EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 2487

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. **(5/06)**

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
HPC-2	HNO_3 Tank	HNO_3	0.28	0.02
HPC-3	BOC Silo Bag Filter	PM_{10}	0.01	0.01
HPC-12A	Spray Dryer (d)	NO_x	2.20	9.24
		PM_{10}	1.16	4.87
		CO	1.84	7.72
		VOC	0.11	0.45
		SO_2	0.01	0.05
HPC-12B	NO_x Scrubber (d)	NO_x	15.20	44.60
		PM_{10}	0.52	2.18
		NH_3	0.74	3.10
HPC-12C	SCR Stack (d)	NO_x	11.21	47.08
		PM_{10}	0.56	2.34
		SO_2	0.01	0.01
		NH_3	0.95	4.00
HCK-8	HCK-8 Stack	NO_x	0.35	1.42
		PM_{10}	0.60	2.43
		CO	0.29	1.16
		VOC	0.02	0.08
		SO_2	0.01	0.01
HPC-14	Solution Storage Tank	NH_3	0.02	0.01
HPC-15	Solution Storage Tank	HNO_3	0.02	0.01
HPC-16	NI $(NO_3)_2$ Tank	HNO_3	0.01	0.01
HPC-17	HEPA Filter for Molox Bin (b)	PM_{10}	0.01	0.01

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
HPC-18	Dust Conveyor Bag Filter	PM_{10}	0.25	1.04
HPC-23	Belt Dryer Stack (a)	NO_x	1.94	8.16
		PM_{10}	0.15	0.64
		CO	1.68	7.04
		VOC	0.11	0.46
		SO_2	0.01	0.05
HPC-24	Calciner 1A Bypass Stack (a)	NO_x	0.97	4.08
		PM_{10}	0.08	0.32
		CO	0.84	3.52
		VOC	0.06	0.22
		SO_2	0.01	0.03
HPC-24A	Calciner 1B Bypass Stack (a)	NO_x	0.97	4.08
		PM_{10}	0.08	0.32
		CO	0.84	3.52
		VOC	0.06	0.22
		SO_2	0.01	0.03
HPC-24B	Calciner 2	NO_x	0.97	4.08
		PM_{10}	0.08	0.32
		CO	0.84	3.52
		VOC	0.06	0.25
		SO_2	<0.01	0.03
HPC-26	Dryer Bypass (a)	NO_x	0.83	3.45
		PM_{10}	0.06	0.27
		CO	0.71	2.98
		VOC	0.05	0.20
		SO_2	0.01	0.02
HPC-30	Mix Dose Tank 2	HNO_3	0.01	0.01

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
HPC-31	Base Storage Hopper Bagfilter	PM_{10}	0.03	0.14
HPC-32	Base Bin A Bagfilter	PM_{10}	0.01	0.01
HPC-33	Base Bin B Bagfilter	PM_{10}	0.01	0.01
HPC-34	Base Bin C Bagfilter	PM_{10}	0.01	0.01
HPC-35	Dust Bin A Bagfilter	PM_{10}	0.01	0.01
HPC-36	Dust Bin B Bagfilter	PM_{10}	0.01	0.01
HPC-41	Phosphoric Acid Tank	H_3PO_4	0.01	0.01
HPC-42	Citric Acid Tank	Water Emissions only		
HPC-44	Solution Reactor	NH_3	0.19	0.28
HPC-46	CO $(NO_3)_2$ Tank	HNO_3	0.01	0.01
HPC-47	HEPA for Solution Reactor Reactor (c)	PM_{10}	0.01	0.01
HPC-48A	Final Product Loadout Bag Filter	PM_{10}	0.01	0.01
HPC-48B	Final Product Loadout Bag Filter Maintenance	PM_{10}	<0.01	<0.01
HPC-49	Wash Water Tank	NH_3	0.01	0.01
HPC-50	Residue Box	NH_3	0.01	0.01

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HPC-51	Molox Hopper	PM_{10}	0.01	0.01
HPC-52	Extruder Feed Hopper Bag Filter	PM_{10}	0.01	0.01
HPC-53	Manual Feed Hopper	PM_{10}	0.01	0.01
HPC-54	3rd Impreg. Dryer Bag Filter	NO_x	0.31	1.34
		PM_{10}	0.06	0.25
		CO	0.72	3.14
		VOC	0.05	0.21
		SO_2	0.01	0.02
HPC-55	3rd Impreg. Area Vent Bag Filter	PM_{10}	0.01	0.01
HPC-56	Dilute Nitric Acid Tank	HNO_3	0.01	0.01
HPC-57	PEG Storage tank	Diethylene Glycol	0.01	0.01
		Ethylene Glycol	0.01	0.01
		VOC 0.01	0.01	
HPC-58	DEG Storage Tank	Diethylene Glycol	0.01	0.01
		VOC 0.01	0.01	
HPC-FUG	Fugitives	NH_3	0.01	0.01
		HNO_3 0.01	0.01	
		Ethylene Glycol	0.01	0.01

(1) Emission point identification - either specific equipment designation or emission point number

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from plot plan.

(2) Specific point source name. For fugitive sources use area name or fugitive source name.

(3) PM_{10} - particulate matter less than 10 microns
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
NH_3 - ammonia
HNO_3 - nitric acid

* Emission rates are based on and the facilities are limited by the maximum operating schedules represented in the permit renewal application of January 2004 and subsequent updates.

(a) Emissions from Calciners 1A and 1B are vented through one or more of the following emission points depending upon manufacturing process requirements: HPC-24, HPC-24A, HPC-26, and HPC-23. The total emissions from these sources will not exceed the quantities shown for HPC-23.

(b) The hourly and annual emission values for the molox bin assume to contain a maximum of 67 percent molybdenum.

(c) The hourly and annual emission values for the solution reactor assume to contain a maximum of 67 percent molybdenum, 50 percent nickel, and 50 percent cobalt.

(d) Emissions of the Main Stack (HPC 12) are a combination of emissions from the NO_x Scrubber (HPC-12B) and the Spray Dryer (HPC-12A). The combined total NO_x emissions from HPC-12B and HPC-12C shall not exceed 15.20 lbs/hr and 47.08 tpy.

Dated June 2, 2006