EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 20345

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. 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 lb/hr	TPY
CU/STK	Stack Serving Reactor Furnace Operation (During Holding Fire Operations Only)	PM	1.37	0.47
		PM_{10}	1.37	0.47
		CO	3.42	1.72
		NO_x	9.45	6.03
		SO_2	100.00	52.60
		VOC	0.25	0.13
CU/STK/AN	Stack Annulus Serving Fluid Bed Dryer and Converter Building Ventilation Baghouses, Bin B2A, Bin B2B, Reactor Feed Distribution System, and Pugmill Baghouse	PM	76.30	324.80
		PM_{10}	76.30	324.80
		Pb	2.20	7.30
		CO	45.00	135.00
		NO_x	11.50	50.40
		SO_2	1010.50	4425.10
		VOC	0.29	1.27
DC-4	Baghouse Serving Lime Silo	PM	0.09	0.01
		PM_{10}	0.09	0.01
C-1	No. 1 Acid Plant Preheater	PM	0.90	3.96
		PM_{10}	0.90	3.96
		CO	2.31	10.12
		NO_x	5.28	23.13
		SO_2	0.04	0.17
		VOC	0.18	0.80

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
C-3	1st Marine Power Boiler	PM	0.27	0.44
		PM_{10}	0.27	0.44
		CO	0.68	2.77
		NO_x	2.74	11.09
		SO_2	5.79	1.51
		VOC	0.05	0.22
C-4	2nd Marine Power Boiler	PM	0.42	0.68
		PM_{10}	0.42	0.68
		CO	1.05	4.25
		NO_x	4.20	17.01
		SO_2	8.88	2.32
		VOC	0.08	0.34
C-5	Direct-Fired Boiler at Water Treatment Plant	PM	0.10	0.30
		PM_{10}	0.10	0.30
		CO	0.53	2.30
		NO_x	1.60	6.90
		SO_2	0.01	0.04
		VOC	0.04	0.20
C-6	No. 2 Acid Plant Preheater	PM	0.86	3.78
		PM_{10}	0.86	3.78
		CO	2.21	9.66
		NO_x	6.30	27.59
		SO_2	0.04	0.17
		VOC	0.18	0.77
C-7	Steam Superheater (This Unit Qualifies for Standard Exemption No. 7)	PM	0.90	4.00
		PM_{10}	0.90	4.00
		CO	0.23	1.00
		NO_x	1.20	5.30

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
		SO_2	0.11	1.00
		VOC	0.54	2.40
F-RSS	Slag Skimming from Reactor Smelting Furnace (4)	PM	0.09	0.36
		PM_{10}	0.09	0.36
		SO_2	0.25	0.96

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates lb/hr	TPY
F-CB(4)	Converter Building Fugitives (4)	PM	0.12	0.54
		PM_{10}	0.12	0.54
		NO_x	0.02	0.04
		SO_2	0.70	3.07
		CO	<0.01	<0.01
		VOC	<0.01	<0.01
F/Slag/P	Slag Pour at Dump (4)	PM	0.62	2.41
		PM_{10}	0.62	2.41
S-1	Stack Serving Spray Dryer Baghouse	PM	0.87	3.33
		PM_{10}	0.87	3.33
		CO	0.22	0.85
		NO_x	0.66	2.55
		SO_2	<0.01	0.02
		VOC	0.02	0.07
PF-1	Loading Acid from Tanks into Railcars	SO_2	0.06	0.07
		H_2SO_4	0.01	0.01
AP/S	Stack Serving Acid Plants	CO	50.00	120.00
		NO_x	30.00	80.00
		SO_2	964.90	2171.00
		VOC	0.10	0.33
		H_2SO_4 (MIST)	3.74	16.20
T-1	5,000 Ton Sulfuric Acid Tank	SO_2	0.06	0.08
T-2	5,000 Ton Sulfuric Acid Tank	SO_2	0.06	0.08
T-3	5,000 Ton Sulfuric Acid Tank	SO_2	0.06	

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
	0.08			
T-4	5,000 Ton Sulfuric Acid Tank	SO_2	0.06	0.08
T-5	6,000 Ton Sulfuric Acid Tank	SO_2	0.06	0.10
T-6	6,000 Ton Sulfuric Acid Tank	SO_2	0.06	0.10
T-7	6,000 Ton Sulfuric Acid Tank	SO_2	0.06	0.10
T-8	6,000 Ton Sulfuric Acid Tank	SO_2	0.06	0.10
T-20	Fuel Oil Storage Tank	VOC	1.46	0.51
T-22	Diesel Storage Tank	VOC	0.04	0.01
T-23	Diesel Storage Tank	VOC	0.05	0.03
T-24	Gasoline Storage Tank	VOC	6.80	0.02
T-25	Gasoline Storage Tank	VOC	6.99	0.55
T-26	750,000 Gallon Wastewater Holding Tank	SO_2	0.06	0.10
T-27	750,000 Gallon Wastewater Holding Tank	SO_2	0.06	0.10
T-28	100,000 Gallon Wastewater	SO_2	0.06	0.10

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
	Surge Tank			
T-29	Clarate Tank	Any	<0.01	<0.01
HF-15	Loading of WHB Dust into Tote Boxes (4)	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
HF-17Mix	Transfer from No. 5 Conveyor to No. 10 Belt or to Delumper and Screens (4)	PM	0.02	0.04
		PM_{10}	0.01	0.02
HF-17Si	Converter Silica Transfer from No. 5 to No. 10 Belt (4)	PM	0.03	<0.01
		PM_{10}	0.01	<0.01
HF-18AMix	Nos. 10-13 Belt Transfer, Mix (4)	PM	0.02	0.04
		PM_{10}	0.01	0.02
HF-18BMix	Nos. 13-14 Belt Transfer, Mix (4)	PM	0.02	0.04
		PM_{10}	0.01	0.02
HF-18ASi	Nos. 10-13 Belt Transfer, Si (4)	PM	0.03	<0.01
		PM_{10}	0.01	<0.01
HF-18BSi	Nos. 13-14 Belt Transfer, Si (4)	PM	0.03	<0.01
		PM_{10}	0.01	<0.01
HF-19Mix	Nos. 14-15 Belt Transfer, Mix (4)	PM	0.02	0.04
		PM_{10}	0.01	0.02
HF-19Si	Nos. 14-15 Belt Transfer, Si (4)	PM	0.03	<0.01
		PM_{10}	0.01	<0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
HF-20Mix	Nos. 15-32 Belt Transfer, Mix (4)	PM	0.02	0.04
		PM_{10}	0.01	0.02
HF-20Si	Nos. 15-32 Belt Transfer, Si (4)	PM	0.03	<0.01
		PM_{10}	0.01	<0.01
HF-21	No. 32 Belt Transfer to Silica Silo, Si (4)	All	<0.01	<0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
HF-22	Silica Silo Transfer to 33 Belt (4)	PM	0.01	<0.01
		PM_{10}	0.07	<0.01
HF-23	Transfer from 32 to 34 Belt, Mix (4)	PM	0.02	0.04
		PM_{10}	0.01	0.02
HF-24	Transfer from Belt 34 to Wet Concentrate Storage Bin B1A (4)	PM	0.02	0.02
		PM_{10}	0.01	0.01
HF-25	Transfer from Belt 34 to Wet Concentrate Storage Bin B1B (4)	PM	0.02	0.02
		PM_{10}	0.01	0.01
HF-26	Bin B1A Transfer to C1A Feeder Belt (4)	PM	0.01	0.02
		PM_{10}	0.01	0.01
HF-27	Bin B1B Transfer to C1B Feeder Belt (4)	PM	0.01	0.02
		PM_{10}	0.01	0.01
HF-28	Belt C1A Transfer to C2 Belt (4)	PM	0.01	0.02
		PM_{10}	0.01	0.01
HF-29	Belt C1B Transfer to C2 Belt (4)	PM	0.01	0.02
		PM_{10}	0.01	0.01
HF-30	C2 Belt Transfer to Fluid Bed	PM	0.01	0.04

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
	Dryer (4)	PM_{10}	0.01	0.02
HF-31	Reactor Feed Distribution	PM	0.02	0.06
	System (4)	PM_{10}	0.01	0.03
RF-1	Concentrate and Flux Delivery	PM	1.13	0.36
	Trucks (4)	PM_{10}	0.51	0.16
		Pb	0.01	<0.01
RF-2	Scrap Handling Fork Lifts (4)	PM	0.01	<0.01
		PM_{10}	0.01	<0.01
RF-3	General Plant Service Haul	PM	0.88	0.79
	Trucks (4)	PM_{10}	0.40	0.36
		Pb	0.01	0.01
RF-4	Street Sweepers (4)	PM	0.29	0.56
		PM_{10}	0.13	0.25
		Pb	<0.01	0.01
RF-5	Slag Haul Trucks (4)	PM	1.13	2.48
		PM_{10}	0.51	1.12
		Pb	<0.01	0.01
RF-6	Storage Pile Front-End Loaders (4)	PM	0.21	0.19
		PM_{10}	0.09	0.08
RF-7	Misc. Use Front-End Loaders (4)	PM	0.19	0.13
		PM_{10}	0.09	0.06

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
RF-8	Water Trucks (4)	PM	0.10	0.08
		PM_{10}	0.05	0.04
RF-9	Miscellaneous Use Fork Lifts (4)	PM	0.20	0.13
		PM_{10}	0.09	0.06
RF-10	Acid Plant Fork Lifts (4)	PM	0.28	0.26
		PM_{10}	0.13	0.12
RF-11	Wastewater Lime Delivery Trucks (4)	PM	0.10	0.01
		PM_{10}	0.05	<0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
F/MATTE/P	Outdoor Matte Pouring (4)	PM	5.47	1.97
		PM_{10}	5.47	1.97
		SO_2	39.20	14.10
		Pb	0.95	0.34
HF-46	Reclaim of Matte from Pile (4)	PM	0.02	0.01
		PM_{10}	0.02	0.01
		Pb	<0.01	<0.01

Note: Annual emission limits for CU/STK based on 1,056 hours of simultaneous ConTop furnace holding fire and converter operation; hours of holding fire during times when smelting and converter operations have ceased are not limited. **(2/99)**

(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 including PM_{10} (including species)
PM_{10} - particulate matter, equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no particulate matter greater than 10 microns is emitted.
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
CO - carbon monoxide
H_2SO_4 - sulfuric acid
Pb - lead
(4) Fugitive emissions are an estimate only.

* Emission rates are based on and the facilities are limited by the

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY

following maximum operating schedule:

Hrs/day_____ Days/week_____ Weeks/year _____ or Hrs/year 8,760

Dated ____