

# Emission Sources - Maximum Allowable Emission Rates

Permit Number 9582

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 (1)	Source Name (2)	Air Contaminant (3)	Emission Rates	
			lbs/hour	TPY (4)
BLR-20	Boiler M-526	VOC	0.42	1.82
		Benzene	0.01	0.01
		Acetone	0.14	0.01
		CO	6.12	10.31
		NO <sub>x</sub>	3.14	13.75
		SO <sub>2</sub>	0.05	0.20
		PM	0.57	2.51
		PM <sub>10</sub>	0.57	2.51
		PM <sub>2.5</sub>	0.57	2.51
CT-1	Cooling Tower M-508	VOC	0.33	1.43
		Benzene	0.04	0.17
		PM	0.06	0.27
		PM <sub>10</sub>	0.06	0.27
		PM <sub>2.5</sub>	0.04	0.16
E-331	M-339 After Condenser Jet	VOC	0.05	0.20
FLR-1	Flare 1 (Normal Operations)	VOC	0.01	0.02
		CO	0.04	0.20
		NO <sub>x</sub>	0.01	0.02
		SO <sub>2</sub>	0.01	0.01
HQFIN	Hydroquinone Finishing Area	PM	0.04	0.08
		PM <sub>10</sub>	0.04	0.08

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		PM <sub>2.5</sub>	0.04	0.08
10	Hot Oil Heater	VOC	0.07	0.28
		CO	1.51	6.66
		NO <sub>x</sub>	0.95	4.16
		SO <sub>2</sub>	0.02	0.10
		PM	0.19	0.83
		PM <sub>10</sub>	0.19	0.83
		PM <sub>2.5</sub>	0.19	0.83
M-503A	Emergency Pump Engine	VOC	0.35	0.01
		CO	0.95	0.03
		NO <sub>x</sub>	4.39	0.11
		SO <sub>2</sub>	0.29	0.01
		PM	0.31	0.01
		PM <sub>10</sub>	0.31	0.01
		PM <sub>2.5</sub>	0.31	0.01
M-503B	Emergency Pump Engine	VOC	0.35	0.01
		CO	0.95	0.03
		NO <sub>x</sub>	4.39	0.11
		SO <sub>2</sub>	0.29	0.01
		PM	0.31	0.01
		PM <sub>10</sub>	0.31	0.01
		PM <sub>2.5</sub>	0.31	0.01
LR-9	Loading Rack	VOC	0.22	0.02
LR-18	Loading Rack	VOC	1.62	0.29
		Acetone	44.99	3.80
LR-MDIDB	Loading Rack	VOC	0.34	0.01

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FU-100	100 Unit Fugitives (5)	VOC	1.09	4.76
		Benzene	0.07	0.30
FU-200	200 Unit Fugitives (5)	VOC	0.63	2.75
		Benzene	0.12	0.51
		Acetone	0.01	0.01
FU-300	300 Unit Fugitives (5)	VOC	0.99	4.34
		Benzene	0.08	0.34
		Acetone	0.31	1.37
FU-400	400 Unit Fugitives (5)	VOC	0.38	1.67
		Benzene	0.01	0.03
		Acetone	0.11	0.47
FU-700	700 Unit Fugitives (5)	VOC	0.13	0.57
FU-WW	Wastewater Fugitives (5)	VOC	0.10	0.43
		Acetone	0.01	0.01
V-Caustic	Caustic Tanks (V-212 and V-412)	Sodium Hydroxide	0.42	0.01
V-Diesel	Diesel Storage Vessels (V52, V53, V62, and V63)	VOC Cap	0.14	0.01
V-HQ	HQ Finishing (V332, V333, and V334)	VOC Cap	0.01	0.01
		Acetone Cap	0.02	0.01
V-LAB	Laboratory Vents (V-54, V-55, V-56, and V-57)	VOC Cap	0.24	0.05
V-Sulfuric	Sulfuric Acid Tanks	Sulfuric Acid Cap	0.01	0.01
V-9	C-202 Scrubber Exhaust	VOC	EMERGENCY USE ONLY	
V-321	Sodium Bisulfite Tank	Sodium Bisulfite	0.05	0.07
V-405 A/B	PARA Storage Tanks (V405A and V405B)	VOC Cap	0.01	0.06
V-413	Peroxide Storage Tank	Hydrogen Peroxide	0.05	0.01
V-415	Sodium Sulfite Tank	Sodium Sulfide	0.02	0.01

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V-715	Diphenylamine Storage Tank	VOC	0.13	0.01
Maintenance, Startup, and Shutdown (MSS) Emissions				
BLR-20	Boiler M-526 (MSS Activities)	VOC	0.01	0.01
FLR-1	Flare 1 (MSS Activities)	VOC	5.67	2.69
		Acetone	5.40	0.28
		CO	8.50	18.24
		NO <sub>x</sub>	0.99	2.13
		SO <sub>2</sub>	0.10	0.45
MSS-CAP	Total Uncontrolled Cap	VOC	20.42	0.57
Site-wide Limits				
SITEWIDE	Site-wide Sources	Individual HAP Total HAPs		< 10.00 < 25.00

- (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
  - CO - carbon monoxide
  - 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>
  - PM<sub>10</sub> - particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>
  - PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter
  - HAP - hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
- (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.

Date: September 13, 2017