

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 104840 and N170

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 (4)	
			lbs/hour	TPY (5)
65B-81A	Heating Medium Heater A	NO _x	0.80	-
		CO	2.44	-
		PM	0.92	-
		PM ₁₀	0.92	-
		PM _{2.5}	0.92	-
		SO ₂	0.08	-
		H ₂ SO ₄	<0.01	-
		VOC	1.00	-
65B-81B	Heating Medium Heater B	NO _x	0.80	-
		CO	2.44	-
		PM	0.92	-
		PM ₁₀	0.92	-
		PM _{2.5}	0.92	-
		SO ₂	0.08	-
		H ₂ SO ₄	<0.01	-
		VOC	1.00	-
65B-81C	Heating Medium Heater C	NO _x	0.80	-
		CO	2.44	-
		PM	0.92	-
		PM ₁₀	0.92	-
		PM _{2.5}	0.92	-
		SO ₂	0.08	-
		H ₂ SO ₄	<0.01	-
		VOC	1.00	-

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65B-81D	Heating Medium Heater D	NO _x	0.80	-
		CO	2.44	-
		PM	0.92	-
		PM ₁₀	0.92	-
		PM _{2.5}	0.92	-
		SO ₂	0.08	-
		H ₂ SO ₄	<0.01	-
		VOC	1.00	-
65B-81E	Heating Medium Heater E	NO _x	0.80	-
		CO	2.44	-
		PM	0.92	-
		PM ₁₀	0.92	-
		PM _{2.5}	0.92	-
		SO ₂	0.08	-
		H ₂ SO ₄	<0.01	-
		VOC	1.00	-
65B-81A through E	Heating Medium Heaters A through E Annual Emissions Cap	NO _x	-	4.58
		CO	-	13.94
		PM	-	5.29
		PM ₁₀	-	5.29
		PM _{2.5}	-	5.29
		SO ₂	-	0.45
		H ₂ SO ₄	-	0.03
		VOC	-	5.70
69B-81A	Heating Medium Heater 69A	NO _x	0.32	-
		CO	0.49	-
		PM	0.92	-
		PM ₁₀	0.92	-

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		PM _{2.5}	0.92	-
		SO ₂	0.08	-
		H ₂ SO ₄	<0.01	-
		VOC	0.25	-
		NH ₃	0.62	-
69B-81B	Heating Medium Heater 69B	NO _x	0.32	-
		CO	0.49	-
		PM	0.92	-
		PM ₁₀	0.92	-
		PM _{2.5}	0.92	-
		SO ₂	0.08	-
		H ₂ SO ₄	<0.01	-
		VOC	0.25	-
		NH ₃	0.62	-
69B-81C	Heating Medium Heater 69C	NO _x	0.32	-
		CO	0.49	-
		PM	0.92	-
		PM ₁₀	0.92	-
		PM _{2.5}	0.92	-
		SO ₂	0.08	-
		H ₂ SO ₄	<0.01	-
		VOC	0.25	-
		NH ₃	0.62	-
69B-81A through C	Train 4 Heating Medium Heaters Annual Emissions Cap	NO _x	-	2.80
		CO	-	4.27
		PM	-	8.09
		PM ₁₀	-	8.09
		PM _{2.5}	-	8.09

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		SO ₂	-	0.69
		H ₂ SO ₄	-	0.05
		VOC	-	2.18
		NH ₃	-	5.43
TO1	Amine Unit/ Thermal Oxidizer 61	NO _x	0.28	1.21
		CO	0.42	1.82
		PM	1.29	5.65
		PM ₁₀	1.29	5.65
		PM _{2.5}	1.29	5.65
		SO ₂	0.75	2.98
		H ₂ SO ₄	0.06	0.23
		VOC	2.12	2.42
		H ₂ S	0.07	0.24
TO2	Amine Unit/ Thermal Oxidizer 62	NO _x	0.28	1.21
		CO	0.42	1.82
		PM	1.29	5.65
		PM ₁₀	1.29	5.65
		PM _{2.5}	1.29	5.65
		SO ₂	0.75	2.98
		H ₂ SO ₄	0.06	0.23
		VOC	2.12	2.42
		H ₂ S	0.07	0.24
TO3	Amine Unit/ Thermal Oxidizer 63	NO _x	0.28	1.21
		CO	0.42	1.82
		PM	1.29	5.65
		PM ₁₀	1.29	5.65
		PM _{2.5}	1.29	5.65
		SO ₂	0.75	2.98

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		H ₂ SO ₄	0.06	0.23
		VOC	2.12	2.42
		H ₂ S	0.07	0.24
TO4	Amine Unit/ Thermal Oxidizer 64	NO _x	0.28	1.21
		CO	0.42	1.82
		PM	1.29	5.65
		PM ₁₀	1.29	5.65
		PM _{2.5}	1.29	5.65
		SO ₂	0.75	2.98
		H ₂ SO ₄	0.06	0.23
		VOC	2.12	2.42
		H ₂ S	0.07	0.24
CT	Combustion Turbine Stack	NO _x	8.09	30.73
		CO	9.85	37.07
		PM	10.00	43.80
		PM ₁₀	10.00	43.80
		PM _{2.5}	10.00	43.80
		SO ₂	4.08	11.98
		H ₂ SO ₄	0.43	0.73
		VOC	0.34	1.27
		NH ₃	14.95	56.27
		NO _x (MSS)	87.00	-
		CO (MSS)	57.00	-
		PM (MSS)	2.90	-
		PM ₁₀ (MSS)	2.90	-
		PM _{2.5} (MSS)	2.90	-
		VOC (MSS)	1.27	-
LUBVENT	Lube Oil Vent	PM	0.05	0.22

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		PM ₁₀	0.05	0.22
		PM _{2.5}	0.05	0.22
		VOC	0.05	0.22
PTFFLARE	PTF Flare	NO _x	139.49	1.66
		CO	278.48	3.32
		SO ₂	<0.01	0.03
		VOC	863.98	2.93
		H ₂ S	<0.01	<0.01
PTFFWP	Fire Water Pump	NO _x	2.56	0.13
		CO	0.67	0.03
		PM	0.08	<0.01
		PM ₁₀	0.08	<0.01
		PM _{2.5}	0.08	<0.01
		SO ₂	<0.01	<0.01
		H ₂ SO ₄	<0.01	<0.01
		VOC	0.09	<0.01
PTFFWP2	Fire Water Pump (Train 4)	NO _x	2.56	0.13
		CO	0.67	0.03
		PM	0.08	<0.01
		PM ₁₀	0.08	<0.01
		PM _{2.5}	0.08	<0.01
		SO ₂	<0.01	<0.01
		H ₂ SO ₄	<0.01	<0.01
		VOC	0.09	<0.01
PTFEG-1	Emergency Generator (DFEJ)	NO _x	8.57	0.21
		CO	0.70	0.02
		PM	0.05	<0.01
		PM ₁₀	0.05	<0.01

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		PM _{2.5}	0.05	<0.01
		SO ₂	<0.01	<0.01
		H ₂ SO ₄	<0.01	<0.01
		VOC	0.13	<0.01
PTFEG-2	Emergency Generator (DFEJ)	NO _x	8.57	0.21
		CO	0.70	0.02
		PM	0.05	<0.01
		PM ₁₀	0.05	<0.01
		PM _{2.5}	0.05	<0.01
		SO ₂	<0.01	<0.01
		H ₂ SO ₄	<0.01	<0.01
		VOC	0.13	<0.01
PTFEG-3	Emergency Generator (DFEJ)	NO _x	8.57	0.21
		CO	0.70	0.02
		PM	0.05	<0.01
		PM ₁₀	0.05	<0.01
		PM _{2.5}	0.05	<0.01
		SO ₂	<0.01	<0.01
		H ₂ SO ₄	<0.01	<0.01
		VOC	0.13	<0.01
PTFEG-4	Emergency Generator (DQFAH)	NO _x	1.38	0.03
		CO	2.00	0.05
		PM	0.07	<0.01
		PM ₁₀	0.07	<0.01
		PM _{2.5}	0.07	<0.01
		SO ₂	0.02	<0.01
		H ₂ SO ₄	<0.01	<0.01
		VOC	0.13	<0.01

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PTFEG-5	Emergency Generator (DQFAH)	NH3	0.51	0.01
		NO _x	1.38	0.03
		CO	2.00	0.05
		PM	0.07	<0.01
		PM ₁₀	0.07	<0.01
		PM _{2.5}	0.07	<0.01
		SO ₂	0.02	<0.01
		H ₂ SO ₄	<0.01	<0.01
		VOC	0.13	<0.01
		NH3	0.51	0.01
PTFEG-6	Emergency Generator (DFEJ)	NO _x	8.57	0.21
		CO	0.7	0.02
		PM	0.05	<0.01
		PM ₁₀	0.05	<0.01
		PM _{2.5}	0.05	<0.01
		SO ₂	<0.01	<0.01
		H ₂ SO ₄	<0.01	<0.01
		VOC	0.13	<0.01
PTFEAC-1	Emergency Air Compressor	NO _x	1.87	0.05
		CO	1.73	0.04
		PM	0.10	<0.01
		PM ₁₀	0.10	<0.01
		PM _{2.5}	0.10	<0.01
		SO ₂	<0.01	<0.01
		H ₂ SO ₄	<0.01	<0.01
		VOC	0.10	<0.01
		NH ₃	0.14	<0.01
PTFEAC-2	Emergency Air Compressor	NO _x	1.87	0.05

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		CO	1.73	0.04
		PM	0.10	<0.01
		PM ₁₀	0.10	<0.01
		PM _{2.5}	0.10	<0.01
		SO ₂	<0.01	<0.01
		H ₂ SO ₄	<0.01	<0.01
		VOC	0.10	<0.01
		NH ₃	0.14	<0.01
FUG-TREAT	Pretreatment 1-3 VOC Fugitives (6)	VOC	0.40	0.62
FUG-TRN4	Pretreatment Train 4 VOC Fugitives (6)	VOC	0.13	0.21
FUG-CT	Pretreatment Ammonia Fugitives (6)	NH ₃	0.12	0.51
FUG-HTR	Heater Ammonia Fugitives (6)	NH ₃	0.12	0.51
67Z-97-Z1	Ammonia Loading	NH ₃	<0.01	<0.01
PTFSOT	Slop Oil Tank	VOC	<0.01	<0.01
PTFOWT	Oily Water Tank	VOC	<0.01	<0.01
PTFHMT	Heating Medium Tank	VOC	3.57	0.01
PTFSOT-T4	Slop Oil Tank	VOC	<0.01	<0.01
PTFOWT-T4	Oily Water Tank	VOC	<0.01	<0.01
PTFHMT-T4	Heating Medium Tank	VOC	3.57	0.01
67T-90	Amine Storage Tank	VOC	<0.01	<0.01
PTFFWPT-1	Diesel Firewater Pump Tank	VOC	0.01	<0.01
PTFFWPT-2	Diesel Fire Water Pump Tank 2	VOC	0.01	<0.01
PTFEGT-1	Diesel Emergency Generator (DFEJ) Tank	VOC	0.01	<0.01
PTFEGT-2	Diesel Emergency Generator (DFEJ) Tank	VOC	0.01	<0.01
PTFEGT-3	Diesel Emergency Generator (DFEJ) Tank	VOC	0.01	<0.01
PTFEGT-4	Diesel Emergency	VOC	0.01	<0.01

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	Generator (DQFAH) Tank			
PTFEGT-5	Diesel Emergency Generator (DQFAH) Tank	VOC	0.01	<0.01
PTFEGT-6	Diesel Emergency Generator (DFEJ) Tank	VOC	0.01	<0.01
PTFEACT-1	Diesel Emergency Air Compressor Tank	VOC	0.01	<0.01
PTFEACT-2	Diesel Emergency Air Compressor Tank	VOC	0.01	<0.01

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (4)	
			lbs/hour	TPY (5)
60K-11A	Booster Compressors Lube Oil Vent	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
60K-11B	Booster Compressors Lube Oil Vent	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
60K-11C	Booster Compressors Lube Oil Vent	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
69K-11A	Booster Compressors Lube Oil Vent	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
60K-11ATK	Lube Oil Run Down Tank	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
60K-11BTK	Lube Oil Run Down Tank	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
60K-11CTK	Lube Oil Run Down Tank	PM	<0.01	<0.01

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69K-11ATK	Lube Oil Run Down Tank	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
60K-40A	Residue Compressor Lube Oil Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
60K-40B	Residue Compressor Lube Oil Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
60K-40C	Residue Compressor Lube Oil Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
69K-40A	Residue Compressor Lube Oil Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
60K40ATK	Lube Oil Run Down Tank Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
60K40BTK	Lube Oil Run Down Tank Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
60K40CTK	Lube Oil Run Down Tank Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
69K40ATK	Lube Oil Run Down Tank Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
61K-43A	Debutanizer Overhead Compressor Lube Oil Vent	PM	<0.01	<0.01

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61K-43B	Debutanizer Overhead Compressor Lube Oil Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
62K-43A	Debutanizer Overhead Compressor Lube Oil Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
62K-43B	Debutanizer Overhead Compressor Lube Oil Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
63K-43A	Debutanizer Overhead Compressor Lube Oil Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
63K-43B	Debutanizer Overhead Compressor Lube Oil Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
64K-43A	Debutanizer Overhead Compressor Lube Oil Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
64K-43B	Debutanizer Overhead Compressor Lube Oil Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
61K-30	Regen Gas Compressor Lube Oil Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
62K-30	Regen Gas Compressor Lube Oil Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
63K-30	Regen Gas Compressor Lube Oil Vent	PM	<0.01	<0.01

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64K-40	Regen Gas Compressor Lube Oil Vent	PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<0.01	<0.01
		PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
		VOC	<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_x - total oxides of nitrogen
 SO₂ - sulfur dioxide
 PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented
 PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented
 PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
 CO - carbon monoxide
 H₂SO₄ - sulfuric acid mist
 H₂S - hydrogen sulfide
 NH₃ - ammonia
- (4) Planned startup and shutdown (SS) lbs/hour emissions for all pollutants are authorized even if not specifically identified as SS. MSS represents Maintenance, Startup and Shutdown emissions.
- (5) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period. Annual emission rates for each source include planned SS emissions.
- (6) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: April 25, 2018