

# Emission Sources - Maximum Allowable Emission Rates

Permit Number 48455

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)
5F	Bauxite Unloading (E-Cranes No. 1 and 2)(5)	PM	18.33	19.25
		PM <sub>10</sub>	18.33	19.25
131	Bauxite Transfer Hoppers Nos. 1 and 2 (5)	PM	7.70	6.47
		PM <sub>10</sub>	7.70	6.47
12	Kiln 8 - ESP Stack	PM	9.79	33.01
		PM <sub>10</sub>	9.79	33.01
		NO <sub>x</sub>	19.00	49.65
		CO	22.00	74.40
		SO <sub>2</sub>	0.23	0.78
		VOC	5.00	16.91
		Hg	0.0025	0.008
		HF	0.10	0.23
		PM (8)	35.60	0.14
		PM <sub>10</sub> (8)	35.60	0.14
13	Facility 51 - Alumina Conveyor Baghouse	PM	1.63	7.14
		PM <sub>10</sub>	1.63	7.14
14	Facility 51 - Alumina Conveyor Baghouse	PM	1.63	7.14
		PM <sub>10</sub>	1.63	7.14
14F	Dock Conveyor (5)	PM	15.40	12.94
		PM <sub>10</sub>	15.40	12.94

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29	Kiln 9 - ESP Stack	PM	9.76	10.54
		PM <sub>10</sub>	9.76	10.54
		NO <sub>x</sub>	9.64	10.41
		CO	22.00	23.76
		SO <sub>2</sub>	0.23	0.25
		VOC	5.00	5.40
		Hg	0.0025	0.003
		PM (8)	19.00	0.08
		PM <sub>10</sub> (8)	19.00	0.08
30	South Railroad Track Baghouse Stack	PM	1.63	7.14
		PM <sub>10</sub>	1.63	7.14
31	Alumina Ship Loader Conveyor Elevator Baghouse Stack	PM	1.29	5.64
		PM <sub>10</sub>	1.29	5.64
32	Kiln 1 - Hydrate Dryer - ESP Stack	PM	5.00	21.90
		PM <sub>10</sub>	5.00	21.90
		NO <sub>x</sub>	1.00	4.38
		CO	0.50	2.19
		SO <sub>2</sub>	0.04	0.14
		VOC	2.20	4.69
		Hg	0.0008	0.003
		PM (8)	20.10	0.18
		PM <sub>10</sub> (8)	20.10	0.18
34	Alumina Ship Loader Conveyor - Tunnel Baghouse Stack	PM	1.29	5.64
		PM <sub>10</sub>	1.29	5.64
35	Alumina Ship Loader Conveyor - Tower Baghouse Stack	PM	1.20	5.26
		PM <sub>10</sub>	1.20	5.26

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90F	90 Silo Fugitives (5)	PM	0.73	3.17
		PM <sub>10</sub>	0.73	3.17
91F	Alumina Loading (Marine Terminal) (5)	PM	55.20	38.38
		PM <sub>10</sub>	55.20	38.38
92	90 1-1 Silo Dust Collector	PM	0.43	0.94
		PM <sub>10</sub>	0.43	0.94
93	90 2-1 Silo Dust Collector	PM	0.43	0.94
		PM <sub>10</sub>	0.43	0.94
94	90 2-2 Silo Dust Collector	PM	0.43	0.94
		PM <sub>10</sub>	0.43	0.94
95	90 3-1 Silo Dust Collector	PM	0.43	1.88
		PM <sub>10</sub>	0.43	1.88
96	90 3-2 Silo Dust Collector	PM	0.43	1.88
		PM <sub>10</sub>	0.43	1.88
97	90 3-3 Silo Dust Collector	PM	0.43	1.88
		PM <sub>10</sub>	0.43	1.88
98	90 3-4 Silo Dust Collector	PM	0.43	1.88
		PM <sub>10</sub>	0.43	1.88
100A	Lime Silo 1 Vent Baghouse	PM	0.13	0.56
		PM <sub>10</sub>	0.13	0.56
100B	Lime Silo 2 Vent Baghouse	PM	0.13	0.56
		PM <sub>10</sub>	0.13	0.56
101	No. 1 Lime Slaker Baghouse	PM	0.13	0.56
		PM <sub>10</sub>	0.13	0.56
102	No. 2 Lime Slaker Baghouse	PM	0.13	0.56
		PM <sub>10</sub>	0.13	0.56

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109	Belt Feeding Calciner No. 1 (5) (6)	PM	<0.01	<0.01
		PM <sub>10</sub>	<0.01	<0.01
110	Belt Feeding Calciner No. 2 (5) (6)	PM	<0.01	<0.01
		PM <sub>10</sub>	<0.01	<0.01
111	Scale Conveyor (5) (7)	PM	<0.01	<0.01
		PM <sub>10</sub>	<0.01	<0.01
112	Conveyor Feeding Kiln No. 8 (5) (6)	PM	<0.01	<0.01
		PM <sub>10</sub>	<0.01	<0.01
113	Conveyor Feeding Kiln No. 9 (5) (6)	PM	<0.01	<0.01
		PM <sub>10</sub>	<0.01	<0.01
132	Digestors 1 & 2	Hg	0.0114	0.0499
133	Digestors 3 & 4	Hg	0.0114	0.0499
134	Digester 5	Hg	0.0057	0.025
135	Rod Mills (5)	Hg	0.0154	0.1457
136	Desilicators (5)	Hg	0.0093	0.1457
137	Clarification (5)	Hg	0.0071	0.1457
138	Small Evaporators (5)	Hg	0.0015	0.1457
135, 136, 137, and 138	Total F_PlantS Operations (5)	Hg	--	0.1457
139	Large Evaporators (5)	Hg	0.0036	0.199
140	Torque Thickeners (5)	Hg	0.009	0.199
141	Precipitation (5)	Hg	0.0124	0.199
142	Hydrate Filters (5)	Hg	0.0203	0.199
139, 140, 141, and 142	Total F_PlantN Operations (5)	Hg	--	0.199

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<b>Permit by rule (PBR) sources incorporated by reference. Sources remain authorized by the PBR(s) as listed below:</b>				
PBR § 106.433 (Registration No. 92344)				
	Painting	VOC	6.94	0.69
PBR § 106.263 (Registration No. 92344)				
	MSS - Spray Cleaner	VOC	2.98	0.298
	MSS - Spray Lube	VOC	0.76	0.076

- (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<sub>x</sub> - total oxides of nitrogen
- SO<sub>2</sub> - sulfur dioxide
- PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented
- PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented
- PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter
- CO - carbon monoxide
- Hg - mercury
- HF - hydrogen fluoride
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (6) Minimal emissions due to 8 to 10 percent moisture in the material during normal operations.
- (7) Minimal emissions because the material contains 10 to 15 percent free liquids entrained in the matrix.
- (8) Emissions associated with maintenance, startup, and shutdown activities.

Date: July 27, 2012