Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 107764 and PSDTX1340

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) |
| Phase I EPNs | | | | |
| B-01001 | Reformer | NOx | 15.52 | 59.42 |
| | | NOx (6) | 62.08 | - |
| | | $NH_3$ | 5.71 | 21.57 |
| | | CO | 93.84 | 177.40 |
| | | VOC | 8.37 | 10.16 |
| | | $SO_2$ | 1.52 | 5.74 |
| | | PM | 11.56 | 43.72 |
| | | $PM_{10}$ | 11.56 | 43.72 |
| | | $PM_{2.5}$ | 8.67 | 32.79 |
| | | $PM_{2.5}$ (7) | 11.56 | - |
| B-14001 | Auxiliary Boiler | NOx | 9.50 | 31.01 |
| | | NOx (6) | 38.00 | - |
| | | $NH_3$ | 3.64 | 11.71 |
| | | CO | 59.96 | 96.44 |
| | | VOC | 5.12 | 14.00 |
| | | $SO_2$ | 0.53 | 1.71 |
| | | PM | 7.08 | 22.77 |
| | | $PM_{10}$ | 7.08 | 22.77 |
| | | $PM_{2.5}$ | 5.31 | 17.08 |

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| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates | |
|---|---|---|---|---|
| | | | lbs/hour | TPY (4) |
| B-01001/B-14001A | Reformer/Auxiliary Boiler | NOx | - | 67.72 |
| S-10001 | MeOH Flare | NOx | 0.35 | 1.53 |
| | | CO | 2.20 | 9.62 |
| | | VOC | 0.34 | 1.50 |
| | | MeOH | 0.01 | 0.01 |
| | | $SO_2$ | 0.01 | 0.05 |
| S-10001 MSS | MeOH Flare MSS | NOx | 425.11 | 9.11 |
| | | CO | 3644.98 | 145.33 |
| | | VOC | 242.44 | 1.16 |
| | | MeOH | 242.44 | 0.84 |
| | | $SO_2$ | 12.55 | 0.30 |
| TK-03007 | MeOH Slop Tank | VOC | 8.47 | 0.12 |
| | | MeOH | 8.47 | 0.12 |
| D-04001 | MeOH Water Scrubber 1 | VOC | 7.24 | 1.65 |
| | | MeOH | 7.24 | 1.65 |
| FUG-MeOH | MeOH Fugitives (5) | VOC | 3.07 | 13.45 |
| | | MeOH | 3.07 | 13.45 |
| | | $NH_3$ | 0.01 | 0.01 |
| T-06001 | MeOH Cooling Tower | VOC | 7.54 | 3.30 |
| | | MeOH | 7.54 | 3.30 |
| | | PM | 37.70 | 82.57 |
| | | $PM_{10}$ | 0.58 | 1.28 |
| | | $PM_{2.5}$ | 0.01 | 0.03 |

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| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates | |
|---|---|---|---|---|
| | | | lbs/hour | TPY (4) |
| TEMP-MSS | Controlled Tank MSS Emissions | NOx | 3.55 | 0.01 |
| | | CO | 7.09 | 0.01 |
| | | VOC | 52.75 | 0.07 |
| | | MeOH | 52.75 | 0.07 |
| | | $SO_2$ | 0.02 | 0.01 |
| | | PM | 0.19 | 0.01 |
| | | $PM_{10}$ | 0.19 | 0.01 |
| | | $PM_{2.5}$ | 0.19 | 0.01 |
| FUG-MSS | Atmosphere MSS Emissions | VOC | 167.93 | 0.50 |
| | | MeOH | 102.03 | 0.20 |
| Phase II EPNs | | | | |
| H-REGEN | Regeneration Heater | NOx | 1.60 | 3.92 |
| | | CO | 2.82 | 3.45 |
| | | VOC | 0.24 | 0.59 |
| | | $SO_2$ | 0.02 | 0.06 |
| | | PM | 0.33 | 0.81 |
| | | $PM_{10}$ | 0.33 | 0.81 |
| | | $PM_{2.5}$ | 0.33 | 0.81 |

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| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates | |
|---|---|---|---|---|
| | | | lbs/hour | TPY (4) |
| H-RXH | Reactor Heaters | NOx | 4.37 | 16.31 |
| | | CO | 7.69 | 14.32 |
| | | VOC | 0.66 | 2.44 |
| | | $SO_2$ | 0.07 | 0.25 |
| | | PM | 0.91 | 3.38 |
| | | $PM_{10}$ | 0.91 | 3.38 |
| | | $PM_{2.5}$ | 0.91 | 3.38 |
| H-HGT | Heavy Gasoline Heater Treater | NOx | 0.27 | 1.08 |
| | | CO | 0.48 | 0.95 |
| | | VOC | 0.04 | 0.16 |
| | | $SO_2$ | 0.01 | 0.02 |
| | | PM | 0.06 | 0.22 |
| | | $PM_{10}$ | 0.06 | 0.22 |
| | | $PM_{2.5}$ | 0.06 | 0.22 |
| D-04002 | MeOH Water Scrubber 2 | VOC | 1.31 | 1.38 |
| | | MeOH | 1.31 | 1.38 |
| VCU-1 | MtG Loading VCU | NOx | 1.06 | 0.88 |
| | | CO | 0.89 | 0.74 |
| | | VOC | 5.33 | 4.47 |
| | | $SO_2$ | 0.01 | 0.01 |
| | | PM | 0.08 | 0.07 |
| | | $PM_{10}$ | 0.08 | 0.07 |
| | | $PM_{2.5}$ | 0.08 | 0.07 |
| D-04002/VCU-1 | Loading Cap | VOC | - | 4.47 |

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| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates | |
|---|---|---|---|---|
| | | | lbs/hour | TPY (4) |
| TK-OS1 | Off-Spec Gasoline Storage Tank | VOC | 1.94 | 3.19 |
| TK-St1A | Gasoline Run-down Storage Tank 1 | VOC | 1.96 | 2.73 |
| TK-ST1B | Gasoline Run-down Storage Tank 1 | VOC | 1.96 | 2.73 |
| TK-SLOP1 | MeOH Water Slop Storage Tank | VOC | 8.47 | 0.12 |
| | | MeOH | 8.47 | 0.12 |
| TK-SLOP2 | Gasoline Slop Storage Tank | VOC | 55.70 | 1.08 |
| FUG-MTG | MtG Fugitives (5) | VOC | 2.77 | 12.13 |
| | | $NH_3$ | 0.01 | 0.01 |
| V-CATREGEN | Catalyst Regeneration Vent | CO | 84.16 | 70.73 |
| | | PM | 0.01 | 0.01 |
| | | $PM_{10}$ | 0.01 | 0.01 |
| | | $PM_{2.5}$ | 0.01 | 0.01 |
| OWS-WWTP | Wastewater Treatment Plant Oil Water Separator | VOC | 0.31 | 0.73 |
| | | MeOH | 0.01 | 0.01 |
| FUG-WWTP | Wastewater Treatment Plant Fugitives | VOC | 15.26 | 22.71 |
| | | MeOH | 4.25 | 1.74 |

(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) $NH_3$ - ammonia
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
MeOH - methanol

Emission Sources - Maximum Allowable Emission Rates

(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 emission limit applies only during startup as defined in Special Condition 9.
(7) This emission limit applies only during cold start-up of the methanol unit for a maximum of 96 hours per year.

Date: June 17, 2020