

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 4056

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)lb/hr	Emission Rates *	
			TPY **	
<u>CARBON MONOXIDE UNIT</u>				
51MH5AST	Heater MH-5A	PM	0.49	2.16
		VOC	0.41	1.60
		NO <sub>x</sub>	12.17	51.98
		SO <sub>2</sub>	0.88	3.87
		CO	2.40	9.36
51MJ151	Start-up Eductor MJ-151	PM	0.05	<0.01
		VOC	0.03	<0.01
		NO <sub>x</sub>	0.60	0.02
		SO <sub>2</sub>	0.09	<0.01
		CO	0.50	0.02
51MJ152	Start-up Eductor MJ-152	PM	0.05	<0.01
		VOC	0.03	<0.01
		NO <sub>x</sub>	0.60	0.02
		SO <sub>2</sub>	0.09	<0.01
		CO	0.50	0.02
51MJ153	Start-up Eductor MJ-153	PM	0.05	<0.01
		VOC	0.03	<0.01
		NO <sub>x</sub>	0.60	0.02
		SO <sub>2</sub>	0.09	<0.01
		CO	0.50	0.02
51MN1147ST	Propylene Flare	VOC	250.0	0.06
		NO <sub>x</sub>	23.9	0.06
		SO <sub>2</sub>	<0.01	<0.01
		CO	172.4	0.30

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51COFUG	Fugitives (4)	VOC	8.73	38.22
		SO <sub>2</sub>	2.78	12.16
		CO	16.81	73.60
		NH <sub>3</sub>	<0.01	0.01
		HFC-134a	0.63	2.76
51PROPFU	Refrigeration System	MeOH	0.02	0.10
	MR-36 Fugitives (4)	propylene	0.69	3.0
51COLDBOX	Cold Box	helium	31.7	135.0
51ANAL	Analyzer Vents	VOC	<0.01	<0.01
		CO	0.51	2.25
51MT7FUG	CO Unit Cooling Tower	VOC	2.94	12.88
51MN157ST	Flare MN-157	VOC	28.47	2.22
		NO <sub>x</sub>	150.11	1.53
		SO <sub>2</sub>	1.14	0.02
		CO	1388.66	17.76
		H <sub>2</sub> S	0.01	0.01
<u>ACETIC ACID UNIT</u>				
49T149ST	HAc Storage Tank Scrubber T-149	HAc	1.72	1.54
49V578ST	HAc Scavenger Tank	HAc	0.23	<0.01
49V598ST	Personnel Exposure Control Device	VOC	0.02	0.07
		Iodide	<0.01	<0.01
49V601ST	Process Area Scavenger Tank	VOC	0.57	0.02
49V604ST	Steam Condensate Tank	VOC	<0.01	<0.01
49V1049ST	HAc Storage Tank	VOC	0.46	0.09

49V1195ST	Methyl Acetate IFR Storage Tank	MeAc	0.31	0.81
		MeOH	0.06	0.13
49MN138ST	Acetic Acid Unit Flare	VOC	34.06	10.57
		NO <sub>x</sub>	4.50	2.96
		CO	177.94	149.26
49MN294ST	HAc Loading Thermal Oxidizer	VOC	0.65	1.22
		NO <sub>x</sub>	0.44	1.31
		CO	10.64	38.30
49HACCLDFUG	HAc Loading Fugitives (4)	VOC	8.13	15.45
49HACFUG	HAc Unit Equipment Fugitives (4)	VOC	4.18	18.40
		CO	0.51	2.23
		Lil	0.04	0.18
		KI	<0.01	0.01

- (1) Emission point identification - either equipment designation or emission point number from a plot plan.
- (2) Specific point source names. For fugitive sources use area name or fugitive source name.
- (3) 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.
- 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
- CO - carbon monoxide
- HAc - acetic acid
- NH<sub>3</sub> - ammonia
- MeAc - methyl acetate
- MeOH - methanol
- Lil - lithium iodide
- KI - potassium iodide
- HFC-134a - 1,1,1,2-tetrafluoroethane
- H<sub>2</sub>S - Hydrogen Sulfide

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(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

\* Emission rates are based on the following maximum operating schedule: 8,760 hours per year.

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

Dated \_\_\_\_\_