

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 1790

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
5ABS-005 Only	High-Pressure Scrubber	Start-up, Upset, and Maintenance Service		
5ABS-013 Only	Low-Pressure Scrubber	Start-up, Upset, and Maintenance Service		
05COM-001	Portable Compressors	CO	5.64	6.35
		NO _x	0.20	0.23
		VOC	2.82	3.17
5FUG-050	KA Fugitives (4)	VOC	2.79	12.22
5LBA-048	KA Barge Loading/Unloading	VOC	0.72	0.19
05LDR-051	Cyclohexane Drum Loading	VOC	0.61	<0.001
5LTR-034	KA Trailer Loading	VOC	0.40	0.10
5LTR-054	NVR Trailer Loading	VOC	0.56	0.025
05TFL-07B	No. 3 Cyane Tank	VOC	0.40	0.39
05TFL-07C	No. 4 Cyane Tank	VOC	0.40	0.39
05TFL-07D	No. 6 De-inventory Tank	VOC	0.40	0.31
05TFL-07E	No. 61 Cyane Tank	VOC	0.40	0.39
05TFX-008	Lean Oil Tank	VOC	4.33	0.021
05TFX-009	DEHPA Tank	VOC	0.03	0.007

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05TFX-010	DEHPA Metering Tank	VOC	0.01	0.001
05TFX-011	EDTA Tank	VOC	0.001	<0.001
05TFX-012	EDTA Metering Tank	VOC	<0.001	<0.001
05TFX-015	Seal Flush Tank	VOC	0.001	<0.001
05TFX-016	Cobalt Catalyst Tank	VOC	2.0	0.031
05TFX-017	Chromium Tank	VOC	0.13	0.012
05TFX-18A	No. 5 KA Tank	VOC	0.043	0.374
05TFX-18B	No. 11 KA Tank	VOC	0.061	0.59
05TFX-18C	No. 52 KA Tank	VOC	0.061	0.59
05TFX-18D	No. 53 KA Tank	VOC	0.061	0.59
05TFX-019	Catalyst Metering Tank	VOC	0.01	<0.001
05TFX-020	NVR Storage Tank K-2	VOC	<0.001	0.081
05TFX-021	NVR Storage Tank K-1	VOC	0.46	0.152
05TFX-022	Divert Tank K-6	VOC	0.92	0.096
05TFL-023	Divert Tank K-8	VOC	0.92	0.096
05TFX-024	NVR Storage Tank K-7	VOC	<0.001	0.035
05TFL-025	Divert Tank K-10	VOC	0.92	0.096
05TFX-026	KA Storage Tank K-51	VOC	0.013	0.927
05TFX-027	50A Tank	VOC	0.0043	0.0054
05TFX-028	50B Tank	VOC	0.005	0.078

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			lb/hr	TPY
05TFX-029	50C Tank	VOC	0.005	0.035
05TFX-030	50D Tank	VOC	0.005	0.035
05TFX-032	Unichem Tank	VOC	0.02	0.003
05TFX-033	Crude KA/KALL Tank	VOC	0.38	13.526
05TFX-035	Aqueous Waste Divert Tank	VOC	0.001	0.016
05TFX-038	Spill Control Containment	VOC	0.0005	<0.001
05TFX-039	No. 2 Chromium DEHPA Metering Tank	VOC	0.01	<0.001
05TFX-046	Chrome/DEHPA Day Tank	VOC	0.01	0.002
05TFX-049	Portable Diesel Tank	VOC	0.01	0.01
05VNT-014	Steam Still Vent	Maintenance Service Only		
05VNT-037	Steam Still Decanter Vent	Maintenance Service Only		
FD-27	AA Plant Fugitives (4)	VOC	0.07	0.30
PD-4	West Cone Burner (5)	CO	5.1	22.30
		NO _x	52.90	39.80
		VOC	0.10	0.44
PD-5	East Cone Burner (5)	See footnote.		
PD-16A	No. 1 Dryer Dust Scrubber	PM	0.01	0.1
PD-16B	No. 2 Dryer Dust Scrubber	PM	0.01	0.1

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			<u>lb/hr</u>	<u>TPY</u>
PD-17	Adipic Acid Loading	PM	0.94	1.2
PD-25 Only	Absorber Vent	Startup, Upset, and Maintenance Service		
PD-32	Adipic Acid Solution Tank	NO _x	0.30	0.72
PD-33	No. 1 Vacuum Jet Seal Tank	NO _x	0.16	0.39
PD-34	No. 2 Vacuum Jet Seal Tank	NO _x	0.04	0.09
PD-35	No. 1 RML Receiver	NO _x	0.023	0.10
PD-36	No. 2 RML Receiver	NO _x	0.023	0.10
PD-37	No. 1 RML Tank	NO _x	0.37	0.89
PD-38	No. 2 RML Tank	NO _x	0.15	0.37
PD-39	Solution Water Receiver	NO _x	0.023	0.10
PD-40	Solution Water Tank	NO _x	0.36	0.86
PD-41	No. 1 Refined Solution Receiver	NO _x	0.023	0.10
PD-42	No. 2 Refined Solution Receiver	NO _x	0.023	0.10
PD-43	PML Tank Vent	NO _x	<0.10	<0.10
PD-45	DBE Storage Tank Vent	VOC	0.53	3.344
PD-49	Refined Solution Storage Tank	NO _x	0.17	0.40
PD-50	N ₂ O/NO _x Abater	CO	5.30	12.20

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			lb/hr	TPY
		NH ₃ 2.10	5.00	
		NO _x 43.10	30.00	
		N ₂ O 3,405	7,892	
		VOC 2.10	5.00	
PJ-14I	Methanol Tank No. 41	VOC	0.05	0.12
PJ-14J	Methanol Tank No. 42	VOC	0.05	0.12
MEOH-Fug	Methanol Area Fugitives (4)	VOC	0.15	0.64

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

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

- Cyane - cyclohexane
- DBE - dibasic esters
- DEHPA - [Defined in the confidential file]
- EDTA - Ethylenediaminetetraacetic acid
- KA - Ketone-Alcohol mixture of cyclohexanone and cyclohexanol
- KALL - Ketone-Alcohol lower layer
- NVR - non volatile residue
- PML - Purge Mother Liquor (dibasic acid and water)
- RML - Refined Mother Liquor (adipic acid and water)

- (3) CO - carbon monoxide
- NH₃ - ammonia
- NO_x - total oxides of nitrogen
- N₂O - nitrous oxide
- PM - particulate matter, suspended in the atmosphere, including PM₁₀
- PM₁₀ - 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.

(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

(5) The holder of this permit, at his option, may emit all or part of the emissions allowed from the West Cone Burner (EPN PD-4) through the East Cone Burner (EPN PD-5). The sum of all

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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>

emissions from both EPNs PD-4 and PD-5 may not exceed the maximum allowable emission rates shown for EPN PD-4.

- * 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

Dated January 21, 2003