EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 39693 and N63

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emissions 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	Emission Rates * TPY**
Port Arthur I (PAI) - H_2/Cogeneration Facility				
SMR1 STK	Reformer Furnace Stack	NO_x CO VOC PM_{10} SO_2 NH_3	81.0 23.4 3.6 16.7 91.8 9.51	87 59 14 67.1 35.8 41.66
GT6B STK	Gas Turbine Stack (GE F6B)	NO_x NO_x [MSS (5)] NO_x (annual) CO CO [MSS (5)] CO (annual) VOC VOC (MSS) PM_{10} SO_2	19.6 166.5 - 33.3 166.5 - 3.17 27.0 6.00 1.62	- - 7.4 - - 13 1.2 - 2.3 0.34
FLARE1	Flare (pilots only) Flare (MSS)	NO_x CO VOC SO_2 NO_x CO VOC SO_2	0.022 0.046 0.031 0.002 160.0 1654.0 0.2 <0.01	0.1 0.2 0.14 0.01 2.9 28.8 0.3 0.1
H2 VENT1	Hydrogen Vent	CO	36.3	2.1

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PLTFUG1	Fugitives (4)	CO VOC NH_3	2.20 8.40 0.059	8.7 3.4 0.3
Port Arthur II (PAII) - H_2/Cogeneration Facility				
The following four Emission Sources have a cap as noted:				
SMR2 STK	SMR2 Reformer Furnace Stack	NO_x NO_x [MSS and A/T (6)] CO VOC PM_{10} SO_2 NH_3 (7)	22.8 100.5 20 5.32 13.2 107.6 9.51	- - - 4.7 56.5 40.7 41.6
GTG2STK	PAII Gas Turbine Stack (GE F7EA)	NO_x NO_x [MSS and A/T (6)] CO CO [MSS and A/T (6)] VOC VOC (MSS) PM_{10} SO_2	36.3 166.5 65.3 181.7 10.0 27.0 9.66 2.96	- - - - 2.3 - 4.9 1.2
HRSG STK	Heat Recovery Steam Generator	NO_x NO_x [MSS and A/T (6)] CO VOC PM_{10} SO_2 NH_3 (7)	22.6 226.1 32.5 7.66 7.06 144 7.25	- - - 13.7 18.8 41.7 31.74
FLARE2	PAII Flare	NO_x CO VOC SO_2	143 1,498 0.09 <0.01	- - <0.1 <0.1

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SMR2 STK, GTG2 STK, HRSG STK, and FLARE2	Emissions Cap	NO_x CO	- -	88.4 87.8
The following four Emission Sources have a cap as noted:				
SMR2 HPSV	SMR2 HP Steam Vent	MeOH EtOH NH_3	3.79 0.38 0.21	- - -
HRSG SV	HRSG Steam Vent	MeOH EtOH NH_3	1.79 0.18 0.1	- -
125 SV	125-lb Steam Vent	MeOH EtOH NH_3	1.2 0.12 0.07	- - -
SMR1 SV	SMR1 Steam Vent	MeOH EtOH NH_3	0.87 0.09 0.09	- - -
SMR2 HPSV, HRSG SV, 125 SV, and SMR1 SV	Emissions Cap	MeOH EtOH NH_3 Amines	- - - <1.0	3.2 1.7 1.0 <1.0
SMR2 DEA VT	SMR2 De-aerator Vent	MeOH EtOH NH_3	0.54 0.06 0.04	2.3 0.3 0.2
HRSG DEA VT	HRSG De-aerator Vent	MeOH EtOH NH_3	0.32 0.04 0.02	1.4 0.2 0.1

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SMR1 DEA VT	SMR1 De-aerator Vent	MeOH EtOH NH_3	0.27 0.03 0.07	1.2 0.2 0.3
CT2	PAII Cooling Tower	MeOH PM_{10} NH_3	0.32 2.3 0.16	0.1 10.1 <0.1
SMR2 H2 CT	SMR2 Hydrogen Vent	CO	36.5	2.1
SMR2 TGBV	SMR2 Tail Gas Fuel Header Isolator Bleed Valve	MeOH EtOH NH_3	0.02 <0.01 <0.01	<0.01 <0.01 <0.01
SMR2 MIX TEE	SMR2 Mix Tee Startup Steam Vent	MeOH EtOH NH_3	0.03 <0.01 <0.01	<0.01 <0.01 <0.01
SMRTNGMIXT	SMR2 Natural Gas Mix Tee Vent	VOC	71.79	0.4
PAII ATM FL	SMR2 + HRSG Atmospheric Flash	MeOH EtOH NH_3	0.03 <0.01 0.02	0.2 <0.1 0.1
PAII INT BDN	SMR2 + HRSG Process Gas Boiler Intermittent Blowdown	MeOH EtOH NH_3	0.02 <0.01 0.01	0.1 <0.1 <0.1
PLT2FUG	PAII Plant Fugitives	NO_x CO VOC NH_3 Sulfur	2.00 2.50 9.20 0.09 <0.01	<0.01 8.8 5.2 0.4 <0.01
NGISOBV	PAII Natural Gas Isolation Bleed Valve	VOC Sulfur	47.7 0.04	0.1 <0.01

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SMR ID FAN SV	SMR2 ID Fan Turbine Inlet Steam Vent	MeOH EtOH NH_3	0.02 <0.01 <0.01	<0.01 <0.01 <0.01
STG 125 EXV	STG 125# Exhaust Warm Up Vent	MeOH EtOH NH_3	0.27 0.03 0.02	<0.1 <0.1 <0.1
STGGLANDV	STG Gland Condenser Vent	MeOH EtOH NH_3	0.02 <0.01 <0.01	0.1 <0.1 <0.1
STDSTARTV	STG Startup Vent	MeOH EtOH NH_3	7.73 0.80 0.42	0.1 <0.1 <0.1
GTG2 NGV	PAII GTG Natural Gas Vent	VOC Sulfur	3.98 <0.01	2.72 <0.1
SMR FANEDUC	SMR2 ID Fan Turbine Eductor Steam Vent	MeOH EtOH NH_3	0.01 <0.01 <0.01	<0.1 <0.01 <0.01
SMR IDFANSV	SMR2 ID Fan Turbine Startup Vent	MeOH EtOH NH_3	0.19 0.02 0.01	<0.1 <0.01 <0.01
GTG2 ISBDN	PAII GTG Inlet Strainer Blowdown	VOC Sulfur	5.29 0.02	<0.1 <0.01
GTG2FUELV1	GTG2 Fuel System Purge Vent 1	VOC Sulfur	0.57 <0.01	<0.01 <0.01
GTG2FUELV2	GTG2 Fuel System Purge Vent 2	VOC Sulfur	0.57 <0.01	<0.01 <0.01

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GTG2FUELDBB	GTG2 Fuel Gas DB&B Vent	VOC Sulfur	2.12 0.01	<0.01 <0.01
GTGMANSUSV	GTG2 Manual Startup Purge Vent	VOC Sulfur	144.5 0.04	0.3 <0.01
HRSG RFGDBB	HRSG Fuel Gas DB&B Vent	CO VOC Sulfur	0.88 36.1 7.79	<0.01 <0.1 <0.01
HRSGIGNDBB	HRSG Ignition DB&B Vent	VOC Sulfur	0.62 <0.01	<0.01 <0.01
HRSGSUSV	HRSG Startup Steam Vent	MeOH EtOH NH_3	1.8 0.18 0.1	<0.1 <0.01 <0.01
HRSGINPRES	HRSG Inlet Pressure Reduction Vent	CO VOC Sulfur	1.80 73.7 3.65	<0.01 <0.1 <0.01
FEEDPV	PAII Feed System Purge Vent	VOC Sulfur	14.11 0.03	<0.1 <0.01

(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
SO_2 - sulfur dioxide
PM - particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$
PM_{10} - particulate matter equal to or less than 10 microns in diameter
$PM_{2.5}$ - particulate matter less than 2.5 microns
CO - carbon monoxide
NH_3 - ammonia
MeOH - methanol
EtOH - ethanol

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
(5) MSS - Maintenance, startup or shutdown emission rate.
(6) A/T - Alternate or Transitional Operating Modes.
(7) The pound per hour emission rate is not applicable during MSS or A/T.

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

24 Hrs/day 7 Days/week 52 Weeks/year or 8,760 Hrs/year

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

Dated December 15, 2009