

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 21538

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)	<u>Emission Rates *</u>	
			lb/hr	TPY**
ES-801	Package Boiler	VOC	0.43	1.90
		NO <sub>x</sub>	2.90	12.69
		SO <sub>2</sub>	0.02	0.10
		PM <sub>10</sub>	0.72	3.17
		CO	7.97	34.89
ES-802	Alkyl Flare	VOC	0.43	0.10
		NO <sub>x</sub>	0.10	0.10
		SO <sub>2</sub>	0.01	0.01
		CO	0.41	0.88
ES-805	South Flare	VOC	28.91	2.36
		NO <sub>x</sub>	4.71	0.33
		SO <sub>2</sub>	0.01	0.01
		CO	25.11	1.68
		Propylene	25.50	1.85
		Ethylene	9.97	0.13
ES-805MSS	South Flare Maintenance, Startup, and Shutdown (MSS)	VOC	133.47	4.35
		NO <sub>x</sub>	13.56	0.60
		CO	97.93	3.45
		Propylene	128.19	3.82
		Ethylene	25.31	0.14
ES-815	South Thermal Oxidizer	VOC	0.17	0.21
		NO <sub>x</sub>	5.10	6.34
		SO <sub>2</sub>	0.01	0.01
		CO	2.84	3.53
		Propylene	0.16	0.16
		Ethylene	0.10	0.01

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ES-815MSS	South Thermal Oxidizer Maintenance, Startup, and Shutdown	VOC	0.17	0.07
		NO <sub>x</sub>	5.10	2.09
		CO	2.84	1.16
		Propylene	0.17	0.06
		Ethylene	0.14	0.01
F-8	Fugitives (4)	VOC	0.69	3.00
EF-806	Cooling Tower (4)	VOC	0.57	2.48
EV-811	Cooling Water Additive Tanks	VOC	1.20	0.01
EV-871	Carlot Silo Blender Vent Filter	VOC	1.60	(5)
		PM	0.18	0.80
EV-872	Additive Feed Hopper Vent Filter	PM	0.04	0.02
EV-873	Pellet Dryer Exhaust	VOC	1.60	(5)
EV-874	Pellet Surge Hopper Vent	VOC	1.60	(5)
EV-875	Powder Master Batch Weigh Bin Vent Filter	PM	1.44	0.04
EV-876-1	Pellet Classifier Vent	VOC	0.80	(5)
EV-876-2	Pellet Classifier Vent	VOC	0.80	(5)
EV-877-1	Pellet Classifier Vent	VOC	0.80	(5)
EV-877-2	Pellet Classifier Vent	VOC	0.80	(5)
EV-878-1	Railcar Loading Elutriator Bag Filter	VOC	2.50	(5)
		PM <sub>10</sub>	0.05	0.08
EV-878-2	Railcar Loading Elutriator	VOC	2.50	(5)
		PM <sub>10</sub>	0.05	0.08

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T8-OG	Bag Filter Train 8 Off-Gas (5)	VOC		7.00
EV-854	Railcar Wash Vacuum Filter	PM	0.27	0.20
EF-906	Cooling Tower (4)	VOC	1.18	5.15
F-9	Fugitives (4)	VOC	0.85	3.71
EV-971	Carlot Silo Blender Vent Filter	VOC PM <sub>10</sub>	2.60 0.32	(6) 1.22
EV-972A	Additive Hopper Vent Filter	PM	0.03	0.01
EV-972B	Additive Hopper Vent Filter	PM	0.03	0.01
EV-978	Elutriator Bag Filter	VOC PM <sub>10</sub>	2.60 0.06	(6) 0.24
EV-973A	Pellet Dryer Exhaust	VOC	1.30	(6)
EV-973B	Pellet Dryer Exhaust	VOC	1.30	(6)
EV-974A	Pellet Surge Hopper Vent	VOC	1.30	(6)
EV-974B	Pellet Classifier Vent	VOC	1.30	(6)
EV-975A	Pellet Classifier Vent	VOC	1.30	(6)
EV-975B	Pellet Classifier Vent	VOC	1.30	(6)
EV-976A	Pellet Classifier Vent	VOC	1.30	(6)
EV-976B	Pellet Classifier Vent	VOC	1.30	(6)
T9-OG	Train 9 Off-Gas (6)	VOC		10.00
ES-975	Blender/Feeder Vent Gas	VOC CO	0.20 0.01	0.75 0.03

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ES-976	Catalytic Oxidizer (7)	PM <sub>10</sub>	0.38	0.14
	Train 8 and 9 Enclosed	VOC	0.18	0.80
	Vapor Combustor (7)	NO <sub>x</sub>	0.09	0.37
		SO <sub>2</sub>	0.01	0.01
		PM <sub>10</sub>	0.03	0.12
		CO	0.05	0.23
EV-911	Cooling Water Additive Tanks	VOC	1.20	0.01
EV-869	Additive Storage Tank Vent	VOC	0.01	0.01
EV-808	Catalyst Building Guard Oil Tank Vent	VOC	0.19	0.01
EV-820	Mineral Oil Drying Tank Vent	VOC	0.01	0.01
EV-197	Mineral Oil Drying Tank Vent	VOC	0.01	0.01
EV-715	TEAL KO Pot Vent	VOC	0.01	0.01
MSS-TR8	Train 8 MSS	VOC	52.73	0.10
MSS-TR9	Train 9 MSS	VOC	72.52	0.10

- (1) Emission point identification - either specific equipment designation or emission point number (EPN) from plot plan.
- (2) Specific point source names. For fugitive sources use area name or fugitive source name.
- (3) PM - particulate matter, suspended in the atmosphere, including PM<sub>10</sub>  
PM<sub>10</sub> - particulate matter equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted.  
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1  
NO<sub>x</sub> - total oxides of nitrogen  
SO<sub>2</sub> - sulfur dioxide  
CO - carbon monoxide
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

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- (5) EPN T8-OG provides the cumulative annual VOC emission limit for EPNs EV-873, EV-874, EV-876-1, EV-876-2, EV-877-1, EV-877-2, EV-871, EV-878-1, and EV-878-2.
- (6) EPN T9-OG provides the cumulative annual VOC emission limit for EPNs EV-973A, EV-973B, EV-974A, EV-974B, EV-975A, EV-975B, EV-976A, EV-976B, EV-971, and EV-978.
- (7) ES-975 and ES-976 shall not emit simultaneously.

\* 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 December 27, 2010