EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 8052

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) |
| 138 | Multipurpose Spray Dryer and Baghouse FC/FD-11-038 | $PM_{10}$ | 2.03 | 8.90 |
| | | $SO_2$ | 0.01 | 0.04 |
| | | CO | 0.39 | 1.71 |
| | | VOC | 0.06 | 0.28 |
| | | $NO_x$ | 0.04 | 0.18 |
| | | Methanol | 1.71 | 7.51 |
| 151 | Ammonia Scrubber | $NH_3$ | 4.02 | 17.61 |
| | | VOC | 0.34 | 0.70 |
| | | $CH_2O$ | 0.58 | 2.54 |
| | | CO | 0.15 | 0.07 |
| 172 | Hydrogen Cyanide Scrubber | HCN | 0.03 | 0.09 |
| | | VOC | 0.01 | 0.01 |
| 185 | Flash Dryer | $PM_{10}$ | 0.02 | 0.09 |
| | | $SO_2$ | 0.01 | 0.01 |
| | | CO | 0.04 | 0.17 |
| | | VOC | 0.01 | 0.01 |
| | | $NO_X$ | 0.05 | 0.20 |
| 203 | H2SO4 Storage Tank | $H_2SO_4$ | 0.01 | 0.01 |
| 232 | Flash Dryer | $PM_{10}$ | 0.01 | 0.04 |
| | | $SO_2$ | 0.01 | 0.01 |
| | | CO | 0.03 | 0.11 |
| | | VOC | 0.01 | 0.01 |
| | | $NO_X$ | 0.03 | 0.13 |
| 237 | Hydrogen Cyanide Tank Scrubber | HCN | 0.0009 | 0.0002 |

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| | | | | |
|---|---|---|---|---|
| 245 | Formaldehyde Storage Tank Scrubber | $CH_2O$ | 0.01 | 0.01 |
| | | VOC (6) | 0.25 | 0.10 |
| | | CO | 0.01 | 0.01 |
| 262 | Amine Scrubber | VOC | 0.02 | 0.02 |
| 407 | DAXAD Storage Tank 1 | Methanol | 1.19 | 0.07 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.50 | 0.03 |
| 408 | Loading Rack No. 4 | Methanol | 0.76 | 0.21(7) |
| | | $CH_2O$ | 0.01 | 0.01(7) |
| | | Naphthalene | 0.32 | 0.09(7) |
| 430 | Spray Dryer | VOC (6) | 13.57 | 59.44 |
| | | $CH_2O$ | 0.98 | 4.29 |
| | | CO | 3.60 | 14.05 |
| | | $PM_{10}$ | 2.40 | 10.51 |
| | | $SO_2$ | 0.01 | 0.03 |
| | | NOx | 0.85 | 3.72 |
| 442 | DAXAD Storage Tank 4 | Methanol | 1.19 | 0.07 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.50 | 0.03 |
| 443 | DAXAD Storage Tank 3 | Methanol | 1.19 | 0.07 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.50 | 0.03 |
| 444 | DAXAD Storage Tank 2 | Methanol | 1.19 | 0.07 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.50 | 0.03 |
| 516 | Furan Utility Tank | Methanol | 1.19 | 0.07 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.5 | 0.01 |
| 531 | DAXAD Storage Tank 5 | Methanol | 0.89 | 0.07 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.38 | 0.03 |

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| | | | | |
|---|---|---|---|---|
| 546 | Fluid Bed Dryer | VOC (6) | 8.22 | 35.00 |
| | | $CH_2O$ | 0.10 | 0.44 |
| | | CO | 5.68 | 22.70 |
| | | $PM_{10}$ | 0.53 | 2.32 |
| | | $SO_2$ | 0.01 | 0.01 |
| | | NOx | 4.91 | 21.51 |
| 566 | Naphthalene Storage Tank A | VOC | 6.04 | 1.63 |
| 568 | Filter Aid Tank | Methanol | 1.17 | 0.01 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.50 | 0.01 |
| 569 | Cake Wash Tank | Methanol | 0.59 | 0.02 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.25 | 0.01 |
| 573 | Filter Press | Methanol | 0.01 | 0.01 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.01 | 0.01 |
| 598 | DAXAD Thermal Oxidizer | $CH_2O$ | 0.06 | 0.24 |
| | | Methanol | 0.96 | 3.99 |
| | | $PM_{10}$ | 0.06 | 0.26 |
| | | $SO_2$ | 0.01 | 0.01 |
| | | NOx | 0.50 | 2.19 |
| | | CO | 0.67 | 2.84 |
| | | Combustion VOC | 0.03 | 0.13 |
| 723 | East Cooling Tower | VOC | 0.01 | 0.01 |
| 772 | Cooling Tower | VOC | 0.01 | 0.01 |
| 817 | Fuel Oil Tank | VOC | 0.01 | 0.01 |
| 819 | Firewater Pump | $PM_{10}$ | 0.26 | 0.01 |
| | | $SO_2$ | 0.24 | 0.01 |
| | | CO | 0.80 | 0.01 |
| | | VOC | 0.29 | 0.01 |
| | | NOx | 3.70 | 0.05 |

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| | | | | |
|---|---|---|---|---|
| 859 | Boiler (3 total) | $PM_{10}$ | 0.32 | 1.41 |
| | | $SO_2$ | 0.03 | 0.11 |
| | | CO | 4.57 | 20.02 |
| | | VOC | 0.73 | 3.2 |
| | | NOx | 3.25 | 14.24 |
| 895 | Naphthalene Storage Tank B | VOC | 6.04 | 1.72 |
| 1290 | DSIDA Tank | VOC | 0.01 | 0.01 |
| 1560 | Purge Liquor Tank | VOC | 0.01 | 0.01 |
| 2884 | DAXAD Storage Tank 13 | Methanol | 1.19 | 0.07 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.50 | 0.03 |
| 2914 | Naphthalene Storage Tank C | VOC | 6.04 | 1.63 |
| 4032 | Lime Silo Baghouse | $PM_{10}$ | 0.08 | 0.01 |
| 4033 | Lime Slaker Scrubber | $PM_{10}$ | 0.06 | 0.01 |
| 4034 | LCA DAXAD Prefilter Tank | Methanol | 0.88 | 0.09 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.37 | 0.04 |
| 4035 | LCA DAXAD Unfiltered Water Tank | Methanol | 0.88 | 0.03 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.37 | 0.04 |
| 4037 | LCA DAXAD Filter Press | Methanol | 0.01 | 0.03 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.02 | 0.04 |
| 4038 | LCA DAXAD Cake Wash H2O Tank | Methanol | 0.88 | 0.03 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.37 | 0.01 |
| 4039 | LCA DAXAD Product Receiver H2O Tank | Methanol | 0.89 | 0.03 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.38 | 0.04 |
| 4040 | Third Product Receiver Tank H2O Tank | Methanol | 0.90 | 0.09 |
| | | $CH_2O$ | 0.01 | 0.01 |

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| | | | | |
|---|---|---|---|---|
| | | Naphthalene | 0.38 | 0.04 |
| 4290 | DAXAD Product Receiver H2O Tank | Methanol | 0.90 | 0.08 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.38 | 0.04 |
| 4297 | Loading Rack No. 2 | Methanol | 0.76 | (7) |
| | | $CH_2O$ | 0.01 | (7) |
| | | Naphthalene | 0.32 | (7) |
| 4338 | Third Filter Press | Methanol | 0.01 | 0.01 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.03 | 0.02 |
| 4513 | Prefilter Tank H2O Tank | Methanol | 0.89 | 0.11 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.38 | 0.04 |
| 5019 | Bersworth Reactor I | $NH_3$ | 0.93 | 0.17 |
| | | VOC | 0.42 | 0.08 |
| 5319 | Bersworth Reactor II | $NH_3$ | 0.93 | 0.17 |
| | | VOC | 0.42 | 0.08 |
| 5357 | DSIDA Centrifuge | HCN | 0.03 | 0.02 |
| 5361 | DSIDA Steam Jet | HCN | 0.03 | 0.02 |
| 6031 | DAXAD Storage Tank 6 | Methanol | 0.89 | 0.29 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.38 | 0.12 |
| 6032 | DAXAD Storage Tank 7 | Methanol | 1.19 | 0.28 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.50 | 0.12 |
| 6033 | DAXAD Storage Tank 8 | Methanol | 1.19 | 0.27 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.50 | 0.11 |
| 6034 | DAXAD Storage Tank 9 | Methanol | 1.19 | 0.27 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.50 | 0.11 |
| 6035 | Sodium Glycinate Storage | VOC | 0.01 | 0.01 |

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| | | | | |
|---|---|---|---|---|
| | Tank 10 | | | |
| 6036 | NTA-150 Storage Tank | VOC | 0.01 | 0.01 |
| 6064 | Loading Rack No. 5 | Methanol | 0.76 | (7) |
| | | $CH_2O$ | 0.01 | (7) |
| | | Naphthalene | 0.32 | (7) |
| 6065 | Loading Rack No. 1 | Methanol | 0.76 | (7) |
| | | $CH_2O$ | 0.01 | (7) |
| | | Naphthalene | 0.32 | (7) |
| 6121 | Loading Rack No. 9 | Methanol | 0.76 | (7) |
| | | $CH_2O$ | 0.01 | (7) |
| | | Naphthalene | 0.32 | (7) |
| 6122 | Loading Rack No. 8 | Methanol | 0.76 | (7) |
| | | $CH_2O$ | 0.01 | (7) |
| | | Naphthalene | 0.32 | (7) |
| 6123 | Loading Rack No. 7 | Methanol | 0.76 | (7) |
| | | $CH_2O$ | 0.01 | (7) |
| | | Naphthalene | 0.32 | (7) |
| 7717 | DAXAD Storage Tank 12 | Methanol | 1.19 | 0.12 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.50 | 0.05 |
| 8000 | DSIDA Storage Tank | VOC | 0.01 | 0.01 |
| 8003 | Chelate Acid Centrifuge Discharge Hopper | $PM_{10}$ | 0.03 | 0.03 |
| 155171 | DAXAD Storage Tank A | Methanol | 1.19 | 0.10 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.5 | 0.04 |
| 155181 | DAXAD Storage Tank B | Methanol | 0.59 | 0.10 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.25 | 0.04 |
| 1700901 | Cartridge Dust Collector | $PM_{10}$ | 0.01 | 0.01 |
| 1700905 | Glycine Conditioning Train Baghouse | $PM_{10}$ | 0.03 | 0.14 |

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

| | | | | |
|---|---|---|---|---|
| Fugitives | Fugitives (4) | VOC | 0.26 | 1.14 |
| | | $NH_3$ | 0.06 | 0.26 |
| FU-1 | DAXAD Product Fugitives (4) | Methanol | 0.02 | 0.11 |
| | | $CH_2O$ | 0.01 | 0.01 |
| | | Naphthalene | 0.01 | 0.05 |

(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) $PM_{10}$ - particulate matter (PM) equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no particulate matter greater than 10 microns is emitted.
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code ' 101.1
$NO_x$ - total oxides of nitrogen
$SO_2$ - sulfur dioxide
CO - carbon monoxide
HCN - hydrogen cyanide
$CH_2O$ - formaldehyde
$NH_3$ - ammonia
$H_2SO_4$ - sulfuric acid
(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) Volatile organic compounds from EPNs 245, 439 and 546 are exclusive of formaldehyde.
(7) Annual emissions on EPN 408 are the sum of annual emissions from EPN=s 408, 4297, 6064, 6065, 6121, 6122, and 6123

Date: _____