Emission Sources - Maximum Allowable Emission Rates

Permit Number 9074

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) |
| 94 | PCE Barge Unloading Fugitives (5) | PCE | 1.66 | 0.06 |
| 96 | PCE Tank Truck and Ship Unloading Fugitives (5) | PCE | 0.17 | 0.74 |
| 102 | PCE or $CCl_4$ Storage Tank No. 1 | PCE | 0.87 | 0.18 |
| | | $CCl_4$ | 1.05 | 0.67 |
| | | VOC (6) | 1.05 | 0.67 |
| 103 | PCE or $CCl_4$ Storage Tank No. 2 | PCE | 0.89 | 0.22 |
| | | $CCl_4$ | 1.05 | 0.67 |
| | | VOC (6) | 1.05 | 0.67 |
| TANK CAP | Tank Cap (TK-102 and TK-103) | $CCl_4$ | 1.05 | 0.67 |
| | | VOC (6) | 1.05 | 0.67 |
| TK-MSS | PCE or $CCl_4$ Tank MSS (TK-102 and TK-103) | $CCl_4$ | 4.03 | 0.20 |
| | | VOC (6) | 4.03 | 0.20 |
| 119 | West Aq HCl Emergency Generator No. 2 | $NO_x$ | 8.07 | 0.21 |
| | | CO | 0.52 | 0.01 |
| | | $SO_2$ | <0.01 | <0.01 |
| | | VOC | 0.18 | <0.01 |
| | | PM | 0.08 | <0.01 |
| | | $PM_{10}$ | 0.08 | <0.01 |
| | | $PM_{2.5}$ | 0.08 | <0.01 |

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| | | | | |
|---|---|---|---|---|
| 120R | Emergency Generator No. 1 | $NO_x$ | 8.07 | 0.21 |
| | | CO | 0.52 | 0.01 |
| | | $SO_2$ | <0.01 | <0.01 |
| | | VOC | 0.18 | <0.01 |
| | | PM | 0.08 | <0.01 |
| | | $PM_{10}$ | 0.08 | <0.01 |
| | | $PM_{2.5}$ | 0.08 | <0.01 |
| 121 | Caustic Scrubber | HCl | 0.02 | 0.03 |
| | | $Cl_2$ | 0.20 | <0.01 |
| | | FC | 86.70 | 28.30 |
| | | VOC (6) | 86.06 | 25.49 |
| 122 | Aq HCl Scrubber | HCl | 0.02 | 0.09 |
| | | FC | 1.35 | 4.19 |
| | | VOC (6) | 0.29 | 1.08 |
| 123 | Fugitives (5) | HCl | 0.01 | 0.06 |
| 124 | Aq. HCl Fugitives (5) | HCl | 0.39 | 1.71 |
| 126 | Fugitives (5) | HCl | 0.07 | 0.30 |
| 166 | $H_2O_2$ Storage Tank | $H_2O_2$ | 0.30 | <0.01 |
| 175 | Fugitives (5) | FC | 1.45 | 6.35 |
| 179 | Cooling Tower | PM | 0.90 | 3.95 |
| | | $PM_{10}$ | 0.90 | 3.95 |
| | | $PM_{2.5}$ | 0.90 | 3.95 |
| | | FC | 1.51 | 3.31 |
| | | VOC (6) | 0.59 | 1.29 |
| 186 | Neutralizer Vent | FC | 0.27 | 1.20 |

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| | | | | |
|---|---|---|---|---|
| 187 | Fugitives (5) | FC | 1.88 | 8.23 |
| | | HF | 0.05 | 0.21 |
| | | HCl | 0.03 | 0.15 |
| | | VCM | 0.10 | 0.43 |
| | | VOC (6) | 0.10 | 0.43 |
| 189 | Sniff Scrubber Stack | FC | 0.01 | 0.01 |
| | | HCl | 0.01 | <0.01 |
| | | HF | 0.01 | <0.01 |
| 192 | Thermal Converter Stack | $NO_x$ | 0.94 | 4.12 |
| | | CO | 0.11 | 0.50 |
| | | $SO_2$ | 0.14 | 0.61 |
| | | VOC (6) | 0.97 | 3.13 |
| | | PM | 0.08 | 0.33 |
| | | $PM_{10}$ | 0.08 | 0.33 |
| | | $PM_{2.5}$ | 0.08 | 0.33 |
| | | FC | 0.56 | 2.23 |
| | | Benzene | <0.01 | <0.01 |
| | | VCM | <0.01 | <0.01 |
| | | HF | 0.32 | 1.19 |
| | | HCl | 0.31 | 0.84 |
| | | $Cl_2$ | 0.01 | 0.04 |
| | | $CHCl_3$ | <0.01 | <0.01 |
| | | $CCl_4$ | 0.15 | 0.14 |
| | | 1,2-Dichloroethane | <0.01 | <0.01 |

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| | | | | |
|---|---|---|---|---|
| 0.49 | | | | |
| | | $NO_x$ | 0.94 | 4.10 |
| | | CO | 0.11 | 0.50 |
| | | $SO_2$ | 0.14 | 0.61 |
| | | VOC (6) | 2.36 | 0.74 |
| | | PM | 0.08 | 0.33 |
| | | $PM_{10}$ | 0.08 | 0.33 |
| | | $PM_{2.5}$ | 0.08 | 0.33 |
| | | HF | 1.18 | 0.22 |
| | | HCl | 0.57 | 0.12 |
| | | $Cl_2$ | <0.01 | <0.01 |
| | | PCE | <0.01 | <0.01 |
| | | $CHCl_3$ | <0.01 | <0.01 |
| | | $C_2Cl_6$ | <0.01 | <0.01 |
| | | $CCl_4$ | 0.26 | <0.01 |
| | | 1,2-Dichloroethane | 0.01 | <0.01 |
| 193 | Fugitives (5) | FC | 6.75 | 29.52 |
| | | Benzene | <0.01 | <0.01 |
| | | HCl | 0.02 | 0.10 |
| | | VCM | 0.05 | 0.21 |
| | | VOC (6) | 0.31 | 1.36 |
| 193-AqHCl | Aq. HCl Fugitives (5) | HCl | 0.03 | 0.14 |

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| | | | | |
|---|---|---|---|---|
| 194 | Emergency Generator No. 3 | $NO_x$ | 18.26 | 0.49 |
| | | CO | 3.93 | 0.10 |
| | | $SO_2$ | <0.01 | <0.01 |
| | | VOC | 1.49 | 0.04 |
| | | PM | 1.28 | 0.03 |
| | | $PM_{10}$ | 1.28 | 0.03 |
| | | $PM_{2.5}$ | 1.28 | 0.03 |
| 197 | Carbon Canister No. 2 | FC | 12.50 | 2.74 |
| | | HF | 0.03 | 0.01 |
| | | $Cl_2$ | 0.80 | 0.17 |
| | | HCl | 8.04 | 1.76 |
| | | VOC (6) | 12.50 | 2.74 |
| 198 | FUG-198 (5) | FC | 0.24 | 1.06 |
| 215 | Emergency Fire Pump No. 2 | $NO_x$ | 11.80 | 0.31 |
| | | CO | 2.50 | 0.07 |
| | | $SO_2$ | <0.01 | <0.01 |
| | | VOC | 0.95 | 0.03 |
| | | PM | 0.84 | 0.02 |
| | | $PM_{10}$ | 0.84 | 0.02 |
| | | $PM_{2.5}$ | 0.84 | 0.02 |
| 237 | Hot Air Heater | $NO_x$ | 0.75 | 3.30 |
| | | CO | 0.63 | 2.77 |
| | | $SO_2$ | 0.11 | 0.47 |
| | | VOC | 0.04 | 0.18 |
| | | PM | 0.06 | 0.25 |
| | | $PM_{10}$ | 0.06 | 0.25 |
| | | $PM_{2.5}$ | 0.06 | 0.25 |
| 244R | Emergency Generator No. 2 | $NO_x$ | 8.07 | 0.21 |
| | | CO | 0.52 | 0.01 |

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| | | | | |
|---|---|---|---|---|
| | | $SO_2$ | <0.01 | <0.01 |
| | | VOC | 0.18 | <0.01 |
| | | PM | 0.08 | <0.01 |
| | | $PM_{10}$ | 0.08 | <0.01 |
| | | $PM_{2.5}$ | 0.08 | <0.01 |
| 245 | Fugitives (5) | FC | 3.74 | 16.39 |
| | | HF | 0.12 | 0.53 |
| | | HCl | 0.04 | 0.19 |
| | | $Cl_2$ | 0.02 | 0.07 |
| | | PCE | 0.16 | 0.68 |
| | | VOC (6) | 1.37 | 6.01 |
| 247 | Spray Scrubber Stack | HF | 0.11 | 0.05 |
| | | HCl | 1.00 | 0.10 |
| | | $Cl_2$ | 0.11 | 0.23 |
| | | FC | 56.44 | 5.98 |
| | | VOC (6) | 56.44 | 5.98 |
| 247-MSS | Spray Scrubber Stack MSS | FC | 3.10 | 0.01 |
| | | CO | 60.00 | 25.92 |
| | | VOC (6) | 4.10 | 0.02 |
| | | HF | 0.19 | 0.08 |
| FUG-FEBED | Iron bed Change-outs | VOC (6) | 1.78 | 0.03 |
| | | $CHCl_3$ | 0.02 | <0.01 |
| | | $CCl_4$ | 1.09 | 0.02 |
| | | 1,2-Dichloroethane | 0.09 | <0.01 |

Emission Sources - Maximum Allowable Emission Rates

| | | | | |
|---|---|---|---|---|
| SITE | VESSBREAK (MSS – Residual from Vessel Openings) | VOC (6) | 177.15 | 4.26 |
| | | FC | 174.00 | 4.18 |
| | | PCE | 0.14 | <0.01 |
| | | HF | 0.02 | <0.01 |
| | | HCl | 0.03 | <0.01 |
| | | $Cl_2$ | 0.02 | <0.01 |
| | | $CHCl_3$ | 0.02 | <0.01 |
| | | $C_2Cl_6$ | <0.01 | <0.01 |
| | | $CCl_4$ | 1.70 | 0.04 |
| | | 1,2- Dichloroethane | 0.09 | <0.01 |
| SITE | LINEBREAK (MSS – Residual from Line Breaks) | VOC (6) | 5.15 | 0.10 |
| | | FC | 0.82 | 0.06 |
| | | PCE | 0.37 | 0.04 |
| | | HF | <0.01 | <0.01 |
| | | HCl | <0.01 | <0.01 |
| | | $Cl_2$ | 0.02 | <0.01 |
| | | $CHCl_3$ | 0.26 | <0.01 |
| | | $C_2Cl_6$ | 0.52 | <0.01 |
| | | $CCl_4$ | 0.34 | <0.01 |
| | | 1,2- Dichloroethane | 0.22 | <0.01 |
| SITE | SPRAYCLN (MSS – Spray Cleaners, Degreasers, and Lubricants) | VOC | 5.40 | 2.70 |
| CATLOAD | MSS - Catalyst Loading | PM | 0.70 | 0.01 |
| | | $PM_{10}$ | 0.32 | 0.01 |
| | | $PM_{2.5}$ | 0.05 | <0.01 |
| CATVAC | MSS - Catalyst Unloading | PM | 0.51 | 0.01 |
| | | $PM_{10}$ | 0.51 | 0.01 |
| | | $PM_{2.5}$ | 0.51 | 0.01 |
| SILICAVAC | MSS - Silica Gel Unloading | PM | 0.51 | 0.04 |

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| | | | | |
|---|---|---|---|---|
| | | $PM_{10}$ | 0.51 | 0.04 |
| | | $PM_{2.5}$ | 0.51 | 0.04 |
| 245-MSS | MSS – Container Conversions | FC | 4.77 | 0.09 |
| | | VOC (6) | 4.77 | 0.09 |
| DRY-1 | Sitewide Drying Emissions | VOC (6) | 0.17 | <0.01 |
| | | FC | 0.17 | <0.01 |
| | | PCE | 0.06 | <0.01 |
| FUG-DRY-1 | Sitewide Drying Fugitive Emissions (5) | VOC (6) | 0.05 | 0.21 |
| | | FC | 0.05 | 0.21 |
| | | PCE | 0.01 | 0.06 |
| 302 | Fugitive Emissions (5) | FC | 5.20 | 22.75 |
| | | HF | 0.14 | 0.60 |
| | | HCl | 0.08 | 0.37 |
| | | $Cl_2$ | 0.05 | 0.21 |
| | | PCE | <0.01 | <0.01 |
| | | $CHCl_3$ | 0.03 | 0.12 |
| | | VOC (6) | 4.35 | 19.06 |
| 303-MSS | Earth Unit Carbon Beds – MSS | FC | 37.80 | 0.91 |
| | | VOC (6) | 30.33 | 0.75 |
| | | PCE | <0.01 | <0.01 |
| | | $CHCl_3$ | <0.01 | <0.01 |
| | | $C_2Cl_6$ | <0.01 | <0.01 |
| | | $CCl_4$ | 0.37 | 0.02 |
| | | 1,2- Dichloroethane | 0.02 | <0.01 |
| 304 | Emergency Generator #4 Diesel Tank | VOC | 0.05 | <0.01 |
| 305 | Emergency Generator #4 | $NO_x$ | 8.07 | 0.21 |
| | | CO | 0.52 | 0.01 |
| | | $SO_2$ | <0.01 | <0.01 |
| | | VOC | 0.18 | <0.01 |

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| | | | | |
|---|---|---|---|---|
| | | PM | 0.08 | <0.01 |
| | | $PM_{10}$ | 0.08 | <0.01 |
| | | $PM_{2.5}$ | 0.08 | <0.01 |
| 306 | FUG-306<br>Fugitive Emissions (5) | VOC (6) | 3.43 | 15.03 |
| | | PCE | <0.01 | 0.02 |
| | | $CHCl_3$ | <0.01 | 0.03 |
| | | $C_2Cl_6$ | <0.01 | 0.03 |
| | | $CCl_4$ | 1.23 | 5.38 |
| | | 1,2- Dichloroethane | 0.06 | 0.25 |
| 307 | Cooling Tower | FC | 0.77 | 1.68 |
| | | VOC (6) | 1.21 | 2.65 |
| | | PM | 0.75 | 3.29 |
| | | $PM_{10}$ | 0.75 | 3.29 |
| | | $PM_{2.5}$ | 0.75 | 3.29 |
| | | $CCl_4$ | 0.13 | 0.28 |
| | | 1,2- Dichloroethane | 0.01 | 0.03 |
| 308 | Wastewater System | FC | 0.03 | 0.13 |
| | | VOC (6) | 0.05 | 0.20 |
| | | $CHCl_3$ | 0.02 | 0.07 |
| | | $CCl_4$ | <0.01 | <0.01 |
| | | 1,2- Dichloroethane | <0.01 | <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
$SO_2$ - 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
PCE - perchloroethylene
HCl - hydrogen chloride
$Cl_2$ - chlorine
FC - fluorocarbons
$H_2O_2$ - hydrogen peroxide

Emission Sources - Maximum Allowable Emission Rates

| | | |
|---|---|---|
| HF | - | hydrogen fluoride |
| VCM | - | vinyl chloride monomer |
| $CHCl_3$ | - | chloroform |
| $C_2Cl_6$ | - | hexachloroethane |
| $CCl_4$ | - | carbon tetrachloride |

(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) Speciated VOC emissions and fluorocarbon (FC emissions) which are also VOC (not all FC emissions are VOC) are included in the emission rate associated with the Air Contaminant Name VOC.

Date: August 18, 2023