Emission Sources – Maximum Allowable Emission Rates

Permit Number 45622

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 (5)
KS2	Kiln No. 2	CO	14.46	63.33
		HCl	6.38	24.83
		HF	1.52	6.66
		NO_x	61.81	238.22
		Pb (6)	0.13	0.55
		PM	73.54	283.20
		PM_{10}	29.14	112.06
		$PM_{2.5}$	29.14	112.06
		SO_2 (4)	727.31	2353.83
		SO_3 (6)	8.78	28.83
		VOC	0.29	1.13
KS3	Kiln No. 3	CO	24.79	108.57
		HCl	10.94	42.56
		HF	2.61	11.42
		NO_x	105.95	408.38
		Pb (6)	0.22	0.95
		PM	126.27	486.38
		PM_{10}	50.15	193.00
		$PM_{2.5}$	50.15	193.00
		SO_2 (4)	1131.38	3716.60
		SO_3 (6)	15.05	49.43
		VOC	0.50	1.94
WHBS3	Kiln No. 3 Waste Heat Boiler Stack	CO	24.79	108.57
		HCl	10.94	42.56
		HF	2.61	11.42
		NO_x	105.95	408.38
		Pb (6)	0.22	0.95
		PM	88.20	486.38
		PM_{10}	44.72	193.00
		$PM_{2.5}$	44.72	193.00
		SO_2 (4)	1131.38	3716.60
		SO_3 (6)	15.05	49.43
		VOC	0.50	1.94

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KS3/WHBS3	Total Kiln No. 3 and Waste Heat Boiler Stacks	CO	-	108.57
		HCl	-	42.56
		HF	-	11.42
		NO_x	-	408.38
		Pb (6)	-	0.95
		PM	-	486.38
		PM_{10}	-	193.00
		$PM_{2.5}$	-	193.00
		SO_2 (4)	-	3716.60
		SO_3 (6)	-	49.43
		VOC	-	1.94
KS4	Kiln No. 4	CO	24.79	108.57
		HCl	10.94	42.56
		HF	2.61	11.42
		NO_x	105.95	408.38
		Pb (6)	0.22	0.95
		PM	126.86	488.97
		PM_{10}	50.74	195.59
		$PM_{2.5}$	50.74	195.59
		SO_2 (4)	1131.38	3716.60
		SO_3 (6)	15.05	49.43
		VOC	0.50	1.94
WHBS4	Kiln No. 4 Waste Heat Boiler Stack	CO	24.79	108.57
		HCl	10.94	42.56
		HF	2.61	11.42
		NO_x	105.95	408.38
		Pb (6)	0.22	0.95
		PM	88.79	488.97
		PM_{10}	45.31	195.59
		$PM_{2.5}$	45.31	195.59
		SO_2 (4)	1131.38	3716.60
		SO_3 (6)	15.05	49.43
		VOC	0.50	1.94
KS4/WHBS4	Total Kiln No. 4 and Waste Heat Boiler Stacks	CO	-	108.57
		HCl	-	42.56
		HF	-	11.42
		NO_x	-	408.38
		Pb (6)	-	0.95
		PM	-	488.97
		PM_{10}	-	195.59
		$PM_{2.5}$	-	195.59
		SO_2 (4)	-	3716.60
		SO_3 (6)	-	49.43
		VOC	-	1.94

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KS5	Kiln No. 5 Stack	CO	251.10	1100.00
		HCl	15.80	61.74
		HF	3.76	16.49
		NO_x	164.40	720.00
		Pb (6)	0.31	1.37
		PM	86.87	380.49
		PM_{10}	42.55	186.33
		$PM_{2.5}$	42.55	186.33
		SO_2 (4)	1170.00	5120.00
		SO_3 (6)	15.60	68.33
		VOC	0.50	2.50
WHBS5	Kiln No. 5 Waste Heat Boiler Stack	CO	251.10	1100.00
		HCl	15.80	61.74
		HF	3.76	16.49
		NO_x	164.40	720.00
		Pb (6)	0.31	1.37
		PM	86.87	380.49
		PM_{10}	42.55	186.33
		$PM_{2.5}$	42.55	186.33
		SO_2 (4)	1170.00	5120.00
		SO_3 (6)	15.60	68.33
		VOC	0.50	2.50
KS5/WHBS5	Total Kiln No. 5 and Waste Heat Boiler Stacks	CO	251.10	1100.00
		HCl	15.80	61.74
		HF	3.76	16.49
		NO_x	164.40	720.00
		Pb (6)	0.31	1.37
		PM	86.87	380.49
		PM_{10}	42.55	186.33
		$PM_{2.5}$	42.55	186.33
		SO_2 (4)	1170.00	5120.00
		SO_3 (6)	15.60	68.33
		VOC	0.50	2.50
CLR3DC	Cooler No. 3 Baghouse	CO	5.61	24.55
		HCl	1.29	5.66
		HF	0.01	0.03
		NO_x	1.29	5.64
		PM	0.59	2.59
		PM_{10}	0.59	2.59
		$PM_{2.5}$	0.59	2.59
		SO_2	1.39	6.08
		SO_3	0.10	0.45
CLR5DC	Cooler No. 5 Baghouse	CO	11.37	49.79
		HCl	2.62	11.47
		HF	0.02	0.07
		NO_x	2.61	11.43
		PM	1.49	6.53
		PM_{10}	1.49	6.53
		$PM_{2.5}$	1.49	6.53
		SO_2	2.82	12.33
			0.21	0.91

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		SO_3		
MTLHDL	Material Handling (7) (Raw and Calcined Coke Conveying)	PM PM_{10} $PM_{2.5}$	120.86 3.23 0.67	47.82 2.07 0.35
MTLLOAD	Raw Coke Loading Operations (Railcar and Truck Loading with Front-End Loader) (7)	PM PM_{10} $PM_{2.5}$	1.15 0.14 0.01	0.93 0.11 0.01
MTLUNLOAD	Raw Coke Unloading Operations (Raw Petcoke Barge and Ship Crane Unloading, Railcar Unloading and Truck Unloading)	PM PM_{10} $PM_{2.5}$	5.62 0.69 0.08	3.73 0.46 0.06
PA-PILES	Process Area Short-Term Piles (7)	PM PM_{10} $PM_{2.5}$	0.13 0.01 0.01	0.57 0.06 0.01
SP	Stockpiles (7) (Raw and Calcined)	PM PM_{10} $PM_{2.5}$	6.73 0.74 0.12	27.78 3.22 0.52
5C2 DC	Conveyor 5C2 Insertable Dust Collector	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.01	0.09 0.09 0.02
C25 DC	Conveyor 25 Insertable Dust Collector	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.02	0.09 0.09 0.07
C31 DC	Conveyor 31 Insertable Dust Collector	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.01	0.09 0.09 0.02
C35-HV	C35 Hi-Vac Unit Dust Collector	PM PM_{10} $PM_{2.5}$	0.04 0.04 0.01	0.15 0.15 0.05
C36 DC	Conveyor C36 Insertable Dust Collector	PM PM_{10} $PM_{2.5}$	0.04 0.04 0.02	0.18 0.18 0.09
C-37	C36/37 Conveyor Transfer Chute Dust Collector	PM PM_{10} $PM_{2.5}$	0.17 0.17 0.02	0.74 0.74 0.09
C-38	C37/38 Conveyor Transfer Point Dust Collector	PM PM_{10} $PM_{2.5}$	0.17 0.17 0.02	0.76 0.76 0.09
C&SDTBV	C and S Daytank Bin Vent Dust Collector	PM PM_{10} $PM_{2.5}$	0.07 0.07 0.01	0.31 0.31 0.05
CS-1	Calcine Silo No. 1 Bin Vent Dust Collector	PM PM_{10} $PM_{2.5}$	0.84 0.84 0.02	3.69 3.69 0.09
CS-2	Calcine Silo No. 2 Bin Vent Dust Collector	PM PM_{10} $PM_{2.5}$	0.70 0.70 0.01	3.08 3.08 0.05
CS-3	Calcine Silo No. 3 Bin Vent Dust Collector	PM PM_{10} $PM_{2.5}$	0.70 0.70 0.01	3.08 3.08 0.05

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CS-4	Calcine Silo No. 4 Bin Vent Dust Collector	PM PM_{10} $PM_{2.5}$	0.49 0.49 0.01	2.16 2.16 0.05
CS-CC	Main Calcine Material Handling System Dust Collector (Airtrol dust Collector)	PM PM_{10} $PM_{2.5}$	2.56 2.56 0.06	11.22 11.22 0.34
CS-DV	T1/T2 Pneumatic Conveying System Dust Collector	PM PM_{10} $PM_{2.5}$	0.33 0.33 0.01	1.43 1.43 0.05
L6 DC	Conveyor L6 Insertable Dust Collector	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.02	0.09 0.09 0.09
L6A DC	Conveyor L6A Insertable Dust Collector	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.02	0.09 0.09 0.09
L25A DC	Conveyor L25A Insertable Dust Collector	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.02	0.09 0.09 0.09
L44 DC	Conveyor L44 Insertable Dust Collector	PM PM_{10} $PM_{2.5}$	0.04 0.04 0.02	0.18 0.18 0.09
L45 DC	Conveyor L45 Insertable Dust Collector	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.02	0.09 0.09 0.09
LA-DC	Lab Annex Building Dust Collector	PM PM_{10} $PM_{2.5}$	0.06 0.06 0.06	0.01 0.01 0.01
RD-DC2	Kiln RD Building Hi-Vac Dust Collector	PM PM_{10} $PM_{2.5}$	0.07 0.07 0.07	0.08 0.08 0.08
SL-1	Ship Loading Dock Area Dust Collector (L44 Dust Collector)	PM PM_{10} $PM_{2.5}$	0.91 0.91 0.09	4.00 4.00 0.06
SL1-DCL	Ship Loader DCL Spout Dust Collector	PM PM_{10} $PM_{2.5}$	0.09 0.09 0.02	0.38 0.38 0.04
SL1-T1	Ship Loader Transfer No. 1 (L44/L1) Dust Collector	PM PM_{10} $PM_{2.5}$	0.09 0.09 0.09	0.38 0.38 0.18
SL1-T2	Ship Loader Transfer No. 2 (L1/L2) Dust Collector	PM PM_{10} $PM_{2.5}$	0.09 0.09 0.09	0.38 0.38 0.09
SL1-T3	Ship Loader Transfer No. 3 (L2/L3) Dust Collector	PM PM_{10} $PM_{2.5}$	0.09 0.09 0.09	0.38 0.38 0.09
SL-PIT2-DC STK1 SL-PIT2-DC STK2	Total Ship Loading Pit Dust Collector Stack 1 and Stack 2	PM PM_{10} $PM_{2.5}$	0.28 0.28 0.09	0.62 0.62 0.02

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SR-DC	Sample Prep Building Dust Collector	PM PM_{10} $PM_{2.5}$	0.06 0.06 0.06	0.11 0.11 0.11
S1 DC1	Silo 1 Insertable Dust Collector 1	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.02	0.09 0.09 0.02
S1 DC2	Silo 1 Insertable Dust Collector 2	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.02	0.09 0.09 0.02
S1 DC3	Silo 1 Insertable Dust Collector 3	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.02	0.09 0.09 0.02
S1 DC4	Silo 1 Insertable Dust Collector 4	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.02	0.09 0.09 0.02
S2 DC1	Silo 2 Insertable Dust Collector 1	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.02	0.09 0.09 0.03
S2 DC2	Silo 2 Insertable Dust Collector 2	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.02	0.09 0.09 0.03
S2 DC3	Silo 2 Insertable Dust Collector 3	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.02	0.09 0.09 0.03
S3 DC1	Silo 3 Insertable Dust Collector 1	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.02	0.09 0.09 0.03
S3 DC2	Silo 3 Insertable Dust Collector 2	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.02	0.09 0.09 0.03
S3 DC3	Silo 3 Insertable Dust Collector 3	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.02	0.09 0.09 0.03
S4 DC1	Silo 4 Insertable Dust Collector 1	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.02	0.09 0.09 0.05
S4 DC L44	Silo 4 Insertable Dust Collector at L44	PM PM_{10} $PM_{2.5}$	0.02 0.02 0.02	0.09 0.09 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) CO - carbon monoxide
HCl - hydrogen chloride
HF - hydrogen fluoride
NO_x - total oxides of nitrogen
Pb - lead
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented

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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

SO_2 - sulfur dioxide

SO_3 - sulfur trioxide

VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

(4) The hourly emission rate for SO_2 shall be the limit for stack testing purposes. The hourly emission rate for reporting SO_2 compliance with the permit shall be based on a 7-day rolling average from a 24-hour composite analysis of the blended raw feed sulfur content. The annual emission rate for reporting SO_2 compliance with the permit shall be based on a calendar year.

(5) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.

(6) Emitted as PM and included in the PM and PM_{10} emission rate.

(7) Fugitive emissions are an estimate only.