EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 810

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**
06HUT-003	No. 1 PAA Hold-Up Tank	NO_X	0.01	0.01
		PM_{10}	0.45	0.50
06FLT-004	No. 1 SR Filter	NO_X	0.20	0.50
		PM_{10}	0.45	1.10
06FLT-005	No. 2 SR Filter	NO_X	0.20	0.50
		PM_{10}	0.45	1.10
06CEN-006	No. 1 and No. 2 Refined Centrifuge	NO_X	0.10	0.10
		PM_{10}	0.30	0.70
06DRY-COMB	No. 1 - No. 4 Dryer Combined Emissions (Normal Operations)	PM_{10}	6.30	16.00
06DRY-COMB	No. 1 - No. 4 Dryer Combined Emissions (Maintenance, Start-Up, and Shutdown [MSS] Operations)	PM_{10}	36.00	0.30
06BIN-COMB	No. 1 and No. 2 Loading Bins Combined Emissions	PM_{10}	1.10	3.50
06TFX-012	OP1 Catalyst Mix Tank	VOC	3.23	0.04
06TFX-013	No. 3 TWKA Tank	VOC	3.80	1.56
06TFX-013	No. 3 TWKA Tank (MSS Operations)	VOC	0.30	0.01
06TFL-014	No. 2 Cyane Storage Tank (Normal Operations)	VOC	1.16	1.32

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
06TFL-014	No. 2 Cyane Storage Tank (MSS Operations)	VOC	40.68	1.61
06TFL-015	No. 3 Cyane Storage Tank (Normal Operations)	VOC	1.05	1.10
06TFL-015	No. 3 Cyane Storage Tank (MSS Operations)	VOC	40.58	1.61
06TFL-016	No. 4 Cyane Storage Tank (Normal Operations)	VOC	0.97	2.62
06TFL-016	No. 4 Cyane Storage Tank (MSS Operations)	VOC	104.93	4.34
06CLR-COMB	No. 1 and No. 2 Fluid Bed Cooler Combined Emissions (Normal Operations)	PM_{10}	2.5	6.40
06CLR-COMB	No. 1 and No. 2 Fluid Bed Cooler Combined Emissions (MSS Operations)	PM_{10}	7.0	0.03
06LTR-019	ADBA Truck Loading	NO_X VOC	2.09 0.01	0.91 0.01
06FLT-024	No. 3 Crude Filter	NO_X PM_{10}	1.00 0.23	2.50 0.60
06CEN-026	No. 3 and No. 4 Refined Centrifuge	NO_X PM_{10}	0.10 0.30	0.20 0.70
06FLT-027	Purge Filter	NO_X	1.30	2.80
06TFX-032	OP1 PMD Cobalt Metering Tank	VOC	3.53	0.01

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
06TFX-032	OP1 PMD Cobalt Metering Tank (MSS Operations)	VOC	0.01	0.01
06TFX-033	OP1 Lean Oil Tank	VOC	2.17	0.02
06TFX-033	OP1 Lean Oil Tank (MSS Operations)	VOC	0.02	0.01
06TFX-034	OP1 EDTA Tank	VOC	0.02	0.01
06TFX-035	Antifoam Tank	VOC	0.29	0.01
06TFX-041	No. 2 PAA Storage Tank	NO_X	0.01	0.01
		VOC	0.01	0.01
06TFX-044	OP1A Crude KA Tank	VOC	7.54	0.60
06TFX-044	OP1A Crude KA Tank (MSS Operations)	VOC	0.01	0.01
06TFX-045	NVR Tank	VOC	0.15	0.16
06TFX-046	OP1A Lean Oil Tank	VOC	2.17	0.03
06TFX-046	OP1A Lean Oil Tank (MSS Operations)	VOC	0.03	0.01
06LBA-047	Cyane Barge Unloading	VOC	5.50	3.00
06TFX-048	DEHPA Storage Tank	VOC	0.46	0.01
06DRY-050	No. 1 Fluid Bed Dryer	PM_{10}	1.30	5.10
06TFX-051	OP1A EDTA Tank	VOC	0.02	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**
06TFX-054	OP1 Crude KA Tank	VOC	2.28	0.20
06LDR-055	Cyane Drum Loading	VOC	2.90	0.02
06TFX-056	No. 1 TWKA Storage Tank	VOC	3.78	1.55
06TFX-056	No. 1 TWKA Storage Tank (MSS Operations)	VOC	0.18	0.01
06TFX-038	No. 2 South TWKA Storage Tank	VOC	3.78	1.55
06TFX-038	No. 2 South TWKA Storage Tank (MSS Operations)	VOC	0.12	0.01
06TFX-060	PMD Cobalt Metering Tank	VOC	0.26	0.01
06TFX-061	PMD North DEHPA Metering Tank	VOC	0.46	0.01
06CEN-062	No. 5 and No. 6 Crude Centrifuge	NO_X PM_{10}	1.00 0.19	2.40 0.45
06TFX-063	PMD South DEHPA Metering Tank	VOC	0.46	0.01
06TFX-065	No. 1 PAA Storage Tank	NO_X VOC	0.01 0.01	0.01 0.01
06CRY-066	No. 1 Crystallizer Jet Seal Tank	NO_X	1.10	2.20
06CRY-067	No. 1 Refined Crystallizer Jet Seal Tank	NO_X	0.01	0.01
06CRY-068	No. 2 SR Crystallizer Jet Seal Tank	NO_X	1.10	2.20

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**
06CRY-069	No. 2 Refined Crystallizer Jet Seal Tank	NO_X	0.01	0.01
06HUT-071	No. 2 PAA HUT	NO_X	0.01	0.01
		PM_{10}	0.20	0.50
06LTR-074	KA/NVR Truck Spot	VOC	1.10	0.25
06LBA-084	KA Barge Loading and Unloading (Normal Operations)	VOC	4.60	1.20
06LBA-084	KA Barge Loading and Unloading (MSS Operations)	VOC	0.01	0.01
06CTL-090	Cooling Towers	VOC	1.00	3.30
06WA-091	Cooling Water Basin	VOC	2.10	8.28
06LRC-094	CWW Railcar Loading	VOC	0.06	0.06
06LRC-086	Adipic Acid Rework Area	PM_{10}	1.10	0.05
06LRC-111	Dust Collection System Maintenance (MSS Operations)	PM_{10}	0.30	0.01
06TFX-288	Stormwater Tank	VOC	0.01	0.01
06FUG	Fugitives (4)	VOC	17.30	75.80
06VNT-001	OP1 Low Pressure Scrubber Vent (MSS Operations)	CO	545.00	35.00
		VOC	100.00	8.00

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
06VNT-002	OP1 High Pressure Scrubber Vent (MSS Operations)	CO	530.00	6.00
		VOC	245.00	3.00
06VNT-021	OP1A Low Pressure Scrubber Vent (MSS Operations)	CO	577.00	32.00
		VOC	120.00	8.00
06VNT-022	OP1A High Pressure Scrubber Vent (MSS Operations)	CO	930.00	12.00
		VOC	200.00	2.60
06TFX-387	Recycle Cyane Tank (MSS Operations)	VOC	1.39	0.01
06MNT-OP1	OP1 Area Clear-up Emissions (MSS Operations)	VOC	58.00	0.20
06MNT-OP1A	OP1A Area Clear-up Emissions (MSS Operations)	VOC	109.00	0.30
06LTR-MSS	MSS Loading Fugitives (MSS Operations)	VOC	2.60	0.20
06FUG-MSS	MSS Fugitive Emissions (MSS Operations)	Cl_2	0.10	0.01
		CO	0.02	0.01
		HCl	0.21	0.15
		HNO_3	0.04	0.01
		PM_{10}	1.11	0.01
		VOC	27.13	1.15

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

(1) Emission point identification - either specific equipment designation or emission point number from a plot plan.

(2) Specific point source names. For fugitive sources, use an area name or fugitive source name. The abbreviations used in the source names are as follows:

ADBA - Anhydrous Dibasic Acids
CWW - Concentrated Water Wash
Cyane - Cyclohexane
DEHPA - Di(2-Ethylehexyl) Phosphoric Acid
EDTA - Ethylenediaminetetraacetic acid
KA - Ketone-Alcohol mixture of cyclohexanone and cyclohexanol
NVR - Non volatile residue
OP1 - Cyane oxidation reaction unit operating in parallel with OP1A
OP1A - Cyane oxidation reaction unit operating in parallel with OP1
PAA - Purified Adipic Acid
PMD - Plastics Manufacturing Division
SR - Semi-Refined
TWKA - Topped wet cyclohexanone and cyclohexanol

(3) The abbreviations used in the air contaminant names are as follows:

Cl_2 - chlorine
CO - carbon monoxide
HCl - hydrogen chloride
HNO_3 - nitric acid
NO_X - total oxides of nitrogen
PM_{10} - particulate matter (PM) less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted.
SO_2 - sulfur dioxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

(4) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable special conditions and permit application representations.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

24 Hrs/day 7 Days/week 52 Weeks/year or 8,760 Hrs/year

** Compliance with annual emission limits is based on a rolling 12-month period.

Dated: July 29, 2011