

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 137789 and N244

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

| Air Contaminants Data | | | | |
|------------------------|---------------------------|--------------------------|----------------|---------|
| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates | |
| | | | lbs/hour | TPY (4) |
| Routine Operations | | | | |
| EHTR-B3901 | Reactor Furnace B3901 (6) | VOC | 0.42 | 1.66 |
| | | CO | 5.63 | 11.36 |
| | | CO (MSS) | 11.26 | |
| | | NO _x | 0.99 | 3.89 |
| | | SO ₂ | 0.11 | 0.43 |
| | | PM | 0.58 | 2.29 |
| | | PM ₁₀ | 0.58 | 2.29 |
| | | PM _{2.5} | 0.58 | 2.29 |
| EHTR-B3902 | Reactor Furnace B3902 (6) | VOC | 0.42 | 1.66 |
| | | CO | 5.63 | 11.36 |
| | | CO (MSS) | 11.26 | |
| | | NO _x | 0.99 | 3.89 |
| | | SO ₂ | 0.11 | 0.43 |
| | | PM | 0.58 | 2.29 |
| | | PM ₁₀ | 0.58 | 2.29 |
| | | PM _{2.5} | 0.58 | 2.29 |
| EHTR-B3903 | Reactor Furnace B3903 (6) | VOC | 0.32 | 1.25 |
| | | CO | 4.21 | 8.51 |
| | | CO (MSS) | 8.43 | |
| | | NO _x | 0.74 | 2.92 |
| | | SO ₂ | 0.08 | 0.32 |
| | | PM | 0.44 | 1.73 |
| | | PM ₁₀ | 0.44 | 1.73 |
| | | PM _{2.5} | 0.44 | 1.73 |

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| | | | | |
|------------|------------------------------------|-------------------|-------|-------|
| EHTR-B3904 | Reactor Furnace B3904 (6) | VOC | 0.21 | 0.83 |
| | | CO | 2.80 | 5.66 |
| | | CO (MSS) | 5.60 | |
| | | NO _x | 0.50 | 1.95 |
| | | SO ₂ | 0.05 | 0.22 |
| | | PM | 0.29 | 1.15 |
| | | PM ₁₀ | 0.29 | 1.15 |
| | | PM _{2.5} | 0.29 | 1.15 |
| ETK1912 | Storage Tank 1912 | VOC | 0.20 | 0.66 |
| ETK1921 | Storage Tank 1921 | VOC | 0.79 | 1.06 |
| ETK1931 | Storage Tank 1931 | VOC | 1.00 | 3.12 |
| EFUGRTBE | Fugitive Emissions | VOC | 1.00 | 4.36 |
| | | Acetone | 0.07 | 0.29 |
| ECWTU1809 | Cooling Tower | VOC | 1.99 | 4.36 |
| | | PM | 0.71 | 2.49 |
| | | PM ₁₀ | 0.41 | 1.43 |
| | | PM _{2.5} | <0.01 | <0.01 |
| E-B1550 | Flare E-B1550 (Routine Operations) | VOC | 9.02 | 24.06 |
| | | NO _x | 1.26 | 4.71 |
| | | CO | 6.43 | 24.02 |
| | | Acetone | 1.49 | 5.24 |
| | | SO ₂ | 0.26 | 1.14 |
| EMG-3902 | Emergency Generator (Ethers Unit) | VOC | 0.08 | <0.01 |
| | | NO _x | 0.18 | 0.01 |
| | | CO | 1.54 | 0.08 |
| | | SO ₂ | 0.55 | 0.03 |
| | | PM | 0.01 | <0.01 |
| | | PM ₁₀ | 0.01 | <0.01 |
| | | PM _{2.5} | 0.01 | <0.01 |

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| | | | | |
|---|--|-------------------|--------|-------|
| EMG-3901 | Emergency Generator (Control Room) | VOC | 0.13 | 0.01 |
| | | NO _x | 0.26 | 0.01 |
| | | CO | 2.31 | 0.12 |
| | | SO ₂ | 0.82 | 0.04 |
| | | PM | 0.01 | <0.01 |
| | | PM ₁₀ | 0.01 | <0.01 |
| | | PM _{2.5} | 0.01 | <0.01 |
| E-ANLZRVNT | Analyzer Vents | VOC | <0.01 | <0.01 |
| E-B1501A | Emergency Flare B1501A (Ethers Unit Process) | VOC | 5.49 | 0.66 |
| | | NO _x | 1.06 | 0.13 |
| | | CO | 5.39 | 0.65 |
| | | Acetone | 1.20 | 0.14 |
| Planned Maintenance, Startup and Shutdown (MSS) | | | | |
| E-B 1550MSS | Flare E-B1550 (Ethers Unit MSS) | VOC | 261.15 | 1.12 |
| | | NO _x | 46.73 | 0.18 |
| | | CO | 240.71 | 0.90 |
| | | Acetone | 51.52 | 0.07 |
| | | SO ₂ | 5.91 | 0.02 |
| MSSFUG | MSS Emissions to Atmosphere | VOC | 102.27 | 2.39 |
| | | PM | 0.03 | <0.01 |
| | | PM ₁₀ | 0.03 | <0.01 |
| | | PM _{2.5} | 0.03 | <0.01 |
| MSSCTRL | Controlled MSS Emissions | VOC | 0.11 | 0.01 |
| | | NO _x | 0.86 | 0.04 |
| | | CO | 1.30 | 0.06 |
| | | SO ₂ | 0.01 | <0.01 |
| | | PM | 0.06 | <0.01 |
| | | PM ₁₀ | 0.06 | <0.01 |
| | | PM _{2.5} | 0.06 | <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_x - total oxides of nitrogen

SO₂ - sulfur dioxide

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|-------------------|--|
| 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 |

- (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) MSS emissions of pollutants other than CO from Reactor Furnaces B3901 through B3904 are estimated to be at or below the routine hourly emission rate. The MSS annual emissions of all authorized pollutants are included in the routine operation annual emissions.

Date: February 4, 2021