EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 9423

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. 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 * lb/hr | TPY** |
|---|---|---|---|---|
| **EPNs Common to C-Line, D-Line, and E-Line** | | | | |
| 30 and 34 | LOG Flare and Elevated Flare (6) | VOC (5) | 81.24 | 61.56 |
| | | Ethylene | 81.24 | 61.56 |
| | | Propylene | 81.24 | 61.56 |
| | | $NO_x$ | 11.21 | 8.50 |
| | | CO | 90.64 | 68.69 |
| 98 | D-885 Waste Oil Loading Drum | VOC | 1.62 | 0.06 |
| **C-Line EPNs** | | | | |
| 39 | D-3106 Catalyst Handling Drum | VOC | 3.89 | 0.02 |
| 40 | D-3504 Stabilizer Addition Drum | $PM_{10}$ | 4.07 | 0.03 |
| 15 | M-522 Pellet Silo Cyclone | VOC | (7) | (7) |
| | | $PM_{10}$ | 0.01 | 0.05 |
| 15B | M2542A/B Recycle Pellet Cyclones | VOC | (7) | (7) |
| | | $PM_{10}$ | 0.02 | 0.10 |
| 43 | M-2522 Pellet Silo Cyclone | VOC | (7) | (7) |
| | | $PM_{10}$ | 0.01 | 0.05 |
| 118 | M-571 Pellet Bulk Loading Cyclone | VOC | (7) | (7) |
| | | $PM_{10}$ | 0.03 | 0.10 |

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| | | | | |
|---|---|---|---|---|
| 55A | M-500A Flake Bag Filter | VOC<br>$PM_{10}$ | (7)<br>0.02 | (7)<br>0.08 |
| 55B | M-500B Flake Bag Filter | VOC<br>$PM_{10}$ | (7)<br>0.02 | (7)<br>0.02 |
| 120 | M-574 Bag Filter | VOC<br>$PM_{10}$ | (7)<br>0.02 | (7)<br>0.08 |
| 122 | M-2574 Bag Filter | VOC<br>$PM_{10}$ | (7)<br>0.02 | (7)<br>0.08 |
| 123 | M-2572 Bag Filter | VOC<br>$PM_{10}$ | (7)<br>0.02 | (7)<br>0.08 |
| 109 | D-3103 TEAL Seal Pot Drum | VOC | 0.04 | 0.01 |
| 110 | D-3105 Oil and Grease Mixing | VOC | 0.21 | 0.01 |
| 111 | D-3107 Hydraulic Oil Drum | VOC | 0.04 | 0.01 |
| 112 | D-3110A Donor Storage Drum | VOC | 1.99 | 0.01 |
| 113 | D-3110B Donor Storage Drum | VOC | 0.34 | 0.01 |
| 114 | TK-3111 Donor Storage Drum | VOC | 0.60 | 0.01 |
| 115 | T-3501 Scrubber Wastewater | VOC | 0.07 | 0.31 |
| 116 | Railcar Loading (Flake) | VOC | (7) | (7) |
| 35 | Fugitives (4) | VOC<br>$NH_3$ | 6.38<br>0.66 | 27.93<br>2.89 |
| 143 | Mineral Oil Tank | VOC | 0.01 | 0.01 |
| 144 | Mineral Oil Tank | VOC | 0.01 | 0.01 |

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| | | | | |
|---|---|---|---|---|
| 149 | D-3106B Catalyst Handling Drum | VOC | 0.64 | 0.01 |
| **D-Line EPNs** | | | | |
| 37 | D-4106 Catalyst Unloading | VOC | 0.82 | 0.01 |
| 38 | D-4504 Stabilizer Addition | VOC | 0.08 | 0.01 |
| 41 | Fugitives (4) | VOC<br>$NH_3$ | 4.11<br>0.11 | 18.00<br>0.50 |
| 100A | M-4511A Bag Filter (6) | VOC<br>$PM_{10}$ | (8)<br>0.57 | (8)<br>2.38 |
| 100B | M-4511B Bag Filter (6) | VOC<br>$PM_{10}$ | (8)<br>0.57 | (8)<br>2.38 |
| 101A | M-43500A Flake Bag Filter (6) | VOC<br>$PM_{10}$ | (8)<br>0.28 | (8)<br>1.23 |
| 101B | M-42500B Flake Bag Filter (6) | VOC<br>$PM_{10}$ | (8)<br>0.28 | (8)<br>1.23 |
| 102 | Railcar Loading/VOC Residual (6) | VOC | (8) | (8) |
| 103 | D-4105 Oil and Grease Mixing | VOC | 0.18 | 0.01 |
| 104 | D-4110A Donor Storage Drum | VOC | 0.09 | 0.01 |
| 105 | D-4110B Donor Storage Drum | VOC | 0.59 | 0.01 |
| 106 | TK-4111 Donor Storage Drum | VOC | 0.55 | 0.01 |
| 107 | D-4103 TEAL Seal Pot | VOC | 0.01 | 0.01 |
| 108 | T-4501 Scrubber Wastewater | VOC | 0.23 | 1.00 |

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| | | | | |
|---|---|---|---|---|
| 152 | DLX Flake Transfer | VOC<br>$PM_{10}$ | (8)<br>0.13 | (8)<br>0.56 |
| 153 | DLX Pellet Silos | VOC | (8) | (8) |
| 154 | Railcar Loading DLX | VOC<br>$PM_{10}$ | (8)<br>0.69 | (8)<br>3.00 |
| **E-Line EPNs** | | | | |
| 50A | Catalyst Handling | VOC | 0.28 | 0.01 |
| 50B | Catalyst Handling | VOC | 0.28 | 0.01 |
| 51 | Stabilizer Addition | VOC | 0.01 | 0.01 |
| 14C | Pellet Transfer System | VOC<br>$PM_{10}$ | (8)<br>0.03 | (8)<br>0.08 |
| 131 | Pellet Transfer System | VOC<br>$PM_{10}$ | (9)<br>0.03 | (9)<br>0.08 |
| 124 | TEAL Seal Pot | VOC | 0.01 | 0.01 |
| 125 | Oil and Grease Mixing | VOC | 0.01 | 0.01 |
| 126 | Hydraulic Oil Drum | VOC | 0.01 | 0.01 |
| 127 | Donor Storage Drum | VOC | 0.09 | 0.01 |
| 128 | Donor Storage Drum | VOC | 0.09 | 0.01 |
| 129 | Donor Storage Drum | VOC | 0.16 | 0.01 |
| 130 | Scrubber Wastewater | VOC | 0.07 | 0.31 |
| 132 | Railcar Loading MP2 | VOC | (9) | (9) |
| 133 | Railcar Loading MP4 | VOC | (9) | (9) |
| 135 | Additive Surge Drum | VOC | 0.01 | 0.01 |
| 52 | Fugitives (4) | VOC<br>$NH_3$ | 5.31<br>0.66 | 23.24<br>2.89 |
| 147 | Additive Storage | VOC | 0.06 | 0.01 |

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| | | | | |
|---|---|---|---|---|
| 148 | Additive Storage | VOC | 0.02 | 0.01 |
| 99 | West Marley Cooling Tower | VOC (4) (5) | 1.08 | 4.73 |
| | | Ethylene | 1.08 | 4.73 |
| | | Propylene | 1.08 | 4.73 |
| | | $PM_{10}$ (10) | 0.33 | 1.46 |
| 146 | East Marley Cooling Tower | VOC (4) (5) | 0.57 | 2.49 |
| | | Ethylene | 0.57 | 2.49 |
| | | Propylene | 0.57 | 2.49 |
| | | $PM_{10}$ (10) | 0.18 | 0.77 |

(1) Emission point identification - either specific equipment designation or emission point number from a plot plan.
(2) Specific point source names. For fugitive sources, use an 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
$PM_{10}$ - particulate matter equal to or less than 10 microns in diameter
CO - carbon monoxide
$NH_3$ - ammonia
(4) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable special conditions and permit application representations.
(5) The allowable emission rates for individual VOC species of ethylene and propylene from this EPN are included in the total VOC emission rates.
(6) Emission rates shown are combined totals for EPN 30 and EPN 34.
(7) The combined total VOC emissions for all EPNs with this note shall not exceed 1.25 lb/hr and 4.83 tpy.
(8) The combined total VOC emissions for all EPNs with this note shall not exceed 1.46 lb/hr and 3.50 tpy.
(9) The combined total VOC emissions for all EPNs with this note shall not exceed 0.31 lb/hr and 0.92 tpy.
(10) The $PM_{10}$ emission rates effective September 1, 2010. Until then, compliance with the cooling tower monitoring requirements in Special Condition No. 16 shall be demonstrated by maintaining a total dissolved solid concentration of 2500 mg/L or less in the cooling water.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

____ Hrs/day ____ Days/week ____ Weeks/year or 8,760 Hrs/year

** Compliance with annual emission limits is based on a rolling 12-month period.

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Dated December 22, 2009