

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 19886

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 **
8-1-003	W-900A Recovery Vaporizer	CO	1.16	5.10
		NO <sub>x</sub>	1.39	6.07
		PM <sub>10</sub>	0.11	0.46
		SO <sub>2</sub>	0.01	0.04
		VOC	0.08	0.33
8-1-004	Strand Room Vent (5)	VOC	1.66	7.97
8-1-005	Stand Room Vent (5)	VOC	1.66	7.97
8-1-007	W-40S Backup Vaporizer	CO	0.43	1.90
		NO <sub>x</sub>	0.52	2.26
		PM <sub>10</sub>	0.04	0.17
		SO <sub>2</sub>	0.01	0.01
		VOC	0.03	0.12
8-1-008	B-1 Storage Tank	VOC	0.01	0.01
8-1-009	B-23 Storage Tank	VOC	1.23	0.01
8-1-010	Propionic Acid Process Fugitives (4)	VOC	0.46	2.01
8-1-012	Bulk Storage Silos	PM <sub>10</sub>	0.82	3.52
		PM	2.11	9.04
8-1-014	B-195 Process Vessel	VOC	0.01	0.01
8-1-015	B-63A Process Vessel	VOC	0.01	0.01

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8-1-017	D-900 Process Vessel	VOC	0.06	0.01
8-1-018	D-920 Process Vessel	VOC	0.05	0.01
8-1-019	D-940 Process Vessel	VOC	0.02	0.01
8-1-020	D-950 Process Vessel	VOC	0.05	0.01
8-1-021	D-984 Process Vessel	VOC	0.01	0.01
8-1-024	B-130A&B Process Vessel	VOC	0.34	0.01
8-1-025	B-143 Process Vessel	VOC	0.30	0.01
8-1-026	A-27A Storage Tank	VOC	0.01	0.01
8-1-027	A-27B Storage Tank	VOC	0.02	0.01
8-1-028	B-200 Process Vessel	VOC	0.01	0.01
8-1-030	Packaging Silos	PM <sub>10</sub>	0.69	2.97
		PM	1.98	8.49
8-1-031	Cooling Towers	VOC	0.01	0.01
8-1-032	D-949 Process Vessel	VOC	0.01	0.01
8-1-033	D-945 Process Vessel	VOC	0.01	0.02
8-1-035	T-907 Catalyst Scrubber	PM <sub>10</sub>	0.01	0.01
		PM	0.01	0.05
8-1-036	B-27 Reactor Refeed Hoppers	PM <sub>10</sub>	0.02	0.02
		PM	0.06	0.05
8-1-037	Recovered Caprolactam Loading	VOC	0.08	0.01

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8-1-038	Spent Heating Fluid Loading	VOC	0.01	0.01
8-1-039	B-125 Storage Tank	Carbonic Dihydrazide	0.01	0.01
8-1-040	F-155 Solid Additive Hopper	PM <sub>10</sub>	0.46	1.97
		PM	0.68	2.94
8-1-041	Seal Pots	VOC	0.04	0.16
8-1-042	Slurry Drums	VOC	0.05	0.20
8-1-043	B-2 TAD Storage Tank	VOC	0.08	0.01
8-1-044	TAD Process Fugitives (4)	VOC	0.01	0.05
8-1-045	D-990 Process Vessel	VOC	0.06	0.01
8-1-046	B-66 Diesel Tank	VOC	0.07	0.01
8-1-101	W-50C Vaporizer (Reactor Train 3)	CO	0.72	3.16
		NO <sub>x</sub>	0.86	3.77
		PM <sub>10</sub>	0.07	0.29
		SO <sub>2</sub>	0.01	0.02
		VOC	0.05	0.21
8-1-201	W-50D Vaporizer (Reactor Train 4)	CO	0.72	3.16
		NO <sub>x</sub>	0.86	3.77
		PM <sub>10</sub>	0.07	0.29
		SO <sub>2</sub>	0.01	0.02
		VOC	0.05	0.21
8-1-300	W-40C Vaporizer (Reactor Train No. 1)	CO	0.43	1.90
		NO <sub>x</sub>	0.52	2.26

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		PM <sub>10</sub>	0.04	0.17
		SO <sub>2</sub>	0.01	0.01
		VOC	0.03	0.12
8-1-400	W-40D Vaporizer (Reactor Train No. 2)	CO	0.43	1.90
		NO <sub>x</sub>	0.52	2.26
		PM <sub>10</sub>	0.04	0.17
		SO <sub>2</sub>	0.01	0.01
		VOC	0.03	0.12
8-1-500	W-40E Vaporizer (Reactor Train No. 5)	CO	0.43	1.90
		NO <sub>x</sub>	0.52	2.26
		PM <sub>10</sub>	0.04	0.17
		SO <sub>2</sub>	0.01	0.01
		VOC	0.03	0.12
8-1-600	W-50F Vaporizer (Reactor Train No. 6)	CO	0.72	3.16
		NO <sub>x</sub>	0.86	3.77
		PM <sub>10</sub>	0.07	0.29
		SO <sub>2</sub>	0.01	0.02
		VOC	0.05	0.21
8-1-700	W-50G Vaporizer (Reactor Train No. 7)	CO	0.72	3.16
		NO <sub>x</sub>	0.86	3.77
		PM <sub>10</sub>	0.07	0.29
		SO <sub>2</sub>	0.01	0.02
		VOC	0.05	0.21
8-1-607	CY-94F1 Train 6 Separator Cyclone	PM <sub>10</sub>	0.10	0.40
		PM	0.27	1.13
8-1-608	CY-94F2 Train 6 Separator Cyclone	PM <sub>10</sub>	0.10	0.40
		PM	0.27	1.13
8-1-701	CY-94G1 Train 7 Separator	PM <sub>10</sub>	0.11	0.46

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	Cyclone	PM	0.30	1.32
8-1-702	CY-94G2 Train 7 Separator	PM <sub>10</sub>	0.11	0.46
	Cyclone	PM	0.30	1.32
8-1-800	W-50G Vaporizer (Reactor Train No. 8)	CO	0.95	4.17
		NO <sub>x</sub>	1.13	4.96
		PM <sub>10</sub>	0.09	0.38
		SO <sub>2</sub>	0.01	0.03
		VOC	0.06	0.27
POLMSS	Planned MSS (6)	H <sub>2</sub> SO <sub>4</sub>	0.10	0.01
		PM/PM <sub>10</sub>	0.03	0.27
		VOC	61.00	1.03

- (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) CO - carbon monoxide  
NO<sub>x</sub> - total oxides of nitrogen  
PM - particulate matter, suspended in the atmosphere, including PM<sub>10</sub>  
PM<sub>10</sub> - 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.  
SO<sub>2</sub> - sulfur dioxide  
TAD - triacetone diamine  
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) Authorized emissions of Emission Point No. (EPN) 8-1-004. Sum of EPNs 8-1-004 and 8-1-005 emissions can not exceed EPN 8-1-004 limits.
- (6) Planned maintenance, startup and shutdown activities and emissions emitted from this EPN.

\* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

24 Hrs/day 7 Days/week 52 Weeks/year

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

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			<u>lb/hr</u>	<u>TPY **</u>

Dated May 31, 2011