Emission Sources - Maximum Allowable Emission Rates

Permit Number 5572B

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) |
| 31 | Boiler A | VOC | 0.27 | 1.18 |
| | | $PM_{10}$ | 0.37 | 1.63 |
| | | $NO_x$ | 5.56 | 24.33 |
| | | $SO_2$ | 0.03 | 0.13 |
| | | CO | 4.12 | 18.04 |
| 33 | Cooling Tower | VOC | 0.46 | 2.01 |
| | | Hexane (6) | 0.16 | 0.70 |
| 43 | RH Loading | VOC | 13.63 | 0.19 |
| 44 | B Flare<br>Normal Operations | VOC | 42.41 | 21.98 |
| | | Hexane (6) | 9.20 | 8.02 |
| | | $NO_x$ | 3.18 | 1.86 |
| | | $SO_2$ | 0.01 | 0.01 |
| | | CO | 22.88 | 13.08 |
| 44 | B Flare<br>Maintenance, Startup, and Shutdown (MSS) Activities | VOC | 2151.62 | 2.02 |
| | | Hexane (6) | 974.10 | 1.38 |
| | | $NO_x$ | 169.06 | 0.13 |
| | | $SO_2$ | 0.01 | 0.01 |
| | | CO | 1221.09 | 0.91 |

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| | | | | |
|---|---|---|---|---|
| 44 | B Flare<br>Demonstration Plant<br>Normal Operations and MSS Activities | VOC | 2.23 | 4.81 |
| | | $NO_x$ | 4.66 | 10.04 |
| | | $SO_2$ | 0.04 | 0.09 |
| | | CO | 24.01 | 51.72 |
| 46A | Tank D-104 (5) | VOC | 11.30 | 0.01 |
| 46B | Tank D-105 (5) | VOC | 13.94 | 0.17 |
| 49 | B-line Fugitives (8) | VOC | 4.70 | 20.57 |
| | | Hexane (6) | 1.46 | 6.39 |
| 58 | PF-311B Baghouse | PM | 0.01 | 0.05 |
| | | $PM_{10}$ | 0.01 | 0.05 |
| | | $PM_{2.5}$ | 0.01 | 0.01 |
| | | VOC | (7) | (7) |
| 59 | PF-435B Baghouse | PM | 0.03 | 0.14 |
| | | $PM_{10}$ | 0.03 | 0.14 |
| | | $PM_{2.5}$ | 0.01 | 0.03 |
| | | VOC | (7) | (7) |
| 60 | B-line Finishing Building Fugitives (8) | PM | 0.10 | 0.42 |
| | | $PM_{10}$ | 0.10 | 0.42 |
| | | $PM_{2.5}$ | 0.02 | 0.08 |
| | | VOC | (7) | (7) |
| 61 | Powder Transport System 2, 3, and 4 Vent | PM | 0.01 | 0.03 |
| | | $PM_{10}$ | 0.01 | 0.03 |
| | | $PM_{2.5}$ | 0.01 | 0.01 |
| | | VOC | (7) | (7) |
| 58/59/60/61 | Finishing and Hopper Car Loading Residual VOC (7) | VOC | 4.06 | 13.55 |
| 62 | Aluminum Alkyl Metering Run | VOC | 13.94 | 0.18 |

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| | | | | |
|---|---|---|---|---|
| 63 | Alkyl Deactivator Storage Drum | VOC | 27.87 | 0.05 |
| 64 | Tank Truck Loading and Unloading Fugitives (8) | VOC | 1.65 | 0.05 |
| 65 | Hopper Car Unloading Vacuum System | PM | 0.03 | 0.14 |
| | | $PM_{10}$ | 0.03 | 0.14 |
| | | $PM_{2.5}$ | 0.01 | 0.03 |
| 110 | C-line Pellet Silo | $PM_{10}$ | 0.017 | 0.19 |
| | | VOC | 3.97 | 10.08 |
| 111 | Pellet Blending Silo | $PM_{10}$ | 1.01 | 4.41 |
| 112 | Elutriator Bag Filter | $PM_{10}$ | 1.08 | 2.19 |
| 114 | Extrusion Vents | $PM_{10}$ | 0.062 | 0.27 |
| 120 | Boiler C | VOC | 0.67 | 2.93 |
| | | $PM_{10}$ | 0.92 | 4.05 |
| | | $NO_x$ | 4.46 | 10.86 |
| | | $SO_2$ | 0.07 | 0.32 |
| | | CO | 7.42 | 32.48 |
| 130 | C Cooling Tower | VOC | 1.01 | 4.42 |
| 140 | C Flare<br>Normal Operations | VOC (6) | 130.00 | 20.00 |
| | | $NO_x$ | 18.43 | 2.74 |
| | | $SO_2$ | 0.01 | 0.01 |
| | | CO | 94.95 | 13.70 |
| 140 | C Flare<br>MSS Activities | VOC (6) | 176.25 | 2.70 |
| | | $NO_x$ | 17.50 | 0.30 |
| | | $SO_2$ | 0.01 | 0.01 |
| | | CO | 123.75 | 1.78 |

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| | | | | |
|---|---|---|---|---|
| | | Propylene | 176.25 | 2.70 |
| | | Hexane | 0.01 | 0.01 |
| 150 | C-line Fugitives (8) | VOC | 1.78 | 7.77 |
| 170 | Wastewater Fugitives | VOC | 0.11 | 0.47 |
| 200 | Demonstration Plant Fugitives (8) | VOC | 0.03 | 0.14 |
| Vac_MSS | MSS Demonstration Plant Catalyst Removal with Vacuum Truck | PM | 0.43 | 0.01 |
| | | $PM_{10}$ | 0.43 | 0.01 |
| | | $PM_{2.5}$ | 0.21 | 0.01 |
| Maint_MSS | MSS Activities | Propylene | 0.08 | 0.04 |
| | | Hexane | 1.99 | 0.02 |
| Vessel_MSS | MSS Vessel Degasing | Propylene | 19.31 | 0.26 |
| | | Hexane | 16.28 | 0.20 |
| Piping_MSS | MSS Pipe Openings | Propylene | 0.66 | 0.11 |
| Heat Ex_MSS | MSS Heat Exchanger Degassing | Propylene | 0.01 | 0.01 |
| | | Hexane | 27.49 | 0.16 |

(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
CO - carbon monoxide

$SO_2$ - 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
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
(5) Tanks D-104 and D-105 shall not be filled simultaneously.
(6) Hexane and propylene emission rates are included in the VOC emissions.
(7) The compliance caps for EPNs 58, 59, 60, and 61are limited to no more than 4.06 pounds per hour (lb/hr) and 13.55 tons per year (TPY) of VOC emissions.

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(8) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: June 23, 2014