EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

PSD-TX-760M3

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emis-sion rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facil-ities. 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* #/hr	TPY
Olefins				
1001	Pyrolysis Furnace	VOC	0.70	3.00
		NOx	30.30	132.71
		CO	8.20	35.92
		TSP	0.50	2.20
1002	Pyrolysis Furnace	VOC	0.70	3.00
		NOx	30.30	132.71
		CO	8.20	35.92
		TSP	0.50	2.20
1003	Pyrolysis Furnace	VOC	0.70	3.00
		NOx	30.30	132.71
		CO	8.20	35.92
		TSP	0.50	2.20
1004	Pyrolysis Furnace	VOC	0.70	3.00
		NOx	30.30	132.71
		CO	8.20	35.92
		TSP	0.50	2.20
1005	Pyrolysis Furnace	VOC	0.70	3.00
		NOx	30.30	132.71
		CO	8.20	35.92
		TSP	0.50	2.20
1006	Pyrolysis Furnace	VOC	0.70	3.0
		NOx	30.30	132.71
		CO	8.20	35.92
		TSP	0.50	2.20

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
1007	Pyrolysis Furnace	VOC	0.70	3.00
		NOx	30.30	132.71
		CO	8.20	35.92
		TSP	0.50	2.20

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
1008	Pyrolysis Furnace	VOC	0.70	3.00
		NOx	30.30	132.71
		CO	8.20	35.92
		TSP	0.50	2.20
1009B	Pyrolysis Furnace	VOC	0.70	3.00
		NOx	30.30	132.71
		CO	8.20	35.92
		TSP	0.50	2.20
1009	Decoke Drum (5)	CO	34.62	14.00
		TSP	3.20	1.30
1010	Cooling Tower	VOC	5.29	23.19
		BZ	0.17	0.73
1011	API Oil/Water Separator	VOC	1.34	5.86
		BZ	0.04	0.19
1012	MAPD Regenerator 3418F	CO	17.30	0.01
1013	Wash Oil Tank 2410F	VOC	0.02	0.01
1015	Raw Condensate Tank 6402F	VOC	2.21	4.60
		BZ	0.02	0.04
1016	Flux Oil Tank 6495F	VOC	1.71	0.96
1017	Methanol Tank 3416F	VOC	0.65	0.02
1018	Elevated Flare	EMERGENCY ONLY		
1019	Fugitive	VOC	0.72	3.16
		BZ	0.02	0.10
1020	Naptha Tank 6401F	VOC	5.69	12.98
		BZ	0.06	0.11
1024	Wash Oil Tank	VOC	0.28	0.07
1025	Pyrolysis Fuel Oil 6499FA	VOC	1.03	2.36

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
1026	Pyrolysis Fuel Oil 6499FB	VOC	1.03	2.36
1027	Natural Fuel Oil Tank 6497FA	VOC	0.65	1.22

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
1028	Fugitives - A (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1029	Fugitives - B (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1030	Fugitives - C (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1031	Fugitives - D (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1032	Fugitives - E (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1033	Fugitives - F (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1034	Fugitives - G (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1035	Fugitives - H (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1036	Fugitives - I (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1037	Fugitives - J (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1038	Fugitives - K (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1039	Fugitives - L (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1040	Fugitives - M (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1041	Fugitives - N (4)	VOC	0.72	3.16
		BZ	0.02	0.10

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
1042	Fugitives - O (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1043	Fugitives - P (4)	VOC	0.72	3.16
		BZ	0.02	0.10

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
1044	Fugitives - Q (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1045	Fugitives - R (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1046	Reboiler #1	VOC	0.08	0.36
		NOx	1.82	7.97
		CO	1.02	4.47
		TSP	0.03	0.13
1047	Reboiler #2	VOC	0.08	0.36
		NOx	1.82	7.97
		CO	1.02	4.47
		TSP	0.03	0.13
1048	Slop Oil Tank 7408F	VOC	0.54	0.07
1049	Process Fugitives - T (4)	VOC	0.16	0.70
		BZ	<0.01	0.02
1051	Tank Flare	VOC	0.21	0.43
		NOx	1.35	0.04
		CO	11.50	0.31
		TSP	0.07	<0.01
		BZ	0.02	0.04
IEM (Caustic/Chlorine)				
2HC201	Molten Salt Heater	VOC	0.08	0.35
		NOx	3.52	15.42
		CO	1.00	4.38
		TSP	0.14	0.62
EDC				
EDC-FUG	Fugitives (4)	VOC	0.41	1.8
6002	Two Incinerator/Scrubbers	VOC	0.28	1.23
		NOx	2.64	11.56
		CO	0.80	3.50

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
	Wastewater Fugitives (4)	VOC	0.13	0.55
HDPE				
PE-FUG	Plant Fugitives (4)	VOC	2.76	12.10
		TSP	0.06	0.27
2-HDPE	Downstream Pellet Handling	VOC	4.96	21.73
5T6010	Tank T-501	VOC	0.89	0.76
5T6020	Tank T-502	VOC	0.50	0.76
5T6030	Tank 2T-502	VOC	0.50	0.76
5T6040	Tank T-503	VOC	0.49	0.76
5T6050	Tank 2T-503	VOC	0.49	0.76
F-302	Powder Silo Bag Filter	TSP	0.10	0.42
2F-302	Powder Silo Bag Filter	TSP	0.10	0.42
F-701	Blending Silo Bag Filter	TSP	0.09	0.37
2F-701	Blending Silo Bag Filter	TSP	0.09	0.37
F-708A	Hopper Car Bag Filter F-708A	TSP	0.05	0.21
F-708B	Hopper Car Bag Filter F-708B	TSP	0.05	0.21
S-705	Packer Silo Cyclone Separator	TSP	0.06	0.28
2S-705	Packer Silo Cyclone Separator	TSP	0.06	0.28

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
S-707	Packer Silo Cyclone Separator	TSP	0.06	0.28
2S-707	Packer Silo Cyclone Separator	TSP	0.06	0.28
S-708A	Hopper Silo Cyclone Separator	TSP	0.06	0.28
S-708B	Hopper Silo Cyclone Separator	TSP	0.06	0.28
S-709A	Product Silos Cyclone Separator S-709A	TSP	0.06	0.28

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
S-709B	Product Silos Cyclone Separator S-709B	TSP	0.06	0.28
WW1	Wastewater Treatment Plant Fugitives (4)	VOC	0.18	0.79
WW2	Wastewater Treatment Plant Fugitives (4)	VOC	0.18	0.79
WW3	Wastewater Treatment Plant Fugitives (4)	VOC	0.18	0.79
WW4	Wastewater Treatment Plant Fugitives (4)	VOC	0.18	0.79
WW5	Wastewater Treatment Plant Fugitives (4)	VOC	0.18	0.79
Polypropylene				
PP-FUG1	Fugitives #1 (4)	TSP	0.05	0.27
PP-FUG2	Fugitives #2 (4)	VOC	0.32	1.41
PP-FUG3	Fugitives #3 (4)	VOC	0.32	1.41
PP-FUG4	Fugitives #4 (4)	VOC	0.32	1.41
PP-FUG5	Fugitives #5 (4)	VOC	0.32	1.41
PP-FUG6	Fugitives #6 (4)	VOC	0.32	1.41
PP-FUG7	Fugitives #7 (4)	VOC	0.32	1.41
BOPP-FUG	Process Fugitives (4)	VOC	0.88	3.84
BOPP-SILO	Product Silo	TSP	0.04	1.71
F-387	Silo Air Filters Train #1	VOC TSP	0.03 0.38	0.13 1.65

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
F-487	Silo Air Filters Train #2	VOC	0.03	0.13
		TSP	0.38	1.65
F-587	Silo Air Filters Train #3	VOC	0.03	0.13
		TSP	0.38	1.65

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
F-374	Cooling Air Outlet Filters Train #1	VOC	0.07	0.32
		TSP	0.36	1.58
F-474	Cooling Air Outlet Filters Train #2	VOC	0.07	0.32
		TSP	0.36	1.58
F-574	Cooling Air Outlet Filters Train #3	VOC	0.07	0.32
		TSP	0.36	1.58
F-370	Desorber Pellet Cyclone Train #1	VOC	0.18	0.77
		TSP	0.06	0.26
F-470	Desorber Pellet Cyclone Train #2	VOC	0.18	0.77
		TSP	0.06	0.26
F-570	Desorber Pellet Cyclone Train #3	VOC	0.18	0.77
		TSP	0.06	0.26
T-367	Dryer Train #1	VOC	2.31	10.12
		TSP	0.24	1.03
T-467	Dryer Train #2	VOC	2.31	10.12
		TSP	0.24	1.03
T-567	Dryer Train #3	VOC	2.31	10.12
		TSP	0.24	1.03
F-705	Auto Packer Cyclone	VOC	0.02	0.74
		TSP	0.14	0.59
F-706A	Truck Silo Cyclone	VOC	0.02	0.74
		TSP	0.14	0.59
F-701A	Product Silo Filter Train #1	VOC	0.03	0.15
		TSP	0.38	1.65
F-701B	Product Silo Filter Train #2	VOC	0.03	0.14
		TSP	0.38	1.65
F-701C	Product Silo Filter Train #3	VOC	0.03	0.14
		TSP	0.38	1.65

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
F-702A	Hopper Silo Cyclone Train #1	VOC	0.02	0.07
		TSP	0.14	0.59
F-702B	Hopper Silo Cyclone Train #2	VOC	0.02	0.07
		TSP	0.14	0.59

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
WW1	Wastewater Treatment Plant Fugitives (4)	VOC	0.25	1.10
WW2	Wastewater Treatment Plant Fugitives (4)	VOC	0.25	1.10
WW3	Wastewater Treatment Plant Fugitives (4)	VOC	0.25	1.10
WW4	Wastewater Treatment Plant Fugitives (4)	VOC	0.25	1.10
WW5	Wastewater Treatment Plant Fugitives (4)	VOC	0.25	1.10
Ethylene Glycol				
EP221	CO2 Regenerator Vent	VOC	4.73	20.71
EP615	GT615 Tank	VOC	2.19	0.12
EP630A	GT630A Tank	VOC	<0.10	<0.13
EP630B	GT630B Tank	VOC	<0.10	<0.13
EP630C	GT630C Tank	VOC	<0.10	<0.13
EP725A	GT725A Tank	VOC	<0.10	<0.01
EP725B	GT725B Tank	VOC	<0.10	<0.01
EP730A	GT730A Tank	VOC	<0.10	<0.01
EP730B	GT730B Tank	VOC	<0.10	<0.01
EP740	GT740 Tank	VOC	<0.01	<0.01
EP806	GT806 Tank	VOC	<1.26	<0.21
EP807	GT807 Tank	VOC	<1.26	<0.21

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
EP808	GT808 Tank	VOC	<1.26	<0.21
EP809	GT809 Tank	VOC	<1.26	<0.21

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
EP910	Waste Heat Boiler	VOC	0.06	0.25
		NOx	1.44	6.31
		CO	1.56	6.83
		SO2	0.03	0.11
		TSP	0.08	0.36
EPTP1	Fugitive (4)	VOC	0.10	0.51
EPTP2	Fugitive (4)	VOC	0.24	0.96
EPTP3	Fugitive (4)	VOC	0.10	0.51
EP100	Fugitive (4)	VOC	0.09	0.41
EP200	Fugitive (4)	VOC	0.08	0.36
EP300	Fugitive (4)	VOC	0.09	0.39
EP500	Fugitive (4)	VOC	0.23	1.85
EP600	Fugitive (4)	VOC	0.24	1.03
EP700	Fugitive (4)	VOC	0.24	1.03
UTILITIES PLANT				
Case I: Turbines Only - No Duct Burner Firing				
7A	88 NW (ISO) Gas Turbine GE Model PG7111 (EA) Firing Natural Gas	NOx (8)	102.00	385.44
		CO (8)	58.00	223.38
		VOC	0.90	3.94
		PM/PM10	5.00	21.90
7B	88 NW (ISO) Gas Turbine GE Model PG7111 (EA) Firing Natural Gas	NOx (8)	102.00	385.44
		CO (8)	58.00	223.38
		VOC	0.90	3.94
		PM/PM10	5.00	21.90
7C	88 NW (ISO) Gas Turbine GE Model PG7111 (EA) Firing Natural Gas	NOx (8)	102.00	385.44
		CO (8)	58.00	223.38
		VOC	0.90	3.94

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
		PM/PM10	5.00	21.90
7D	88 NW (ISO) Gas Turbine	NOx (8)	115.00	455.52
	GE Model PG7111 (EA)	CO (8)	57.00	227.76
	Firing Process Gas	VOC	0.90	3.94
		PM/PM10	5.00	21.90

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
7E	88 NW (ISO) Gas Turbine GE Model PG7111 (EA) Firing Process Gas	NOx (8)	115.00	455.52
		CO (8)	57.00	227.76
		VOC	0.90	3.94
		PM/PM10	5.00	21.90
Case II: Turbines with Duct Burners Firing				
7A	88 NW (ISO) Gas Turbine GE Model PG7111 (EA) Firing Natural Gas with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas or Process Gas	NOx (8)	119.02	460.00
		CO (8)	60.13	232.71
		VOC	1.75	7.66
		PM/PM10	5.71	25.01
7B	88 NW (ISO) Gas Turbine GE Model PG7111 (EA) Firing Natural Gas with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas or Process Gas	NOx (8)	119.02	460.00
		CO (8)	60.13	232.71
		VOC	1.75	7.66
		PM/PM10	5.71	25.01
7C	88 NW (ISO) Gas Turbine GE Model PG7111 (EA) Firing Natural Gas with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas or Process Gas	NOx (8)	119.02	460.00
		CO (8)	60.13	232.71
		VOC	1.75	7.66
		PM/PM10	5.71	25.01
7D	88 NW (ISO) Gas Turbine GE Model PG7111 (EA) Firing Process Gas with 141.8 MMBtru/hr Duct Burner Firing Hydrogen, Natural Gas or Process Gas	NOx (8)	132.02	530.07
		CO (8)	59.13	237.09
		VOC	1.75	7.66
		PM/PM10	5.71	25.01
7E	88 NW (ISO) Gas Turbine GE Model PG7111 (EA) Firing Process Gas with 141.8 MMBtru/hr Duct Burner Firing Hydrogen, Natural	NOx (8)	132.02	530.07
		CO (8)	59.13	237.09
		VOC	1.75	7.66
		PM/PM10	5.71	25.01

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2) Gas or Process Gas	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
Marine Loading				
8FT-D01	Storage Tank	VOC	8.02	12.96

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
8FT-D02	Storage Tank	VOC	12.39	0.44
8FT-D09A	Storage Tank	VOC	0.35	0.27
8FT-D09B	Storage Tank	VOC	0.35	0.27
8FT-D13	Storage Tank	VOC	7.67	9.34
8FD03	Dock Flare	VOC	5.73	4.62
		NOx	1.80	7.88
		CO	2.50	10.95
		TSP	0.30	1.31
8FD02	Dock Incinerator/ Scrubber	VOC	0.40	1.75
		NOx	3.30	14.45
		CO	0.14	0.61
		TSP	0.01	0.04
8FD04	FT-D18 Flare	VOC	0.06	0.17
		NOx	1.10	4.82
		CO	1.50	6.57
		TSP	0.20	0.88
8F-MEG	MEG Loading	VOC	1.05	0.11
8FD-FUG 1-3 and 6-9	Tank Farm Fugitives (4)	VOC	0.28	1.21
8FD-FUG 4 and 5	Dock Fugitives (4)	VOC	0.09	0.35
Linear Low Density Polyethylene				
EPN-001	Final Degasser No. 1	VOC	6.19	24.79
		TSP	0.44	1.94
EPN-002	Final Degasser No. 2	VOC	6.19	24.79
		TSP	0.44	1.94
EPN-003	Pellitizer No. 1	VOC	2.82	11.29
EPN-004	Pellitizer No. 2	VOC	2.82	11.29

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
EPN-005	Catalyst Filling Vent No. 1	VOC	0.02	0.10
EPN-006	Catalyst Filling Vent No. 2	VOC	0.02	0.10

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
EPN-007	Buffer Silo No. 1	TSP	0.10	0.46
EPN-008	Powder Bin No. 1	TSP	0.10	0.46
EPN-009	Buffer Silo No. 2	TSP	0.10	0.46
EPN-010	Powder Bin No. 2	TSP	0.10	0.46
EPN-011	Blending Silo No. 1	TSP	0.18	0.78
EPN-012	Blending Silo No. 2	TSP	0.18	0.78
EPN-013	Product Silo No. 1	TSP	0.13	0.58
EPN-014	Product Silo No. 2	TSP	0.13	0.58
EPN-015	Hopper Car Silo No. 1	TSP	0.13	0.58
EPN-016	Hopper Car Silo No. 2	TSP	0.13	0.58
EPN-017	Truck Silo No. 1	TSP	0.13	0.58
EPN-018	Truck Silo No. 2	TSP	0.13	0.58
EPN-019	Auto-Packer Silo No. 1	TSP	0.13	0.58
EPN-020	Auto-Packer Silo No. 2	TSP	0.13	0.58
EPN-021	Hopper Car Loading No. 1	TSP	0.05	0.21
EPN-022	Hopper Car Loading No. 2	TSP	0.05	0.21
EPN-023	Additive Fugitives No. 1	TSP	0.06	0.27
EPN-024	Additive Fugitives No. 2	TSP	0.06	0.27
EPN-025	Master Batch No. 1	TSP	0.06	0.24
EPN-026	Master Batch No. 2	TSP	0.06	0.24
Process	Process Fugitives (4)	VOC	3.35	14.67

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
Wastewater	Wastewater Fugitives (4)	VOC	2.22	9.70
	Ethylene Purification Fugitives (4)	VOC	<0.01	<0.01

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* #/hr	TPY
H-02	Thermal Incinerator (5)	VOC	1.40	6.16
		NOx	4.32	18.92
		CO	7.94	34.78
		TSP	0.10	0.46
EPN-1018	Elevated Flare (Olefins Plant)	**EMERGENCY ONLY**		

(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 General Rule 101.1
NOx - total oxides of nitrogen
TSP - total suspended particulate
PM - particlate matter
PM10 - particulate matter <10 microns
CO - carbon monoxide
BZ - benzene
SO2 - sulfur dioxide
(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
(5) Operating hours are 2400 hours per year, 12-month rolling basis, to be calculated at the end of each month. Emissions occur a maximum of 533 hours per year.
(6) Operating hours are 24 hours per year. Emissions occur one hour per year.
(7) Emissions from the flares shall be allowed only during conditions of "major upsets" as defined in Section 101.1 of the TACB General Rules,and Formosa shall comply with Section 101.6 whenever emissions from either flare occurs.
(8) Maximum hourly emissions based on an ambient temperature of 20°F for EPN 7A-7C and 30°F for EPN 7D-7E.

Annual emissions based upon 70°F ambient temparature for EPN 7A-7E.

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

Hrs/day_____Days/week_____Weeks/year_____or Hrs/year 8,760