

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 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	Decanoyl Chloride	0.013	<0.01
		PVCl	0.25	0.055
		HCl	0.18	0.035
		VOC	0.20	0.013
4	South ARI (4)(6)	VOC	15.10	20.30
		Cl <sub>2</sub>	0.009	<0.001
		HCl	0.57	2.31
		COCl <sub>2</sub>	0.26	0.63
		PVCl	0.09	0.03
		Pivalic Acid	0.12	0.02
		Decanoyl Chloride	<0.01	<0.01
		Neodecanoic Acid	<0.01	<0.01
5	Phosgene Plant	Cl <sub>2</sub>	<0.001	<0.001
	Flare	CO	23.8	79.76
	(Before EPN 53 is placed on line)	COCl <sub>2</sub>	<0.001	<0.001
		NO <sub>x</sub>	0.056	0.20
5	Phosgene Plant	Cl <sub>2</sub>	<0.001	<0.001
	Flare	CO	0.8	3.34
	(After EPN 53 is placed on line)	COCl <sub>2</sub>	<0.001	<0.001
		NO <sub>x</sub>	0.006	0.025
11	North Boiler	CO	0.665	2.91
		NO <sub>x</sub>	2.66	11.65
		PM <sub>10</sub>	0.14	0.62
		SO <sub>2</sub>	0.011	0.05
	VOC	0.11	0.48	

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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>
12	North ARI (4)(6)	See footnotes.		
F13	North Chloro-Formates Area Fugitives (5)	VOC	0.56	1.38
14	Caustic Scrubber	VOC	2.44	0.59
		HCl	0.331	0.03
F15	Storage Tanks Fugitives (5)	VOC	0.18	0.79
F16	PRC Area Fugitives (5)	VOC	0.14	0.61
F17	PRC Storage Fugitives (5)	VOC	0.08	0.35
F19	New Products Area Fugitives (5)	VOC	0.83	3.617
		COCl <sub>2</sub>	<0.001	0.002
		HCl	0.001	0.007
F23	Phosgene Plant Fugitives (5)	Cl <sub>2</sub>	0.05	0.21
		CO	0.005	0.02
		COCl <sub>2</sub>	<0.001	0.002
		VOC	0.006	0.03
F24	South ARI Area Fugitives (5)	VOC	0.076	0.333
		COCl <sub>2</sub>	<0.001	<0.001
25	Reactor RX-3100 PM <sub>10</sub> Vent	PM <sub>10</sub>	0.03	0.016
26	Cyclo Vent	VOC	<0.001	<0.001
		PM <sub>10</sub> (Z-ASP)	0.02	0.045
F27	Dryer	PM <sub>10</sub> (Z-ASP)	<0.01	<0.01

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			lb/hr	TPY
	Fugitives (5)			
28	Fitz Dryer Vent	VOC	0.06	0.031
		PM <sub>10</sub> (Z-ASP)	0.11	0.41
29	RX Charge	VOC	<0.01	<0.01
	Bag House	PM <sub>10</sub> (Z-ASP)	<0.01	<0.01
30	Acid Storage Vent	HCl	<0.01	<0.01
F31	Z-ASP Reactor RX Fugitives (5)	VOC (Na-Z-ASP)	0.52	1.92
F36	BCF Storage Tank Fugitives (5)	VOC	0.035	0.15
F37	DMC Storage Tank Fugitives (5)	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
42	Water Scrubber	HCl	<0.01	<0.01
43	Water Scrubber	HCl	<0.01	<0.01
44	DDI Drumming	VOC	<0.01	<0.01
45	Reactor RX-3100	VOC (Na-L-ASP)	<0.01	<0.01

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
	VOC Vent			
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 (5)	VOC (Na-Z-ASP)	<0.01	<0.01
51	Truck Loading Emissions	VOC (Na-Z-ASP)	<0.01	<0.01
53	Thermal Oxidizer (4)(6)	Cl <sub>2</sub>	0.08	0.34
		CO	0.60	2.50
		COCl <sub>2</sub>	0.1534	0.601
		HCl	0.214	0.824
		NO <sub>x</sub>	0.60	0.63
		VOC	3.52	5.96
F54	Thermal Oxidizer Area Fugitives (5)	COCl <sub>2</sub>	<0.001	<0.001
		VOC	<0.01	0.01
F55	Cold Vent Fugitives (5)	COCl <sub>2</sub>	<0.001	<0.001
		VOC	<0.01	0.03
V-ETOH-1	Ethanol Tank Vent	Ethanol	5.71	0.28
V-MEOH-1	Methanol Tank Vent	Methanol	8.02	0.36

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			lb/hr	TPY
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 (7)	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 (5)	VOC	0.28	1.23
F-BZOH	BZOH Storage Tank Fugitives (5)	VOC	0.02	0.09
F-MOSF	Multi-Purpose Organic Synthesis Facility Fugitives (5)	VOC	0.10	0.46
		COCl <sub>2</sub>	<0.01	<0.01
F-CO	CO Storage Area Fugitives (5)	CO	0.15	0.66
WIH-DISCH	Walk-In Hood Caustic Scrubber <0.001	Cl <sub>2</sub>		0.0001
		COCl <sub>2</sub>	0.002	0.001
		HCl	<0.001	0.001
		VOC	2.405	0.57

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- (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.
- (3)  $\text{Cl}_2$  - chlorine
  - CO - carbon monoxide
  - $\text{COCl}_2$  - phosgene
  - HCl - hydrochloric acid
  - Na-L-ASP - sodium salt of carbobenzoxy L- aspartic acid
  - Na-Z-ASP - sodium salt of carbobenzoxy aspartic acid
  - $\text{NO}_x$  - total oxides of nitrogen
  - $\text{PM}_{10}$  - particulate matter less than 10 microns
  - PVCl - pivaloyl chloride
  - $\text{SO}_2$  - sulfur dioxide
  - VOC - volatile organic compounds as defined in General Rule 101.1
  - Z-ASP - carbobenzoxy aspartic acid
- (4) The permit holder, at his option, may emit all or part of the emissions allowed from the South ARI (EPN 4) through the North ARI (EPN 12). The sum of all emissions from both EPN 4 and EPN 12 may not exceed the maximum allowable emission rates shown for EPN 4.
- (5) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (6) EPN 53 shall be placed on line no later than February 1, 1997. When this changeover takes place, EPNs 4 and 12 shall be relegated to backup or emergency service only.
- (7) 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

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Dated \_\_\_\_\_