

## Emission Sources - Maximum Allowable Emission Rates

Permit Number 110357

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, sources, and related activities. 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 (5)	
			lb/hour	TPY (4)
TH-CTS1	Unit 1 Turbine Model Option 1:  GE 7FA.05 (approximately 225 MW)	NO <sub>x</sub> (6)	74.98	45.82
		NO <sub>x</sub> (Peak Firing) (6), (7)	120	--
		NO <sub>x</sub> (MSS) (6)	100	--
		CO (6)	36.59	46.24
		CO (MSS) (6)	714	--
		VOC	3.53	5.06
		VOC (MSS)	79.44	--
		SO <sub>2</sub>	32.27	3.93
		PM	14.24	6.55
		PM <sub>10</sub>	14.24	6.55
		PM <sub>2.5</sub>	14.24	6.55
		H <sub>2</sub> SO <sub>4</sub>	4.94	0.60
TH-CTS2	Unit 2 Turbine Model Option 1:  GE 7FA.05 (approximately 225 MW)	NO <sub>x</sub> (6)	74.98	45.82
		NO <sub>x</sub> (Peak Firing) (6), (7)	120	--
		NO <sub>x</sub> (MSS) (6)	100	--
		CO (6)	36.59	46.24
		CO (MSS) (6)	714	--
		VOC	3.53	5.06
		VOC (MSS)	79.44	--
		SO <sub>2</sub>	32.27	3.93
		PM	14.24	6.55
		PM <sub>10</sub>	14.24	6.55
		PM <sub>2.5</sub>	14.24	6.55
		H <sub>2</sub> SO <sub>4</sub>	4.94	0.60

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TH-CTS1	Unit 1 Turbine Model Option 2:  Siemens SGT6-5000F(5)/(5)ee (approximately 230 MW)	NO <sub>x</sub> (6)	82.24	46.93
		NO <sub>x</sub> (Ramping) (6), (8)	120	--
		NO <sub>x</sub> (MSS) (6)	100	--
		CO (6)	28.73	74.58
		CO (Ramping) (6), (8)	815	--
		CO (MSS) (6)	1,824	--
		VOC	3.19	8.64
		VOC (MSS)	214	--
		SO <sub>2</sub>	35.23	3.94
		PM	15.39	6.47
		PM <sub>10</sub>	15.39	6.47
		PM <sub>2.5</sub>	15.39	6.47
		H <sub>2</sub> SO <sub>4</sub>	5.39	0.60
TH-CTS2	Unit 2 Turbine Model Option 2:  Siemens SGT6-5000F(5)/(5)ee (approximately 230 MW)	NO <sub>x</sub> (6)	82.24	46.93
		NO <sub>x</sub> (Ramping) (6), (8)	120	--
		NO <sub>x</sub> (MSS) (6)	100	--
		CO (6)	28.73	74.58
		CO (Ramping) (6), (8)	815	--
		CO (MSS) (6)	1,824	--
		VOC	3.19	8.64
		VOC (MSS)	214	--
		SO <sub>2</sub>	35.23	3.94
		PM	15.39	6.47
		PM <sub>10</sub>	15.39	6.47
		PM <sub>2.5</sub>	15.39	6.47
		H <sub>2</sub> SO <sub>4</sub>	5.39	0.60

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TH-EDGV	Emergency Generator (1,340 hp)	NO <sub>x</sub>	16.54	0.83
		CO	9.56	0.48
		VOC	0.89	0.04
		SO <sub>2</sub>	0.01	< 0.01
		PM	0.54	0.03
		PM <sub>10</sub>	0.54	0.03
		PM <sub>2.5</sub>	0.54	0.03
TH-FWPV	Fire Water Pump (282 hp)	NO <sub>x</sub>	1.74	0.09
		CO	1.88	0.09
		VOC	0.12	< 0.01
		SO <sub>2</sub>	< 0.01	< 0.01
		PM	0.09	< 0.01
		PM <sub>10</sub>	0.09	< 0.01
		PM <sub>2.5</sub>	0.09	< 0.01
TH-CT1LOV	Unit 1 Lube Oil Vent	VOC	< 0.01	0.01
		PM	< 0.01	0.01
		PM <sub>10</sub>	< 0.01	0.01
		PM <sub>2.5</sub>	< 0.01	0.01
TH-CT2LOV	Unit 2 Lube Oil Vent	VOC	< 0.01	0.01
		PM	< 0.01	0.01
		PM <sub>10</sub>	< 0.01	0.01
		PM <sub>2.5</sub>	< 0.01	0.01
TH-NGFUG	Natural Gas Component Fugitives (9)	VOC	0.01	0.03
TH-LOFUG	Lube Oil Component Fugitives (9)	VOC	0.50	2.18

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TH-MSSFUG	Planned Maintenance Activities Fugitives (9)	NO <sub>x</sub>	< 0.01	< 0.01
		CO	< 0.01	< 0.01
		VOC	0.10	< 0.01
		PM	< 0.01	< 0.01
		PM <sub>10</sub>	< 0.01	< 0.01
		PM <sub>2.5</sub>	< 0.01	< 0.01

- (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 Title 30 Texas Administrative Code § 101.1  
NO<sub>x</sub> - total oxides of nitrogen  
SO<sub>2</sub> - sulfur dioxide  
PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented  
PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented  
PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter  
CO - carbon monoxide  
H<sub>2</sub>SO<sub>4</sub> - sulfuric acid
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Planned maintenance, startup, and shutdown (MSS) emissions for all pollutants are authorized even if not specifically identified as MSS.
- (6) For each pollutant whose emissions during planned MSS activities are measured using a CEMS, the MSS lb/hr limits apply only during each clock hour that includes one or more minutes of MSS activities. During all other clock hours, the lb/hr limits for normal operations, peak firing operations, and transitional load operations apply, as applicable, subject to the qualifying requirements in Special Condition Nos. 5 and 6.
- (7) This hourly emission rate is authorized only during periods of peak firing operation of the GE model turbine, when turbine operation is above base load, subject to the qualifying requirements in Special Condition No. 5.
- (8) This hourly emission rate is authorized only during periods of transitional load operation of the Siemens model turbine, other than periods of planned MSS, when the turbine ramp rate is greater than 5 MW/minute, subject to the qualifying requirements in Special Condition No. 6.
- (9) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: February 7, 2014