

Emission Sources - Maximum Allowable Emission Rates
Permit Number 4773A

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)
SGFUG1C3C	Syngas Process and Propylene Refrigeration Fugitives (5), (6)	CO	3.27	14.32
		VOC	3.04	13.32
		Propylene	0.82	3.60
SGCT	Cooling Tower (6)	VOC	16.50	16.44
		Propylene	2.56	3.89
		Ethylene	1.71	1.30
		Butene	3.41	2.59
SG23-50-1	CE Boiler (7)	VOC	1.68	7.58
		NO _x	60.80	72.96
		SO ₂	4.08	17.87
		PM ₁₀	2.07	9.05
		CO	20.32	85.99
SG23-51-1	Superheater (7)	VOC	0.63	3.00
		NO _x	23.74	25.54
		SO ₂	1.23	5.37
		PM ₁₀	0.62	2.72
		CO	5.59	24.48
SG7-9-14	Ammonia Flare	NH ₃	0.17	0.65
		VOC	0.16	0.70
		NO _x	0.76	3.31
		SO ₂	0.01	0.66
		CO	6.04	26.43

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SG20-2-2	Acid Gas Flare (7)	VOC	0.01	0.01
		NO _x	0.31	0.82
		SO ₂	0.01	0.03
		CO	6.91	15.23
SG20-3-2	Cold Flare (7)	NO _x	6.79	0.89
		SO ₂	0.01	0.03
		CO	313.85	24.92
		VOC	0.03	0.09
		Propylene	0.02	0.08
SG21-1-1	High-Pressure Flare (7)	NO _x	107.77	5.29
		SO ₂	0.60	0.09
		CO	3285.30	123.26
		VOC	36.76	2.78
		Propylene	10.60	0.82
		1, 3 Butadiene	11.80	0.35
		Isomers of butene	10.64	0.23
SG810-21-1	Neutralization Tank	VOC	0.01	0.04
SG810-22-1	Equalization Tank	VOC	0.11	0.49
SG810-23	Aeration Basin	VOC	7.22	31.63
SG810-28	West Basin	VOC	0.10	0.45
SG5-1-1	Wastewater Hold Tank	NH ₃	0.01	0.01
		VOC	0.01	0.01
SG5-1-14	Carbon Water Tank	NH ₃	0.01	0.01
		VOC	0.01	0.01
SG5-1-17	Gray Water Tank	NH ₃	0.01	0.01
		VOC	0.01	0.01
SG13-25-1	Methanol Storage	VOC	0.23	0.24

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	Tank			
SG930D	Diesel Storage Tank	VOC	0.30	0.01
SG930U	Gasoline Storage Tank	VOC	7.53	0.09
PW310-50-1	Emergency Firewater Pump	VOC	1.79	0.06
		NO _x	18.60	0.60
		SO ₂	1.23	0.04
		PM ₁₀	1.32	0.04
		CO	4.01	0.13
310-50-1.2	Diesel Storage Tank	VOC	0.27	0.01
DEGREASER	Cold Solvent Degreaser	VOC	3.04	0.39
MSS-LINDE	Maintenance, Startup and Shutdown Emissions directly to Atmosphere (8)	VOC	111.79	4.50
		CO	31.98	1.94
		NO _x	7.06	0.33
		PM	5.82	0.18
		PM ₁₀	3.30	0.17
		PM _{2.5}	0.81	0.04
		SO ₂	0.04	<0.01
MSS-LNDCNT	Maintenance, Startup and Shutdown Emissions to Plant Flares or Temporary Control (9)	VOC	51.21	0.47
		CO	35.73	0.91
		NO _x	9.19	0.56
		PM	3.30	0.28
		SO ₂	<0.01	<0.01
PRANLZVNT	Process Analyzer Vents	CO	0.42	1.83
PRPUNLD	Propylene Unloading Hose Purge	Propylene	3.53	<0.01

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.

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- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) Exempt Solvent - Those carbon compounds or mixtures of carbon compounds used as solvents which have been excluded from the definition of volatile organic compound.
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|-------------------|---|
| VOC | - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1 |
| HRVOC | - highly reactive volatile organic compounds as defined in 30 TAC § 115.10 |
| IOC-U | - inorganic compounds (unspeciated) |
| NO _x | - total oxides of nitrogen |
| SO ₂ | - sulfur dioxide |
| PM | - total particulate matter, suspended in the atmosphere, including PM ₁₀ and PM _{2.5} , as represented |
| PM ₁₀ | - total particulate matter equal to or less than 10 microns in diameter, including PM _{2.5} , as represented |
| PM _{2.5} | - particulate matter equal to or less than 2.5 microns in diameter |
| CO | - carbon monoxide |
| 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 |
| NH ₃ | - ammonia |
- (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) The allowable emission rates listed for individual VOC species from this EPN are included in the total VOC emission rates.
- (7) Includes MSS emissions based on 9 startup/shutdowns per year (108 hours).
- (8) The emission includes 13.96 lb/hr & 1.11 tpy VOC, 9.06 lb/hr & 3.41 tpy CO, 0.62 lb/hr & 0.05 tpy PM or PM₁₀, and 0.06 lb/hr and 0.005 tpy PM_{2.5} of inherently low emitting sources emissions addressed in Appendix A to the Special Conditions and which should be assumed to be emitted in any hour or 12 month period for which compliance is evaluated for the EPN.
- (9) Control includes the Cold and High Pressure Flares (EPNs SG20-3-2 and SG 21-1-1) and temporary control devices identified in Appendix C to the Special Condition with emissions accounted separately from the currently authorized emissions for the flares.

Date: August 10, 2012