

# Emission Sources - Maximum Allowable Emission Rates

Permit Number 8567

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, sources, and related activities. 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	
			lbs/hour	TPY (4)
B78F1	Flare	Ethylene	7.55	7.00
		Propylene	0.60	0.02
		VOC (excluding Ethylene and Propylene)	4.41	1.17
		VOC (excluding Ethylene and Propylene) (10)	4.59	1.17
		NO <sub>x</sub>	2.25	1.78
		CO	11.47	9.07
		SO <sub>2</sub>	0.19	0.17
		Ethane	0.40	0.13
		Acetone	1.70	0.30
B77FU1	Fugitives (5)	Ethylene	3.31	14.50
		VOC (excluding Ethylene)	1.08	4.73
		Acetone	0.25	1.09
B78FU1	Fugitives (5)	Ethylene	0.11	0.50
		VOC (excluding Ethylene)	0.03	0.13
		Acetone	0.01	0.03
B77V1	Vent	Ethylene	0.08	0.37
		VOC (excluding Ethylene)	0.01	0.04
See Footnote (7)	Pellet Emissions	Ethylene	1.30	1.80
		VOC (excluding Ethylene)	1.09	1.13
		Acetone	0.26	0.23
B77ST8	T8	VOC	0.01	0.01
B77ST10	T10	VOC	0.90	0.02
B77ST11	T11	VOC	0.83	0.02
B77ST12	T12	VOC	12.20	0.09

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See Footnote (6)	Catalyst Mixing	VOC	12.79	0.47
B77ST1	T1	VOC	2.77	0.01
B78CBT5	Carbon Adsorption System	VOC	0.01	0.01
B77CT1	Cooling Tower	Ethylene (9)	0.86	2.59
		Total VOC	0.86	2.59
		PM/PM <sub>10</sub> /PM <sub>2.5</sub>	0.20	0.45
B77LR1	Loading Rack Hose Disconnect	VOC	0.02	0.01
B77ST133	T133	VOC	3.00	0.01
B77LR133	Loading Rack	VOC	3.85	0.03
		VOC (10)	0.41	0.03
B78EOFU1	Acrylic Acid Unloading Line Disconnect	VOC	0.01	0.01
<b>MAINTENANCE, START-UP, AND SHUTDOWN (MSS) EMISSIONS</b>				
B78F1	Flare	Ethylene	65.00	4.06
		Propylene	0.60	0.01
		VOC (excluding Ethylene and Propylene)	59.08	0.55
		NO <sub>x</sub>	6.71	0.44
		CO	48.47	3.14
		Ethane	0.40	0.08
		Acetone	1.70	0.08
B77ST133	Exchanger Bank Washing	VOC (11)	2.30	0.07
B77ST750	Waste Catalyst Storage	VOC	0.40	0.01
B77LR750	Waste Catalyst Loading	VOC	0.08	0.01
B77MEFU1	Instrument, Pump, Pipe, and Valve Purging	Ethylene	1.74	0.20
		VOC (excluding Ethylene and Propylene)	0.67	0.04
B77MEFU2	Attachment A Activities	Ethylene	0.01	0.01
		VOC (excluding Ethylene)	0.05	0.06

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B77DSL101	Wax Loading	Ethylene	1.94	0.29
B77DSL111	Wax Loading	Ethylene	1.94	0.29
WAXLDCAP	Wax loading cap	Ethylene (8)	2.12	0.39
B77MEFU3	Atmospheric Equipment Purging	Ethylene	0.30	0.05
		Propylene	0.01	0.01
		VOC (excluding Ethylene and Propylene)	23.75	0.07
		Acetone	3.16	0.01
B77CBT5	Purging Acrylic Acid Tank to Carbon Adsorption	VOC	0.01	0.01
B78MEFU1	Opening Acrylic Acid Tank to Atmosphere	VOC	0.52	0.01
<b>Permit by rule (PBR) sources incorporated by reference. Sources remain authorized by the PBR(s) as listed below:</b>				
Unregistered PBR 106.452				
B77GB1	Grit Blaster	PM	0.01	0.01
		PM <sub>10</sub>	0.01	0.01
		PM <sub>2.5</sub>	0.01	0.01

- (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) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- NO<sub>x</sub> - total oxides of nitrogen
- SO<sub>2</sub> - sulfur dioxide
- PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented
- PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented
- PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter
- CO - carbon monoxide
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (6) Catalyst mixing area EPNs include B77PT10, B77PT11, B77PT12, B77PT10A, B77PT11A, and B77PT12A.
- (7) Pellet emissions include EPNs B77V101, B77V102, B77SB101, B77SB102, B77SB103, B78SB104, B78SB105, B78SB106, and B78SB107.
- (8) Emissions represent combined hourly and annual emissions from EPNs B77DSL101 and B77DSL111.
- (9) Emissions of Ethylene included in Total VOC.
- (10) Allowable emission rates effective upon completion of construction to route emissions from tank truck loading of kerosene mixture to flare EPN B78F1 and shall replace current VOC (excluding ethylene and propylene) allowable emission rates for EPN B78F1 and current VOC allowable emission rates for EPN B77LR133.
- (11) Allowable emission rates will cease to be authorized upon completion of construction to route emissions from exchanger bank washing to flare EPN B78F1.

Date: July 25, 2018