

# Emission Sources - Maximum Allowable Emission Rates

Permit Number 18295 & PSDTX1466

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	
			lbs/hour	TPY (4)
SPR901	Vapor Combustor No. 1 – Marine Loading (6)	VOC	4.11	*
		NOx	7.12	*
		CO	35.58	*
		SO2	0.43	*
		PM	0.91	*
		PM10	0.91	*
		PM2.5	0.91	*
		H2S	<0.01	*
	Vapor Combustor No. 1 – Marine Loading (7)	VOC	104.23	*
		NOx	18.77	*
		CO	37.47	*
		SO2	31.92	*
		PM	32.91	*
		PM10	32.91	*
		PM2.5	32.91	*
		H2S	0.34	*
SPR902	Vapor Combustor No. 2 - Marine Loading (6)	VOC	4.11	*
		NOx	7.12	*
		CO	35.58	*
		SO2	0.43	*
		PM	0.91	*
		PM10	0.91	*
		PM2.5	0.91	*

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	Vapor Combustor No. 2 – Marine Loading (7)	H2S	<0.01	*
		VOC	104.23	*
		NOx	18.77	*
		CO	37.47	*
		SO2	31.92	*
		PM	32.91	*
		PM10	32.91	*
		PM2.5	32.91	*
		H2S	0.34	*
SPRVCU3	Vapor Combustor No. 3 - Marine Loading	VOC	4.11	*
		NOx	7.12	*
		CO	35.58	*
		SO2	0.43	*
		PM	0.91	*
		PM10	0.91	*
		PM2.5	0.91	*
		H2S	<0.01	*
SPRVCU4	Vapor Combustor No. 4 - Marine Loading	VOC	4.11	*
		NOx	7.12	*
		CO	35.58	*
		SO2	0.43	*
		PM	0.91	*
		PM10	0.91	*
		PM2.5	0.91	*
		H2S	<0.01	*
SPRVCU5	Vapor Combustor No. 5 - Marine Loading	VOC	4.11	*
		NOx	7.12	*
		CO	35.58	*
		SO2	0.43	*

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		PM	0.91	*
		PM10	0.91	*
		PM2.5	0.91	*
		H2S	<0.01	*
SPRVCU6	Vapor Combustor No. 6 - Marine Loading	VOC	4.11	*
		NOx	7.12	*
		CO	35.58	*
		SO2	0.43	*
		PM	0.91	*
		PM10	0.91	*
		PM2.5	0.91	*
		H2S	<0.01	*
SPRVCU7	Vapor Combustor No. 7 - Marine Loading	VOC	4.11	*
		NOx	7.12	*
		CO	35.58	*
		SO2	0.43	*
		PM	0.91	*
		PM10	0.91	*
		PM2.5	0.91	*
		H2S	<0.01	*
SPRVCU8	Vapor Combustor No. 8 - Marine Loading	VOC	4.11	*
		NOx	7.12	*
		CO	35.58	*
		SO2	0.43	*
		PM	0.91	*
		PM10	0.91	*
		PM2.5	0.91	*
		H2S	<0.01	*
Combined VCU	Combined VCUs (includes EPNs	VOC	*	24.51

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		NOx	*	36.07
		CO	*	180.35
		SO2	*	1.31
		PM	*	4.66
		PM10	*	4.66
		PM2.5	*	4.66
		H2S	*	<0.01
	Combined VCUs (includes EPNs SPR901, SPR902) (7), (8)	VOC	*	120.74
		NOx	*	40.11
Flare	RRLOAD, TRLOAD	VOC	8.53	28.97
		NOx	1.15	3.65
		CO	2.29	7.30
		SO2	0.35	1.09
		H2S	<0.01	0.01
ML255B	Uncontrolled Barge Loading Fugitives	VOC	218.67	52.80
ML255A	Uncontrolled Ship Loading Fugitives	VOC	87.47	24.41
RRL02	Uncaptured Railcar loading	VOC	0.18	0.19
TRL02	Uncaptured Truck loading	VOC	0.14	0.19
86	Tank 86	VOC	2.06	1.51
103	Tank 103	VOC	5.71	3.39
		H2S	0.02	0.07
104	Tank 104	VOC	5.74	3.47
		H2S	0.02	0.08
110	Tank 110	VOC	1.80	2.40
112	Tank 112	VOC	2.44	1.43
115	Tank 115	VOC	6.13	2.81
		H2S	0.02	0.07
116	Tank 116	VOC	3.89	4.44

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		H2S	0.01	0.04
117	Tank 117	VOC	3.5	2.07
		H2S	<0.01	0.01
118	Tank 118	VOC	3.89	4.43
		H2S	0.01	0.04
119	Tank 119	VOC	3.58	4.83
		H2S	0.01	0.04
120	Tank 120	VOC	5.13	4.04
		H2S	0.05	0.18
121	Tank 121	VOC	5.13	4.05
		H2S	0.03	0.09
122	Tank 122	VOC	4.61	4.95
		H2S	0.07	0.22
123	Tank 123	VOC	4.6	4.74
		H2S	0.06	0.2
124	Tank 124	VOC	4.6	4.75
		H2S	0.03	0.1
125	Tank 125	VOC	4.6	4.74
		H2S	0.03	0.1
126	Tank 126	VOC	4.61	4.78
		H2S	0.03	0.1
127	Tank 127	VOC	6.47	2.98
		H2S	0.02	0.07
128	Tank 128	VOC	8.50	2.36
		H2S	0.01	0.02
129	Tank 129	VOC	8.50	2.38
		H2S	0.01	0.02
130	Tank 130	VOC	8.50	2.36
		H2S	0.01	0.02

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133	Tank 133	VOC	4.45	5.18
		H2S	0.03	0.12
134	Tank 134	VOC	4.45	5.18
		H2S	0.03	0.12
135	Tank 135	VOC	4.45	5.18
		H2S	0.03	0.12
136	Tank 136	VOC	4.45	5.18
		H2S	0.03	0.12
137	Tank 137	VOC	4.45	5.18
		H2S	0.03	0.12
166	Tank 166	VOC	1.99	3.61
167	Tank 167	VOC	2.99	5.27
		H2S	<0.01	0.03
168	Tank 168	VOC	12.26	2.36
169	Tank 169	VOC	2.3	5.34
203	Tank 203	VOC	7.92	2.46
		H2S	0.02	0.06
207	Tank 207	VOC	1.92	1.89
210	Tank 210	VOC	3.63	7.27
213	Tank 213	VOC	5.32	9.58
		H2S	0.03	0.08
214	Tank 214	VOC	3.66	7.27
215	Tank 215	VOC	3.68	7.32
216	Tank 216	VOC	11.74	29.9
218	Tank 218	VOC	4.06	4.91
219	Tank 219	VOC	3.83	8.43
220	Tank 220	VOC	3.76	5.89
221	Tank 221	VOC	5.37	8.90
222	Tank 222	VOC	12.26	2.78

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223	Tank 223	VOC	6.14	3.24
		H2S	0.02	0.07
224	Tank 224	VOC	6.15	3.27
		H2S	0.02	0.07
225	Tank 225	VOC	12.26	1.90
227	Tank 227	VOC	12.26	2.01
228	Tank 228	VOC	0.79	0.76
229	Tank 229	VOC	12.26	2.81
230	Tank 230	VOC	2.58	5.10
233	Tank 233	VOC	6.70	13.72
234	Tank 234	VOC	6.79	13.96
235	Tank 235	VOC	1.44	1.03
		H2S	<0.01	<0.01
236	Tank 236	VOC	6.79	14.1
238	Tank 238	VOC	3.66	6.83
239	Tank 239	VOC	2.1	1.5
254	Tank 254	VOC	6.13	0.68
255	Tank 255	VOC	6.25	11.36
256	Tank 256	VOC	6.13	0.54
257	Tank 257	VOC	6.13	1.13
258	Tank 258	VOC	6.13	1.13
259	Tank 259	VOC	6.13	1.13
263	Tank 263	VOC	2.03	1.04
270	Tank 270	VOC	3.63	6.74
290	Tank 290	VOC	1.12	0.82
291	Tank 291	VOC	1.12	0.82
300	Methanol Tank No. 1	VOC	2.19	1.19
301	Methanol Tank No. 2	VOC	2.19	1.19
302	Methanol Tank No. 3	VOC	2.19	1.19

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396	Tank 396	VOC	13.83	3.61
		H2S	0.04	0.10
397	Tank 397	VOC	13.83	3.61
		H2S	0.04	0.10
475	Tank 475	VOC	12.26	1.84
476	Tank 476	VOC	12.26	1.89
824	Tank 824	VOC	2.21	1.14
		H2S	0.01	0.01
825	Tank 825	VOC	8.18	2.4
		H2S	0.02	0.05
COTK1	Crude Oil Tank 1	VOC	4.45	5.18
		H2S	0.03	0.12
COTK2	Crude Oil Tank 2	VOC	4.45	5.18
		H2S	0.03	0.12
COTK3	Crude Oil Tank 3	VOC	4.45	5.18
		H2S	0.03	0.12
COTK4	Crude Oil Tank 4	VOC	4.45	5.18
		H2S	0.03	0.12
COTK5	Crude Oil Tank 5	VOC	4.45	5.18
		H2S	0.03	0.12
COTK6	Crude Oil Tank 6	VOC	4.45	5.18
		H2S	0.03	0.12
COTK7	Crude Oil Tank 7	VOC	4.45	5.18
		H2S	0.03	0.12
COTK8	Crude Oil Tank 8	VOC	4.45	5.18
		H2S	0.03	0.12
COTK9	Crude Oil Tank 9	VOC	4.45	5.18
		H2S	0.03	0.12
COTK10	Crude Oil Tank 10	VOC	4.45	5.18



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		H2S	0.03	0.12
COTK11	Crude Oil Tank 11	VOC	4.45	5.18
		H2S	0.03	0.12
GTK1	Gasoline Tank 1	VOC	3.16	6.33
GTK2	Gasoline Tank 2	VOC	3.16	6.33
GTK3	Gasoline Tank 3	VOC	3.16	6.33
GTK4	Gasoline Tank 4	VOC	3.16	6.33
GTK5	Gasoline Tank 5	VOC	3.16	6.33
GTK6	Gasoline Tank 6	VOC	3.16	6.33
GTK7	Gasoline Tank 7	VOC	3.16	6.33
GTK8	Gasoline Tank 8	VOC	3.16	6.33
GTK9	Gasoline Tank 9	VOC	3.16	6.33
GTK10	Gasoline Tank 10	VOC	3.16	6.33
GTK11	Gasoline Tank 11	VOC	3.16	6.33
GTK12	Gasoline Tank 12	VOC	3.16	6.33
GTK13	Gasoline Tank 13	VOC	3.16	6.33
GTK14	Gasoline Tank 14	VOC	3.16	6.33
GTK15	Gasoline Tank 15	VOC	3.16	6.33
GTK16	Gasoline Tank 16	VOC	3.16	6.33
GTK17	Gasoline Tank 17	VOC	3.16	6.33
GTK18	Gasoline Tank 18	VOC	3.16	6.33
DTK1	Distillate Tank 1	VOC	1.12	0.82
DTK2	Distillate Tank 2	VOC	1.12	0.82
DTK3	Distillate Tank 3	VOC	1.12	0.82
DTK4	Distillate Tank 4	VOC	1.12	0.82
DTK5	Distillate Tank 5	VOC	1.12	0.82
DTK6	Distillate Tank 6	VOC	1.12	0.82
DTK7	Distillate Tank 7	VOC	1.12	0.82
TRANSMIX	Transmix Tank	VOC	3.12	3.14

## Emission Sources - Maximum Allowable Emission Rates

TANKMSS	New Tanks Cleaning	VOC	2.9	0.23
		NOx	3.2	0.28
		CO	14.68	1.27
		H2S	<0.01	<0.01
		SO2	0.17	<0.01
SEP01	Oil/water Separator No. 1	VOC	0.1	0.42
CAT1	Caterpillar Engine #1	VOC	0.47	0.02
		NOx	15.84	0.79
		CO	3.63	0.18
		SO2	0.01	<0.01
		PM	0.46	0.02
		PM10	0.46	0.02
		PM2.5	0.46	0.02
CAT2	Caterpillar Engine #2	VOC	1.51	0.08
		NOx	18.6	0.93
		CO	4.01	0.2
		SO2	1.23	0.06
		PM	1.32	0.07
		PM10	1.32	0.07
		PM2.5	1.32	0.07
KUB1	Kubota Engine #1	VOC	0.06	<0.01
		NOx	0.77	0.04
		CO	0.17	0.01
		SO2	0.05	<0.01
		PM	0.05	<0.01
		PM10	0.05	<0.01
		PM2.5	0.05	<0.01
KUB3	Kubota Engine #3	VOC	0.05	<0.01
		NOx	0.58	0.03

## Emission Sources - Maximum Allowable Emission Rates

		CO	0.12	0.01
		SO2	0.04	<0.01
		PM	0.04	<0.01
		PM10	0.04	<0.01
		PM2.5	0.04	<0.01
PERK1	Perkins Engine	VOC	0.19	0.01
		NOx	2.33	0.12
		CO	0.5	0.03
		SO2	0.15	0.01
		PM	0.17	0.01
		PM10	0.17	0.01
		PM2.5	0.17	0.01
SLFUG	Uncaptured Ship Loading Fugitives	VOC	19.72	29.15
		H2S	0.29	0.48
F6312-1	Transfer Manifold process fugitives (5)	VOC	0.02	0.08
		H2S	<0.01	<0.01
F6312-2	Pump Station process fugitives (5)	VOC	0.01	0.03
		H2S	<0.01	<0.01
F6312-3	Gasoline Pump Station process fugitives (5)	VOC	0.01	0.05
		H2S	<0.01	<0.01
F6312-4	Pump Station process fugitives (5)	VOC	0.02	0.07
		H2S	<0.01	<0.01
F6312-5	CPL_PAPS Pump Station process fugitives (5)	VOC	0.01	0.03
		H2S	<0.01	<0.01
SPR905	SPR Manifold Fugitives (5)	VOC	0.04	0.17
		H2S	<0.01	<0.01
RRE01	Railcar Loading Rack Fugitives (5)	VOC	0.05	0.24
		H2S	<0.01	<0.01
TRE01	Truck Loading Rack Fugitives (5)	VOC	0.10	0.42

## Emission Sources - Maximum Allowable Emission Rates

		H2S	<0.01	<0.01
LACTFUG	LACT Units Fugitive (5)	VOC	0.21	0.90
		H2S	<0.01	<0.01
ALLTKFUG	Fugitive Emissions for all Tanks (5)	VOC	2.61	11.44
		H2S	<0.01	<0.01
VCUFUG	Fugitive Emissions for all VCUs (5)	VOC	1.50	6.57
		H2S	0.04	0.22
DOCKFUG	Fugitive Emissions for all Docks (5)	VOC	0.46	2.00
		H2S	<0.01	0.02

- (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
- NOx - 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
- HAP - hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (6) Upon successful installation of low NOx burners on EPNs SPR901 and SPR902, all emissions denoted with "(6)" will become effective.
- (7) These emission rates will be in effect until the successful installation of low NOx burners on EPNs SPR901 and SPR902, which shall occur no later than one year from the issue date of this permit. After that time, all emission values denoted with "(7)" will no longer be authorized.
- (8) These emission rates represent EPNs SPR901 and SPR902 at VOC and NOx emission rates using 98% DRE and NOx emission factor of 0.138 lb/MMBtu parameters established in this permit.

Date: June 8, 2016

# Emission Sources - Maximum Allowable Emission Rates

Permit Number GHGPSDTX139

This table lists the maximum allowable emission rates of greenhouse gas (GHG) emissions, as defined in Title 30 Texas Administrative Code § 101.1, for all sources of GHG air contaminants on the applicant's property that are authorized 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 authorized by this permit.

## Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates
			TPY (4)
FLARE	Flare	CO <sub>2</sub> (5)	4,321.22
		CH <sub>4</sub> (5)	0.17
		N <sub>2</sub> O (5)	0.03
		CO <sub>2</sub> e	4,335.75
Combined VCU	Combined VCUs (includes EPNs SPR901, SPR902, SPRVCU3, SPRVCU4, SPRVCU5, SPRVCU6, SPRVCU7, SPRVCU8)	CO <sub>2</sub> (5)	92,372.97
		CH <sub>4</sub> (5)	3.38
		N <sub>2</sub> O (5)	0.65
		CO <sub>2</sub> e	92,649.78
TANKMSS	TANKMSS (New Tanks Cleaning)	CO <sub>2</sub> (5)	745.45
		CH <sub>4</sub> (5)	0.03
		N <sub>2</sub> O (5)	0.01
		CO <sub>2</sub> e	747.93
CAT1	Caterpillar Engine	CO <sub>2</sub> (5)	37.67
		CH <sub>4</sub> (5)	<0.01
		N <sub>2</sub> O (5)	<0.01
		CO <sub>2</sub> e	37.80
CAT2	Caterpillar Engine #2	CO <sub>2</sub> (5)	34.25
		CH <sub>4</sub> (5)	<0.01
		N <sub>2</sub> O (5)	<0.01
		CO <sub>2</sub> e	34.36
KUB1	Kubota Engine #1	CO <sub>2</sub> (5)	1.42
		CH <sub>4</sub> (5)	<0.01
		N <sub>2</sub> O (5)	<0.01

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		CO <sub>2</sub> e	1.42
KUB3	Kubota Engine #3	CO <sub>2</sub> (5)	1.06
		CH <sub>4</sub> (5)	<0.01
		N <sub>2</sub> O (5)	<0.01
		CO <sub>2</sub> e	1.07
PERK1	Perkins Engine	CO <sub>2</sub> (5)	4.28
		CH <sub>4</sub> (5)	<0.01
		N <sub>2</sub> O (5)	<0.01
		CO <sub>2</sub> e	4.30

- (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) CO<sub>2</sub> - carbon dioxide  
N<sub>2</sub>O - nitrous oxide  
CH<sub>4</sub> - methane  
CO<sub>2</sub>e - carbon dioxide equivalents based on the following Global Warming Potentials (1/2015):  
CO<sub>2</sub> (1), N<sub>2</sub>O (298), CH<sub>4</sub>(25), SF<sub>6</sub> (22,800), HFC ( various), PFC (various)
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period. These rates include emissions from maintenance, startup, and shutdown.
- (5) Emission rate is given for informational purposes only and does not constitute enforceable limit.

Date: June 8, 2016