

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 48106 and PSD-TX-1012

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**
GTG-01	Gas Turbine 1 (4) (up to 2,750 hours of operation/yr)	NO <sub>x</sub>	8.3	11.38
		CO	43.3	59.55
		VOC	4.0	5.45
		PM <sub>10</sub>	4.5	6.21
		SO <sub>2</sub>	0.3	0.38
		NH <sub>3</sub> 3.7	5.07	
	Gas Turbine 1 (after installation of CO catalyst)	NO <sub>x</sub>	8.3	36.35
		CO	9.0	39.42
		VOC	4.0	17.52
		PM <sub>10</sub>	4.5	19.71
		SO <sub>2</sub>	0.3	1.22
		NH <sub>3</sub> 3.7	16.21	
GTG-02	Gas Turbine 2 (4) (up to 2,750 hours of operation/yr)	NO <sub>x</sub>	8.3	11.38
		CO	43.3	59.55
		VOC	4.0	5.45
		PM <sub>10</sub>	4.5	6.21
		SO <sub>2</sub>	0.3	0.38
		NH <sub>3</sub> 3.7	5.07	
	Gas Turbine 2 (after installation of CO catalyst)	NO <sub>x</sub>	8.3	36.35
		CO	9.0	39.42
		VOC	4.0	17.52
		PM <sub>10</sub>	4.5	19.71
		SO <sub>2</sub>	0.3	1.22
		NH <sub>3</sub> 3.7	16.21	

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY **
GTG-03	Gas Turbine 3 (4) (up to 2,750 hours of operation/yr)	NO <sub>x</sub>	8.3	11.38
		CO	43.3	59.55
		VOC	4.0	5.45
		PM <sub>10</sub>	4.5	6.21
		SO <sub>2</sub>	0.3	0.38
		NH <sub>3</sub> 3.7	5.07	
	Gas Turbine 3 (after installation of CO catalyst)	NO <sub>x</sub>	8.3	36.35
		CO	9.0	39.42
		VOC	4.0	17.52
		PM <sub>10</sub>	4.5	19.71
		SO <sub>2</sub>	0.3	1.22
		NH <sub>3</sub> 3.7	16.21	
GTG-04	Gas Turbine 4 (4) (up to 2,750 hours of operation/yr)	NO <sub>x</sub>	8.3	11.38
		CO	43.3	59.55
		VOC	4.0	5.45
		PM <sub>10</sub>	4.5	6.21
		SO <sub>2</sub>	0.3	0.38
		NH <sub>3</sub> 3.7	5.07	
	Gas Turbine 4 (after installation of CO catalyst)	NO <sub>x</sub>	8.3	36.35
		CO	9.0	39.42
		VOC	4.0	17.52
		PM <sub>10</sub>	4.5	19.71
		SO <sub>2</sub>	0.3	1.22
		NH <sub>3</sub> 3.7	16.21	
HRSG-05	Heat Recovery Steam Generator Number 5 (Total combined cycle emissions including GTG-5)	NO <sub>x</sub>	46.0	189.2
		CO	98.2	402.1
		VOC	16.5	67.9
		PM <sub>10</sub>	32.0	136.7
		SO <sub>2</sub>	1.6	7.1
		NH <sub>3</sub> 23.8	98.1	
HTR-01	Inlet Air Heater Number 01 (5)	NO <sub>x</sub>	0.53	0.27
		CO	0.44	0.22

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY **
		VOC	0.03	0.015
		PM <sub>10</sub>	0.04	0.02
		SO <sub>2</sub>	0.003	0.0015
HTR-02	Inlet Air Heater Number 02 (5)	NO <sub>x</sub>	0.53	0.27
	CO	0.44	0.22	
		VOC	0.03	0.015
		PM <sub>10</sub>	0.04	0.02
		SO <sub>2</sub>	0.003	0.0015
HTR-03	Inlet Air Heater Number 03 (5)	NO <sub>x</sub>	0.53	0.27
	CO	0.44	0.22	
		VOC	0.03	0.015
		PM <sub>10</sub>	0.04	0.02
		SO <sub>2</sub>	0.003	0.0015
Tank 5-3	Diesel Fuel Storage Tank (for diesel fire pump)	VOC	<0.01	<0.01
Tank 5-4	Oil/Water Separator Tank	VOC	<0.01	<0.01
SC PB FUG	Simple Cycle Power Block Fugitives (6)	VOC	<0.1	<0.1
CC PB FUG	Combined Cycle Power Block Fugitives (6)	VOC	0.012	0.06
SC MS FUG	Simple Cycle Natural Gas Meter Skid	VOC	<0.01	<0.01
CC MS FUG	Combined Cycle Natural Gas Meter Skid	VOC	0.13	0.57
CLTWR-1	Cooling Tower 1	PM <sub>10</sub>	6.39	10.99

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SC AMFUG	Simple Cycle Ammonia Fugitives (6)	NH <sub>3</sub>	3.8e <sup>-2</sup>	0.17
CC AMFUG	Combined Cycle Ammonia Fugitives (6)	NH <sub>3</sub>	4.2e <sup>-3</sup>	1.8e <sup>-2</sup>
FPE 1	Diesel Fire Pump Engine (7)	NO <sub>x</sub>	9.3	0.45
		CO	2.0	0.10
		VOC	0.75	0.04
		PM <sub>10</sub>	0.66	0.03
		SO <sub>2</sub>	0.62	0.03
SC CTWR-1	Simple Cycle Cooling (8) Tower 1	PM <sub>10</sub>	0.56	1.12
SC CTWR-2	Simple Cycle Cooling (8) Tower 2	PM <sub>10</sub>	0.56	1.12
SC CTWR-3	Simple Cycle Cooling (8) Tower 2	PM <sub>10</sub>	0.56	1.12

(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 area name or fugitive source name.

(3) VOC - volatile organic compounds as defined in the Title 30 Texas Administrative Code Section 101.1.

NO<sub>x</sub> - total oxides of nitrogen

CO - carbon monoxide

SO<sub>2</sub> - sulfur dioxide

PM<sub>10</sub> - particulate matter (PM) equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no particulate matter greater than 10 microns is emitted.

NH<sub>3</sub> - ammonia

(4) GTG-1 thru GTG-4 are limited to 2,750 operating hours per year until the requirements of Special Condition No. 11 have been met.

(5) Emissions are based on 1,000 operating hours per year.

(6) Fugitive emissions are an estimate based on component count and applicable fugitive emission factors.

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			lb/hr	TPY **

(7) Emissions are based on normal operation of 96 operating hours per year.

(8) Emissions are based on 4,000 operating hours per year.

\* Emission rates are based on an operating schedule of 8,760 hours/year.

\*\* Compliance with the annual emission limits is based on a rolling 12-month year rather than the calendar year.

Dated \_\_\_\_\_