

# Emission Sources - Maximum Allowable Emission Rates

Permit Number 5546

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)
302M331, 302M460, 302M3069, & 302M3077	Boilers – Combined Emissions 302M331, 302M460, 302M3069, & 302M3077 for the Propanol Unit (7)	VOC	0.59	0.68
302M331, 302M460, 302M3069, & 302M3077	Boilers - Combined Emissions 302M331, 302M460, 302M3069, & 302M3077for the Butanol Unit (7)	VOC	4.00	2.83
303M1239	Ethylene Flare (Propanol Unit) (6)	NO <sub>x</sub>	19.12	5.00
		VOC	74.11	5.34
		SO <sub>2</sub>	2.17	1.01
		CO	115.22	28.38
	Ethylene Flare (Butanol Unit Only) (6)	NO <sub>x</sub>	22.02	3.30
		VOC	154.46	24.62
		SO <sub>2</sub>	0.58	0.07
		CO	130.62	20.12
	Ethylene Flare (Start-Up, Shutdown, and Maintenance Operation, Butanol Unit) (6)	NO <sub>x</sub>	16.80	0.01
		VOC	123.90	0.20
		SO <sub>2</sub>	0.20	0.01
		CO	85.50	0.10
Propanol Unit				
108A	Propanol Unit Analyzers	VOC	0.15	0.66
		CO	0.11	0.47
108C	Catalyst Emissions	VOC	1.31	0.19
108F	Fugitives (5)	VOC	1.02	4.50
		CO	0.01	0.02

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251AV37	Tank V-37	VOC	2.46	0.47
251AV39	Tank 39	VOC	0.74	1.04
251CV646	Tank 646	VOC	1.06	0.61
108AV978	Tank 978	VOC	0.01	0.01
ANLY3	Analyzer Vents	VOC	0.15	0.65
		CO	0.07	0.29
CAT3	Spent Catalyst Handling	VOC	5.06	1.01
<b>Butanol Unit</b>				
100CAT	Catalyst Emissions	VOC	2.95	0.42
100GB	Guard Bed Regeneration	SO <sub>2</sub>	13.40	0.32
100ANAL	Butanol Unit Building 1 Vent Analyzer	VOC	1.26	5.53
		CO	0.18	0.77
100GRPTK	Combined Emission Points Tanks V30, V34, and V35	VOC	64.94	2.93
251AV36	Tank 36	VOC	0.77	0.41
251AV94	Tank 94	VOC	0.77	0.41
100V984	Tank V-984	VOC	0.80	0.40
100V865	Tank V-865	VOC	0.74	0.82
251AV866	Tank V-866	VOC	0.74	0.82
251AV994	Tank V-994	VOC	1.11	0.70
251AV995	Tank V-995	VOC	1.11	0.70
100V500	Tank V-500	VOC	0.74	1.40
100V501	Tank V-501	VOC	0.74	1.40
100V502	Tank V-502	VOC	0.74	1.40
251AV38	Tank V-38	VOC	1.01	2.10
100V1034	Tank V-1034	VOC	1.07	2.40
251AV829	Tank V-829	VOC	1.04	2.16
100V23	Tank V-23	VOC	0.25	0.05
100V917	Tank V-917	VOC	0.01	0.05

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251AV119	Tank V-119 (from T-104)	VOC	4.80	0.18
100F	Fugitives (5)	VOC	7.52	32.93
		CO	0.75	3.29

- (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) Other emissions from the flare are included in Permit Numbers 2175, 4449, 6105, and 25229.
- (7) Emissions of NO<sub>x</sub>, CO, SO<sub>2</sub>, and PM from the boilers are authorized under Permit Number 2175.

Date: February 4, 2022