Emission Sources - Maximum Allowable Emission Rates

Permit Number 9804

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 (8)	
			lbs/hour	TPY (4)
DCS-SP-1 to DCS-SP-5	Stockpiles (5)	PM	0.15	0.66
		PM_{10}	0.08	0.33
		$PM_{2.5}$	0.02	0.05
		Cr^{+3}	<0.05	<0.20
		Cr_{tot}	<0.05	<0.20
DCS-CT-1 to DCS-CT-7	Cooling Towers (5)	PM	<0.001	0.0012
		PM_{10}	<0.001	0.0012
		$PM_{2.5}$	<0.001	0.0012
		Cr^{+6}	0.0003	0.0012
		Cr_{tot}	0.0003	0.0012
DCS-MH-1	Material Handling (5)	PM	0.02	0.034
		PM_{10}	<0.007	0.012
		$PM_{2.5}$	<0.007	<0.01
		Cr^{+3}	<0.006	0.01
		Cr_{tot}	<0.006	0.01
15	Mixer Scrubber Stack (WS2 Scrubber)	PM	1.68	5.90
		PM_{10}	1.68	5.90
		$PM_{2.5}$	1.68	5.90
		Cr^{+3}	<0.10	0.328
		Cr^{+6}	<0.006	<0.021

Emission Sources - Maximum Allowable Emission Rates

		Cr_{tot}	<0.10	<0.349
16	Raw Materials Baghouse Stack FINs: Ore Grinders No. 1 and No.2, Ore Dryers No.1 and No. 2, and Ground Ore Bins No. 1 and No. 2	PM	0.53	1.86
		PM_{10}	0.53	1.86
		$PM_{2.5}$	0.53	1.86
		VOC	0.05	0.19
		NO_x	0.77	3.40
		SO_2	<0.01	0.02
		CO	0.65	2.85
		Cr^{+3}	0.14	0.49
		Cr^{+6}	0.003	0.011
		Cr_{tot}	0.143	0.50
17	Electrolytic Stack	PM	0.16	0.54
		PM_{10}	0.16	0.54
		$PM_{2.5}$	0.16	0.54
		Cr^{+3}	<0.001	<0.002
		Cr^{+6}	<0.003	0.007
		Cr_{tot}	<0.003	0.009
		NaOH	<0.08	<0.24
18	Primary Kiln Stack	PM	4.94	18.15
		PM_{10}	4.94	18.15
		$PM_{2.5}$	4.94	18.15
		VOC	0.54	2.36
		NOx	9.80	42.94
		SO_2	0.06	0.26
		CO	8.23	36.07

Emission Sources - Maximum Allowable Emission Rates

		Cr^{+6}	0.10	0.368
		Cr^{+3}	0.50	1.837
		Cr_{tot}	0.60	2.20
19	Kiln Ash Bin Baghouse Stack	PM	0.15	0.57
		PM_{10}	0.15	0.57
		$PM_{2.5}$	0.15	0.57
34	Soda Ash Bin No. 1 Baghouse Stack	PM	0.15	0.57
		PM_{10}	0.15	0.57
		$PM_{2.5}$	0.15	0.57
35	Soda Ash Bin No. 2 Baghouse Stack	PM	0.15	0.57
		PM_{10}	0.15	0.57
		$PM_{2.5}$	0.15	0.57
36	Kiln Ash Feed Bin Baghouse Stack	PM	0.15	0.57
		PM_{10}	0.15	0.57
		$PM_{2.5}$	0.15	0.57
38	Soda Ash Supply Bin Baghouse Stack	PM	0.09	0.30
		PM_{10}	0.08	0.28
		$PM_{2.5}$	0.08	0.28
41	Secondary Kiln Stack	PM	0.86	3.25
		PM_{10}	0.86	3.25
		$PM_{2.5}$	0.86	3.25
		VOC	0.19	0.82
		NOx	3.42	14.99
		SO_2	0.02	0.09
		CO	2.87	12.59

Emission Sources - Maximum Allowable Emission Rates

		Cr^{+3}	0.07	0.26
		Cr^{+6}	0.03	0.112
		Cr_{tot}	0.10	0.373
42	Leach Scrubber Stack (WS4 Scrubber)	PM	1.40	4.91
		PM_{10}	1.40	4.91
		$PM_{2.5}$	1.40	4.91
		Cr^{+3}	0.48	1.67
		Cr^{+6}	0.12	0.41
		Cr_{tot}	0.60	2.08
D1 to Dx	Storage Tanks (5 & 6)	PM	<0.001	0.002
		PM_{10}	<0.001	0.002
		$PM_{2.5}$	<0.001	0.002
		Cr^{+3}	<0.0001	<0.0001
		Cr^{+6}	<0.001	0.002
		Cr_{tot}	<0.001	0.002
		VOC	<0.0001	0.001
		Benzene	<0.0001	<0.001
		NaOH	<0.0001	<0.0001
		H_2SO_4	<0.002	<0.01
RESVNT	Residue Tanks Caustic Scrubber Stack (7)	PM	<0.0001	<0.0001
		PM_{10}	<0.0001	<0.0001
		$PM_{2.5}$	<0.0001	<0.0001
		Cr^{+3}	<0.0001	<0.0001
		Cr^{+6}	<0.0001	<0.0001
		Cr_{tot}	<0.0001	<0.0001

Emission Sources - Maximum Allowable Emission Rates

		VOC	<0.0001	<0.0001
		H_2S	0.02	<0.10
		Benzene	<0.0001	<0.0001

(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
Cr^{+3} - trivalent chromium
Cr^{+6} - hexavalent chromium
Cr_{tot} - total chromium ($Cr^{+3} + Cr^{+6}$)
NaOH - sodium hydroxide
H_2S - hydrogen sulfide
H_2SO_4 -sulfuric acid
(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) EPN D1-Dx consists of Storage Tanks D1 - D8, D13, D15 - D21, D23 - D26, D30, D34 - D43, D46, D47, D55, D56, D58, D59, D61, D64, D67, D69, D71 - D73, D83 – D85, D86A, D86B, D87A, D87B, D88A, D88B, DCSKRS, and RDA Treatment Tank Nos. 1 and 2 and total emissions from the listed tanks shall not exceed the reflected values.

(7) EPN RESVNT consists of emissions from Residue Head Tank, Residue Surge Tank, and Residue Treatment Tanks 1 through 4 and East and West Vertical Sulfide tanks, D28a and D28b, and total emissions from the listed tanks shall not exceed the reflected values.
(8) Planned startup and shutdown emissions are included. Maintenance activities are not authorized by this permit.

Date: March 29, 2013

Emission Sources - Maximum Allowable Emission Rates