drop #2	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
PS-110 D3	Alternative Fuel Conveyor Drop #3	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
PS-111	Cement Silo Baghouse	PM	0.43	1.88
		PM_{10}	0.21	0.94
		$PM_{2.5}$	0.11	0.47
PS-112	Cement Silo Baghouse	PM	0.43	1.88
		PM_{10}	0.21	0.94
		$PM_{2.5}$	0.11	0.47
PS-115	Transfer Tower Slide Gate	PM	0.01	0.06
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
LEF-1	Dry Sorbent Injection System – Hopper Vent 1	PM	<0.01	0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
LEF-2	Dry Sorbent Injection System – Air Lock Vent 1	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
LEF-3	Dry Sorbent Injection System – Hopper Vent 2	PM	<0.01	0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
LEF-4	Dry Sorbent Injection System – Air Lock Vent 2	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
NH3 FUG	Ammonia Storage and Piping (5)	NH_3	0.06	0.28

Emission Sources - Maximum Allowable Emission Rates

Fugitive Emissions: Material Drops to Stationary Sources				
FC-1	Process Fugitive (5)	PM	-	2.53
		PM_{10}	-	1.20
		$PM_{2.5}$	-	0.38
Fugitive Emissions from Material Stockpiles: Material Drops and Wind Erosion				
FC-2	Stockpiles (5)	PM	-	5.64
		PM_{10}	-	2.82
		$PM_{2.5}$	-	0.85
MTL	Material Handling (5), (6)	PM	7.39	10.31
		PM_{10}	7.39	10.31
		$PM_{2.5}$	1.11	1.55
PS-16 + PS-77	Kiln 1 and Kiln 2 Combined Limits (7), (10)	NO_x	-	2,801.00
		SO_2	-	116.50
		CO	-	1,915.00
Planned Maintenance Activities				
MSSFUG1	Inherently Low Emitting (ILE) Planned Maintenance Activities	NO_x	<0.01	<0.01
		CO	0.10	0.04
		SO_2	<0.01	<0.01
		PM	0.39	0.32
		PM_{10}	0.20	0.22
		$PM_{2.5}$	0.06	0.08
		VOC	1.99	0.05

(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
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
HCl - hydrochloric acid
NH_3 - ammonia
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.

Emission Sources - Maximum Allowable Emission Rates

(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(6) Material handling consists of EPNs BA-5, CGS-12, CGS-13, RS-21, RS-22, SD-2, SD-6, SD-7, SD-8, SD-13, SD-14, and SD-15.
(7) Kiln 1 and Kiln 2 combined emission limits for NO_x, SO_2, and CO.
(8) Compliance is based on a 30-day rolling average. A 30-day rolling average is generated for each day as the average of all the day's hourly emission data and the preceding 29 days of hourly emission data (representing only those hours during kiln operation including hours of planned maintenance, startup, and shutdown [MSS]).
(9) 24-hour average as determined by the continuous emission measurement system, including hours of planned MSS.
(10) Planned startup and shutdown emissions from the kilns are included.

Date: January 9, 2020