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 + 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 PM_{10}	(7) 0.02	(7) 0.08
55B	M-500B Flake Bag Filter	VOC PM_{10}	(7) 0.02	(7) 0.02
120	M-574 Bag Filter	VOC PM_{10}	(7) 0.02	(7) 0.08
122	M-2574 Bag Filter	VOC PM_{10}	(7) 0.02	(7) 0.08
123	M-2572 Bag Filter	VOC PM_{10}	(7) 0.02	(7) 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 NH_3	6.38 0.66	27.93 2.89

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143	Mineral Oil Tank	VOC	0.01	0.01
144	Mineral Oil Tank	VOC	0.01	0.01
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 NH_3	4.11 0.11	18.00 0.50
100A	M-4511A Bag Filter	VOC PM_{10}	(8) 0.57	(8) 2.38
100B	M-4511B Bag Filter	VOC PM_{10}	(8) 0.57	(8) 2.38
101A	M-43500A Flake Bag Filter	VOC PM_{10}	(8) 0.28	(8) 1.23
101B	M-42500B Flake Bag Filter	VOC PM_{10}	(8) 0.28	(8) 1.23
102	Railcar Loading/VOC Residual	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

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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
152	DLX Flake Transfer	VOC PM_{10}	(8) 0.13	(8) 0.56
153	DLX Pellet Silos	VOC	(8)	(8)
154	Railcar Loading DLX	VOC PM_{10}	(8) 0.69	(8) 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 PM_{10}	(7) 0.03	(7) 0.08
131	Pellet Transfer System	VOC PM_{10}	(9) 0.03	(9) 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

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

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	(7)	(7)
133	Railcar Loading MP4	VOC	(9)	(9)
135	Additive Surge Drum	VOC	0.01	0.01
52	Fugitives (4)	VOC	5.31	23.24
		NH_3	0.66	2.89
147	Additive Storage	VOC	0.06	0.01
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
		$PM_{10}/PM_{2.5}$ (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
		$PM_{10}/PM_{2.5}$ (10)	0.18	0.77
150	CLX Cooling Tower (11)	$PM_{10}/PM_{2.5}$	0.15	0.66
151	Excel Marley 3 Cooling Tower	VOC (4) (5)	1.0	4.4
		Ethylene	1.0	4.4
		Propylene	1.0	4.4
		$PM_{10}/PM_{2.5}$	0.60	2.63
155	DLX Cooling Tower (11)	$PM_{10}/PM_{2.5}$	0.15	0.66

MAINTENANCE, STARTUP, AND SHUTDOWN ACTIVITIES

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

30 + 34	LOG Flare and Elevated	VOC (5)	540.00	(12)
	Flare MSS Activities (6)	Ethylene Propylene NO_x CO	265.00 540.00 75.00 605.00	
MSS41	C-Line Maintenance Shutdown	VOC	15.18	0.06
MSS42	D-Line Maintenance Shutdown	VOC	15.18	0.06
MSS43	E-Line Maintenance Shutdown	VOC	26.22	0.10
MSS44	Bullets Area Maintenance Shutdown	VOC	26.22	0.01
MSS45	Monomer Supplier Proving	VOC	0.01	0.01
MSS46	C-Line Compressor Maintenance	VOC	0.01	0.01
MSS47	D-Line Compressor Maintenance	VOC	0.01	0.01
MSS48	E-Line Compressor Maintenance	VOC	0.01	0.01
MSS49	C-Line Pump Maintenance	VOC	0.06	0.01
MSS50	D-Line Pump Maintenance	VOC	0.06	0.01
MSS51	E-Line Pump Maintenance	VOC	0.06	0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

MSS52	Bullet Pump Maintenance	VOC	0.06	0.01
MSS53	C-Line Commercial Shutdown	VOC	15.18	0.06
MSS54	D-Line Commercial Shutdown	VOC	15.18	0.06
MSS55	E-Line Commercial Shutdown	VOC	26.22	0.10
MSS56	E-Line Gas Phase Reactor Cleaning	VOC	11.04	0.14
MSS57	C-Line Filter Changes	VOC	0.03	0.01
MSS58	D-Line Filter Changes	VOC	0.03	0.01
MSS59	E-Line Filter Changes	VOC	0.03	0.01
MSS60	C/D/E Instrument Maintenance (repair/replace)	VOC	0.01	0.01

FOOTNOTES:

(1) Emission point identification - either specific equipment designation or emission point number (EPN) 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
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
NH_3 - ammonia

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(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 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 pounds per hour (lbs/hr) and 4.83 tons per year (tpy).
(8) The combined total VOC emissions for all EPNs with this note shall not exceed 1.46 lbs/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. 17 shall be demonstrated by maintaining a total dissolved solid concentration of 2,500 mg/L or less in the cooling water.
(11) The CLX and DLX cooling towers are authorized by unregistered permit by rule 106.371 and are incorporated by reference into the permit.
(12) The combined annual allowable emission limits for these EPNs are specified on Page one.

* 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.

Dated March 3, 2010