

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 77039 and PSD-TX-1060

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	Source	Air Contaminant	Emission Rates *	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY**
SCENARIO 1: GENERAL ELECTRIC PG7121 (EA) AND 165 MMBTU/HR DUCT BURNER				
CTDB1-A	CT/HRSG Unit 1-A, 75 MW Gas Turbine 165 MMBtu/hr Duct Burner	NO _x	23.7	---
		CO	74.5	---
		SO ₂	2.0	---
		PM/PM ₁₀	12.4	---
		VOC	3.7	---
		H ₂ SO ₄	0.3	---
		NH ₃ 12.3	---	---
		HCHO	0.4	---
		Toluene	0.2	---
CTDB1-B	CT/HRSG Unit 1-B, 75 MW Gas Turbine 165 MMBtu/hr Duct Burner	NO _x	23.7	---
		CO	74.5	---
		SO ₂	2.0	---
		PM/PM ₁₀	12.4	---
		VOC	3.7	---
		H ₂ SO ₄	0.3	---
		NH ₃ 12.3	---	---
		HCHO	0.4	---
		Toluene	0.2	---
CTDB2-A	CT/HRSG Unit 2-A, 75 MW Gas Turbine 165 MMBtu/hr Duct Burner	NO _x	23.7	---
		CO	74.5	---
		SO ₂	2.0	---
		PM/PM ₁₀	12.4	---
		VOC	3.7	---
		H ₂ SO ₄	0.3	---
		NH ₃ 12.3	---	---
		HCHO	0.4	---
		Toluene	0.2	---

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
CTDB2-B	CT/HRSG Unit 2-B, 75 MW Gas Turbine 165 MMBtu/hr Duct Burner	NO _x	23.7	---
		CO	74.5	---
		SO ₂	2.0	---
		PM/PM ₁₀	12.4	---
		VOC	3.7	---
		H ₂ SO ₄	0.3	---
		NH ₃ 12.3	---	---
		HCHO	0.4	---
		Toluene	0.2	---

SCENARIO 2: GENERAL ELECTRIC PG7121 (EA) OPERATING WITHOUT DUCT BURNER

CTDB1-A	CT/HRSG Unit 1-A, 75 MW Gas Turbine	NO _x	20.4	---
		CO	61.3	---
		SO ₂	1.7	---
		PM/PM ₁₀	10.5	---
		VOC	2.1	---
		H ₂ SO ₄	0.2	---
		NH ₃ 10.8	---	---
		HCHO	0.3	---
		Toluene	0.2	---
CTDB1-B	CT/HRSG Unit 1-B, 75 MW Gas Turbine	NO _x	20.4	---
		CO	61.3	---
		SO ₂	1.7	---
		PM/PM ₁₀	10.5	---
		VOC	2.1	---
		H ₂ SO ₄	0.2	---
		NH ₃ 10.8	---	---
		HCHO	0.3	---
		Toluene	0.2	---

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
CTDB2-A	CT/HRSG Unit 2-A, 75 MW Gas Turbine	NO _x	20.4	---
		CO	61.3	---
		SO ₂	1.7	---
		PM/PM ₁₀	10.5	---
		VOC	2.1	---
		H ₂ SO ₄	0.2	---
		NH ₃ 10.8	---	---
		HCHO	0.3	---
		Toluene	0.2	---
CTDB2-B	CT/HRSG Unit 2-B, 75 MW Gas Turbine	NO _x	20.4	---
		CO	61.3	---
		SO ₂	1.7	---
		PM/PM ₁₀	10.5	---
		VOC	2.1	---
		H ₂ SO ₄	0.2	---
		NH ₃ 10.8	---	---
		HCHO	0.3	---
		Toluene	0.2	---

SCENARIO 3: GENERAL ELECTRIC PG7121 (EA) DURING START UP, SHUT DOWN, OR MAINTENANCE (4)

CTDB1-A	CT/HRSG Unit 1-A, 75 MW Gas Turbine	NO _x	600	---
		CO	1000	---
		VOC	60	---
		SO ₂	1.7	---
		PM/PM ₁₀	10.5	---
		H ₂ SO ₄	0.2	---
		NH ₃ 10.8	---	---
		HCHO	0.3	---
		Toluene	0.2	---

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
CTDB1-B	CT/HRSG Unit 1-B, 75 MW Gas Turbine	NO _x	600	---
		CO	1000	---
		VOC	60	---
		SO ₂	1.7	---
		PM/PM ₁₀	10.5	---
		H ₂ SO ₄	0.2	---
		NH ₃ 10.8	---	---
		HCHO	0.3	---
		Toluene	0.2	---
CTDB2-A	CT/HRSG Unit 2-A, 75 MW Gas Turbine	NO _x	600	---
		CO	1000	---
		VOC	60	---
		SO ₂	1.7	---
		PM/PM ₁₀	10.5	---
		H ₂ SO ₄	0.2	---
		NH ₃ 10.8	---	---
		HCHO	0.3	---
		Toluene	0.2	---
CTDB2-B	CT/HRSG Unit 2-B, 75 MW Gas Turbine	NO _x	600	---
		CO	1000	---
		VOC	60	---
		SO ₂	1.7	---
		PM/PM ₁₀	10.5	---
		H ₂ SO ₄	0.2	---
		NH ₃ 10.8	---	---
		HCHO	0.3	---
		Toluene	0.2	---

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**

ANNUAL EMISSIONS GENERAL ELECTRIC PG7121 (EA) AND 165 MMBTU/HR DUCT BURNER

CTDB1-A	CT/HRSG Unit 1-A, 75 MW Gas Turbine 165 MMBtu/hr Duct Burner	NO _x	---	84.3
		CO	---	264.0
		SO ₂	---	7.0
		PM/PM ₁₀	---	50.7
		VOC	---	12.3
		H ₂ SO ₄	---	0.8
		NH ₃	---	42.2
		HCHO	---	1.3
		Toluene	---	0.6
CTDB1-B	CT/HRSG Unit 1-B, 75 MW Gas Turbine 165 MMBtu/hr Duct Burner	NO _x	---	84.3
		CO	---	264.0
		SO ₂	---	7.0
		PM/PM ₁₀	---	50.7
		VOC	---	12.3
		H ₂ SO ₄	---	0.8
		NH ₃	---	42.2
		HCHO	---	1.3
		Toluene	---	0.6
CTDB2-A	CT/HRSG Unit 2-A, 75 MW Gas Turbine 165 MMBtu/hr Duct Burner	NO _x	---	84.3
		CO	---	264.0
		SO ₂	---	7.0
		PM/PM ₁₀	---	50.7
		VOC	---	12.3
		H ₂ SO ₄	---	0.8
		NH ₃	---	42.2
		HCHO	---	1.3
		Toluene	---	0.6

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
CTDB2-B	CT/HRSG Unit 2-B, 75 MW Gas Turbine 165 MMBtu/hr Duct Burner	NO _x	---	84.3
		CO	---	264.0
		SO ₂	---	7.0
		PM/PM ₁₀	---	50.7
		VOC	---	12.3
		H ₂ SO ₄	---	0.8
		NH ₃	---	42.2
		HCHO	---	1.3
		Toluene	---	0.6
AUX1	Auxiliary Boiler Unit 1 17 MMBtu/hr	NO _x	0.7	1.9
		CO	1.1	2.9
		SO ₂	0.02	0.07
		PM/PM ₁₀	0.2	0.5
		VOC	0.3	0.8
AUX2	Auxiliary Boiler Unit 2 17 MMBtu/hr	NO _x	0.7	1.9
		CO	1.1	2.9
		SO ₂	0.02	0.07
		PM/PM ₁₀	0.2	0.5
		VOC	0.3	0.8
EG1	Emergency Generator Unit 1	NO _x	27.3	1.7
		CO	7.3	0.5
		SO ₂	0.5	0.03
		PM	0.6	0.04
		PM ₁₀	0.5	0.03
		VOC	0.8	0.05
EG2	Emergency Generator Unit 2	NO _x	27.3	1.7
		CO	7.3	0.5
		SO ₂	0.5	0.03

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
		PM	0.6	0.04
		PM ₁₀	0.5	0.03
		VOC	0.8	0.05
FWP1	Fire Water Pump Unit 1	NO _x	11.3	0.7
		CO	2.5	0.2
		SO ₂	0.2	0.01
		PM/PM ₁₀	0.8	0.05
		VOC	0.9	0.05
FWP2	Fire Water Pump Unit 2	NO _x	11.3	0.7
		CO	2.5	0.2
		SO ₂	0.2	0.01
		PM/PM ₁₀	0.8	0.05
		VOC	0.9	0.05
CD1	Cooling Tower Cell 1	PM	0.6	2.3
		PM ₁₀	0.3	1.2
CD2	Cooling Tower Cell 2	PM	0.6	2.3
		PM ₁₀	0.3	1.2
CD3	Cooling Tower Cell 3	PM	0.6	2.3
		PM ₁₀	0.3	1.2
CD4	Cooling Tower Cell 4	PM	0.6	2.3
		PM ₁₀	0.3	1.2
CD5	Cooling Tower Cell 5	PM	0.6	2.3
		PM ₁₀	0.3	1.2
CD6	Cooling Tower Cell 6	PM	0.6	2.3
		PM ₁₀	0.3	1.2

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
CD7	Cooling Tower Cell 7	PM	0.6	2.3
		PM ₁₀	0.3	1.2
CD8	Cooling Tower Cell 8	PM	0.6	2.3
		PM ₁₀	0.3	1.2

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- (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) NO_x - total oxides of nitrogen
CO - carbon monoxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
SO₂ - sulfur dioxide
PM - particulate matter, suspended in the atmosphere, including PM₁₀.
PM₁₀ - particulate matter (PM) 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.
H₂SO₄ - sulfuric acid
NH₃ - ammonia
HCHO - formaldehyde
- (4) Start-up, shutdown, or maintenance events shall not exceed the time limits of Special Condition No. 2; emissions shall be averaged over the entire event.

* 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 February 9, 2006