

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 1862A

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**
1	Caustic Scrubber PVC	Decanoyl Chloride 0.25 HCl VOC	0.013 0.055 0.18 0.20	<0.01 0.035 0.013
5	Phosgene Plant Flare	Cl ₂ CO 0.8 COCl ₂ <0.001 NO _x	<0.001 3.34 <0.001 0.006	<0.001 0.025
11	North Boiler	CO NO _x PM ₁₀ SO ₂ VOC	1.384 0.823 0.126 0.010 0.091	2.77 1.65 0.252 0.02
F13	North Chloro-Formates Area Fugitives (4)	VOC	0.56	1.38
14	Caustic Scrubber	VOC HCl	2.44 0.331	0.59 0.03
F15	Storage Tanks Fugitives (4)	VOC	0.18	0.80
F16	PRC Area Fugitives (4)	VOC	0.14	0.61
F17	PRC Storage Fugitives (4)	VOC	0.08	0.35
F19	New Products Area Fugitives (4)	VOC COCl ₂ HCl	0.83 <0.001 0.001	3.617 0.002

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F23	Phosgene Plant Fugitives (4)	Cl ₂	0.05	0.21
		CO	0.005	0.02
		COCl ₂	<0.001	0.002
		VOC	0.006	0.03
25	Reactor RX-3100 PM ₁₀ Vent	PM ₁₀	0.03	0.016
26	Cyclo Vent	VOC	<0.001	<0.001
		PM ₁₀ (Z-ASP)	0.02	0.045
F27	Dryer Fugitives (4)	PM ₁₀ (Z-ASP)	<0.01	<0.01
28	Fitz Dryer Vent	VOC	0.06	0.031
		PM ₁₀ (Z-ASP)	0.11	0.41
29	RX Charge Bag House	VOC	<0.01	<0.01
		PM ₁₀ (Z-ASP)	<0.01	<0.01
F31	Z-ASP Reactor RX Fugitives (4)	VOC (Na-Z-ASP)	0.52	1.92
F36	BCF Storage Tank Fugitives (4)	VOC	0.035	0.15
F37	DMC Storage Tank Fugitives (4)	VOC	0.02	0.10
38	Centrifuge Hold Tank	VOC	0.008	<0.001
39	Centrifuge	VOC	0.09	0.022
40	Centrifuge Trans Tank	VOC	0.001	<0.001
41	DMO Loading	VOC	0.012	0.001
43	Water Scrubber	HCl	<0.01	<0.01
44	DDI Drumming	VOC	<0.01	<0.01
45	Reactor RX-3100 VOC Vent	VOC (Na-L-ASP)	<0.01	<0.01

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46	Tank T-3111	VOC (Na-Z-ASP)	<0.01	<0.01
47	Tank T-3112	VOC (Na-Z-ASP)	<0.01	<0.01
48	Tank T-3113	VOC (Na-Z-ASP)	<0.01	<0.01
49	Tank T-3114	VOC (Na-Z-ASP)	<0.01	<0.01
F50	Tank Area Fugitives (4)	VOC (Na-Z-ASP)	<0.01	<0.01
51	Truck Loading Emissions	VOC (Na-Z-ASP)	<0.01	<0.01
52	South Boiler	CO	1.105	2.21
		NO _x	1.19	2.38
		PM ₁₀	0.161	0.322
		SO ₂	0.019	0.038
		VOC	0.09	0.18
53	Thermal Oxidizer System Stack	Cl ₂	0.16	0.68
		CO	1.44	6.00
		COCl ₂	0.3068	1.202
		HCl	0.428	1.648
		NO _x	1.44	1.50
		VOC	0.704	1.192
F54	Thermal Oxidizer System Area Fugitives (4)	COCl ₂	<0.001	<0.001
		VOC	0.004	0.02
F55	Cold Vent Fugitives (4)	COCl ₂	<0.001	<0.001
		VOC	<0.01	0.03
F56	LEP Fugitives (4)	VOC	0.40	1.75
57	Carbon Adsorption Outlet	VOC	0.04	0.008
F58	LEP Loading Fugitives	VOC	0.523	0.273

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F59	DCPI Plant Fugitives (4)	COCl ₂ VOC	<0.001 0.037	<0.001 0.162
F60	DCPI Loading Collection Losses	VOC	0.01	0.001
61	Cooling Tower Emissions	VOC	0.02	0.07
62	Tar Loading	VOC	<0.001	<0.001
F64	Multipurpose Distillation Unit	VOC	0.021	0.093
65	LPE Water Scrubber Outlet	VOC	0.02	0.001
V-ETOH-1	Ethanol Tank Vent	Ethanol	5.71	0.28
V-MEOH-1	Methanol Tank Vent	Methanol	8.02	0.36
V-2EHOH-1	2EHOH Tank Vent	2-Ethyl Hexanol	0.04	<0.01
V-ISOBUT-1	IBOH Tank Vent	Isobutanol	1.78	0.03
V-SECBUT-1	SBOH Tank Vent (5)	Sec-Butyl Alcohol	3.00	0.06
V-DEG-1	DEG Tank Vent	Diethylene Glycol	<0.01	<0.01
V-BZOH-1	BZOH Tank Vent	Benzyl Alcohol	0.015	<0.01
F-TRK-LDG	Load Area Fugitives (4)	VOC	0.28	1.23
F-BZOH	BZOH Storage Tank Fugitives (4)	VOC	0.02	0.09
F-MOSF	Multi-Purpose Organic Synthesis Facility Fugitives (4)	VOC COCl ₂	0.10 <0.01	0.46 <0.01
F-CO	CO Storage Area Fugitives (4)	CO	0.15	0.66

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WIH-DISCH	Walk-In Hood Caustic Scrubber	Cl ₂	0.0001	<0.001
		COCl ₂	0.002	0.001
		HCl	<0.001	0.001
		VOC	2.405	0.57

(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.

- (3) Cl₂ - chlorine
 CO - carbon monoxide
 COCl₂ - phosgene
 HCl - hydrochloric acid
 Na-L-ASP - sodium salt of carbobenzoxy L- aspartic acid
 Na-Z-ASP - sodium salt of carbobenzoxy aspartic acid
 NO_x - total oxides of nitrogen
 PM₁₀ - particulate matter (PM) equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted.
 PVCl - pivaloyl chloride
 SO₂ - sulfur dioxide
 VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code §

101.1

Z-ASP - carbobenzoxy aspartic acid

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

(5) The EPN V-SECBUT-1 shall be deleted and the associated storage tank shall be scrapped no later than September 1, 1998.

* 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.

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Dated December 3, 2004