

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 **
05COM-001	Portable Compressors	CO	5.64	6.35
		NO _x	0.20	0.23
		PM	2.74	3.08
		SO ₂	2.25	2.53
		VOC	2.82	3.17
05LDR-051				
05LTR-034	KA Trailer Loading	VOC	0.36	0.03
05LBA-048	KA Barge Loading	VOC	1.07	0.61
5LTR-054				
PD-50	N ₂ O/NO _x Abater	CO	5.27	11.25
		NH ₃	2.11	4.50
		NO _x	47.39	20.25
		N ₂ O	2,922.08	6,243.75
		VOC	2.11	4.50
PD-16A	No. 1 Dryer Dust Scrubber	PM	3.75	11.30
PD-16B	No. 2 Dryer Dust Scrubber	PM	3.75	11.30
PD-17	Adipic Acid Loading	PM	0.35	1.13
PD-32	Adipic Acid Solution Tank	NO _x	0.45	1.08
PD-33	No. 1 Vacuum Jet Seal Tank	NO _x	0.21	0.50

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			lb/hr	TPY **
PD-34	No. 2 Vacuum Jet Seal Tank	NO _x	0.05	0.12
PD-35	No. 1 RML Receiver	NO _x	0.02	0.10
PD-36	No. 2 RML Receiver	NO _x	0.02	0.10
PD-37	No. 1 RML Tank	NO _x	0.47	1.14
PD-38	No. 2 RML Tank	NO _x	0.22	0.53
PD-39	Solution Water Receiver	NO _x	0.02	0.10
PD-40	Solution Water Tank	NO _x	0.47	1.13
PD-41	No. 1 Refined Solution Receiver	NO _x	0.02	0.10
PD-42	No. 2 Refined Solution Receiver	NO _x	0.02	0.10
PD-43	PML Tank Vent	NO _x	0.01	0.01
PD-49	Refined Solution Storage Tank	NO _x	0.22	0.54
PD-4	West Cone Burner (5)	CO	5.10	22.30
		NO _x	25.66	55.06
		VOC	0.10	0.44
PD-5	East Cone Burner (5)	See footnote.		
05CLT-095	Adipic Acid Cooling Tower	PM	0.78	3.41
NA-CLT	Nitric Acid Cooling Tower	PM	0.30	1.30
PC-9	Vent Stack	NH ₃	2.12	8.50
		NO _x	79.50	210.00
		N ₂ O	1,097.70	2,072.50

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PC-14	Batch Stripping	NH ₃	12.40	4.34
05FUG-050	KA Fugitives (4)	VOC	2.80	12.25
MEOH-FUG	Methanol Area Fugitives (4)	VOC	0.15	0.64
FD-27	AA Plant Fugitives (4)	VOC	0.07	0.30
FD-28	AA Inorganic Fugitives (4)	HNO ₃	0.03	0.10
FC-10	Fugitives (4)	HNO ₃	0.01	0.05
		NH ₃	0.04	0.19
		NO _x	0.02	0.07
		N ₂ O	0.01	0.01
05TFL-07B	No. 3 Cyane Tank	VOC	0.45	0.38
05TFL-07C	No. 4 Cyane Tank	VOC	0.33	0.38
05TFL-07D	No. 6 De-Inventory Tank	VOC	0.09	0.31
05TFL-07E	No. 61 Cyane Tank	VOC	0.34	0.38
05TFX-008	Lean Oil Tank	VOC	0.40	0.03
05TFX-009				
05TFX-010				
05TFX-011	EDTA Storage Tank	VOC	0.01	0.01
05TFX-012	EDTA Metering Tank	VOC	0.01	0.01
05TFX-015	Seal Flush Tank	VOC	0.01	0.01

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			lb/hr	TPY **
05TFX-016	Cobalt Catalyst Tank	VOC	0.17	0.03
05TFX-017				
05TFX-18A	No. 5 KA Tank	VOC	0.97	0.36
05TFX-18B	No. 11 KA Tank	VOC	1.36	0.57
05TFX-18C	No. 52 KA Tank	VOC	1.36	0.57
05TFX-18D	No. 53 KA Tank	VOC	1.36	0.57
05TFX-019				
05TFX-020	NVR Storage Tank K-2	VOC	0.04	0.05
05TFX-021	NVR Storage Tank K-1	VOC	0.04	0.03
05TFX-022	Divert Tank K-6	VOC	0.71	0.10
05TFL-023	Divert Tank K-8	VOC	0.71	0.10
05TFX-024	NVR Storage Tank K-7	VOC	0.04	0.03
05TFX-025	Divert Tank K-10	VOC	0.71	0.10
05TFX-026	KA Storage Tank K-51	VOC	1.29	0.92
05TFX-027	50A Tank	VOC	0.17	0.01
05TFX-028	50B Tank	VOC	0.80	0.11
05TFX-029	50C Tank	VOC	0.80	0.11
05TFX-030	50D Tank	VOC	0.80	0.11
05TFX-032	Unichem Tank	VOC	0.03	0.01

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			lb/hr	TPY **
05TFX-033	Crude KA/KALL Tank	VOC	13.64	15.12
05TFX-035	Aqueous Waste Divert Tank	VOC	0.13	0.02
05TFX-038	Spill Containment Collection Tank	VOC	0.01	0.01
05TFX-039				
05TFX-046				
05TFX-049	Portable Diesel Tank	VOC	0.25	0.01
PD-45	DBE Storage Tank	VOC	43.77	4.44
PJ-14I	Methanol Tank No. 41	VOC	0.05	0.11
PJ-14J	Methanol Tank No. 42	VOC	0.05	0.11
WWFUG	Wastewater Fugitives (4)	VOC	0.69	3.11
05ABS-005	High-Pressure Scrubber (MSS)	CO	1041.00	14.63
		VOC	336.00	3.79
05ABS-013	Low-Pressure Scrubber (MSS)	CO	771.00	18.70
		VOC	148.00	1.26
05VNT-014	Steam Still Vent (MSS)	CO	16.00	0.38
		VOC	4.00	0.03
05VNT-031	Aqueous Waste Decanter	CO	16.00	0.38
	Vent (MSS)	VOC	4.00	0.03
05VNT-037	Steam Still Decanter Vent (MSS)		CO	16.00
	0.38			
		VOC	4.00	0.03
PD-12	Ammonia Flare (MSS)	CO	48.29	0.85

		NH ₃	327.20	3.63	
		NO _x	90.97	1.07	
		VOC	18.28	0.32	
PD-25	Absorber Vent (MSS)	CO		27.00	10.54
		NO _x	72.90	18.98	
		N ₂ O	14,985.00	5,852.00	
		VOC	10.80	4.22	

(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.

Source name abbreviations:

Cyane - cyclohexane

DBE - dibasic esters

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.
SO₂ - sulfur dioxide
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 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

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