

[355538]

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 *	
			(3)	lb/hr
	TPY **			
06HUT-003	No. 1 PAA Hold-Up Tank	PM ₁₀	0.45	0.50
		NO _x	0.01	0.01
06FLT-004	No. 1 SR Filter	PM ₁₀	0.45	1.10
		NO _x	0.20	0.50
06FLT-005	No. 2 SR Filter	PM ₁₀	0.45	1.10
		NO _x	0.20	0.50
06CEN-006	No. 1 and No. 2 Refined Centrifuge	PM ₁₀	0.30	0.70
		NO _x	0.10	0.10
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, Startup, 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
06TFL-014	No. 2 Cyane Storage Tank (Normal Operations)	VOC	1.16	1.32

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Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
**				
06TFL-014	No. 2 Cyane Storage Tank (MSS Operations)	VOC	0.34	0.65
06TFL-015	No. 3 Cyane Storage Tank (Normal Operations)	VOC	1.05	1.10
06TFL-015	No. 3 Cyane Storage Tank (MSS Operations)	VOC	0.23	0.65
06TFL-016	No. 4 Cyane Storage Tank (Normal Operations)	VOC	0.97	2.62
06TFL-016	No. 4 Cyane Storage Tank (MSS Operations)	VOC	0.56	0.65
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	VOC	0.01	0.01
		NO _x	2.09	0.91
06FLT-024	No. 3 Crude Filter	PM ₁₀	0.23	0.60
		NO _x	1.00	2.50
06CEN-026	No. 3 and No. 4 Refined Centrifuge	PM ₁₀	0.30	0.70
		NO _x	0.10	0.20

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<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
**				
06FLT-027	Purge Filter	NO _x	1.30	2.80
06TFX-032	OP1 PMD Cobalt Metering Tank	VOC	3.53	0.01
06TFX-033	OP1 Lean Oil Tank	VOC	2.17	0.02
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	VOC	0.01	0.01
		NO _x	0.01	0.01
06TFX-044	OP1A Crude KA Tank	VOC	7.54	0.60
06TFX-045	NVR Tank	VOC	0.14	0.16
06TFX-046	OP1A Lean Oil Tank	VOC	2.17	0.03
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
06TFX-054	OP1 Crude KA Tank	VOC	2.28	0.20
06LDR-055	Cyane Drum Loading	VOC	2.90	0.02

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<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
**				
06TFX-056	No. 1 TWKA Storage Tank	VOC	3.78	1.55
06TFX-038	No. 2 South TWKA Storage Tank	VOC	3.78	1.55
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	PM ₁₀ NO _x	0.19 1.00	0.45 2.40
06TFX-063	PMD South DEHPA Metering Tank	VOC	0.46	0.01
06TFX-065	No. 1 PAA Storage Tank	VOC NO _x	0.01 0.01	0.01 0.01
06CRY-066	No. 1 and No. 2 SR 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
06CRY-069	No. 3 Refined Crystallizer Jet Seal Tank	NO _x	0.01	0.01
06HUT-071	No. 2 PAA HUT	PM ₁₀	0.20	0.50

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<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
**				
		NO _x	0.01	0.01
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)	VOC CO	100.00 545.00	8.00 35.00
06VNT-002	OP1 High Pressure Scrubber	VOC	245.00	3.00

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	Vent (MSS Operations)	CO	530.00	6.00
06VNT-021	OP1A Low Pressure Scrubber	VOC	120.00	8.00
	Vent (MSS Operations)	CO	577.00	32.00
06VNT-022	OP1A High Pressure Scrubber	VOC	200.00	2.60
	Vent (MSS Operations)	CO	930.00	12.00
06TFX-387	Recycle Cyane Tank (MSS Operations)	VOC	0.03	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

(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.

Source name abbreviations:

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 units operating in parallel
PAA	-	Purified Adipic Acid
PMD	-	Plastics Manufacturing Division

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- SR - Semi-Refined
TWKA - Topped wet cyclohexanone and cyclohexanol
- (3) CO - Carbon monoxide
NO_x - Total oxides of nitrogen
PM₁₀ - 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.
VOC - Volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- * Emission rates are based on and the facilities are limited by the following maximum operating schedule:
Hrs/day_____ Days/week_____ Weeks/year_____ or Hrs/Year 8,760
- ** Compliance with annual emission limits is based on a rolling 12-month period.