

# Emission Sources - Maximum Allowable Emission Rates

Permit Number 6113

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)
L-2	Truck Loading Losses (5)	VOC	8.80	7.83
FL-1	Flare (Loading Rack Control)	NOx	1.14	1.87
		CO	5.80	9.52
		SO <sub>2</sub>	0.01	0.04
		VOC	13.01	11.14
FL-2	Plant Flare	NOx	8.54	3.22
		CO	43.56	17.42
		SO <sub>2</sub>	2.34	0.31
		VOC	71.39	22.35
		H <sub>2</sub> S	0.02	<0.01
H-501	Crude Heater 44 MMBtu/hr	NOx	2.58	11.28
		CO	2.80	12.26
		PM <sub>10</sub>	0.42	1.83
		SO <sub>2</sub>	1.60	2.60
		VOC	0.30	1.32
AAU	AAU Heater	NOx	0.83	3.63
		CO	0.90	3.94
		PM <sub>10</sub>	0.13	0.59
		SO <sub>2</sub>	0.51	0.83
		VOC	0.10	0.43
L-3	4-Oil Loading	VOC	2.75	1.96

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RL-1	Railcar Loading	VOC	1.44	0.11
F-11	F-11 Heater	NOx	3.07	13.46
		CO	1.92	8.41
		PM <sub>10</sub>	0.29	1.25
		SO <sub>2</sub>	1.10	1.78
		VOC	0.21	0.91
F-12	F-12 Heater	NOx	2.35	10.30
		CO	1.47	6.44
		PM <sub>10</sub>	0.22	0.96
		SO <sub>2</sub>	0.84	1.36
		VOC	0.16	0.69
F-13	F-13 Heater	NOx	1.02	4.49
		CO	0.64	2.80
		PM <sub>10</sub>	0.10	0.42
		SO <sub>2</sub>	0.37	0.59
		VOC	0.07	0.30
F-31	F-31 Heater	NOx	0.93	4.06
		CO	0.58	2.54
		PM <sub>10</sub>	0.09	0.38
		SO <sub>2</sub>	0.33	0.54
		VOC	0.06	0.27
API-1	API Separator	VOC	8.37	0.20
FDP	Fire Diesel Pump	NOx	0.87	0.04
		CO	0.08	<0.01
		PM <sub>10</sub>	0.03	<0.01
		SO <sub>2</sub>	0.16	0.01

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		VOC	0.06	<0.01
900-B-4	Steam Boiler (with Fuel Gas) (6)	NO <sub>x</sub>	1.95	--
		CO	3.90	--
		PM	0.97	--
		SO <sub>2</sub>	1.86	--
		VOC	0.71	--
900-B-4	Steam Boiler (with LPG-NG) (6)	NO <sub>x</sub>	2.34	--
		CO	4.81	--
		PM	0.40	--
		SO <sub>2</sub>	1.58	--
		VOC	0.38	--
900-B-4	Steam Boiler (6)	NO <sub>x</sub>	--	10.25
		CO	--	21.07
		PM	--	4.27
		SO <sub>2</sub>	--	3.01
		VOC	--	3.09
H-502	Auxiliary Crude Heater	NO <sub>x</sub>	0.66	2.89
		CO	0.42	1.83
		PM	0.16	0.72
		SO <sub>2</sub>	0.63	1.02
		VOC	0.12	0.54
H-302	Solvents Heater 302	VOC	0.12	0.51
		NO <sub>x</sub>	0.64	2.82
		CO	1.77	7.74
		SO <sub>2</sub>	0.61	1.00
		PM	0.16	0.70

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		PM <sub>10</sub>	0.16	0.70
		PM <sub>2.5</sub>	0.16	0.70
VCU-1	Vapor Combustor Unit (Control for Railcar Loading Rack, RL-1)	VOC	0.30	0.05
		NO <sub>x</sub>	4.81	1.07
		CO	12.02	2.69
		SO <sub>2</sub>	0.15	0.08
		PM	0.04	0.04
		PM <sub>10</sub>	0.04	0.04
		PM <sub>2.5</sub>	0.04	0.04
VCU-FUG	Vapor Combustor Unit	VOC	0.05	0.20
T-113	Tank 113	VOC	0.72	0.04
T-122	Tank 122	VOC	5.19	0.62
T-124	Tank 124	VOC	0.89	0.09
T-125	Tank 125	VOC	0.72	0.29
T-126	Tank 126	VOC	0.72	0.29
T-214	Tank 214	VOC	5.19	0.24
T-215	Tank 215 (7)	VOC	0.49	1.03
T-216	Tank 216 (7)	VOC	0.49	1.03
T-217	Tank 217 (7)	VOC	0.49	1.04
T-218	Tank 218 (7)	VOC	0.49	1.03
T-219	Tank 219 (7)	VOC	0.63	1.86
T-220	Tank 220 (7)	VOC	0.68	2.02
T-303S	Tank 303S	VOC	0.87	0.54
T-304S	Tank 304S	VOC	0.87	0.54
T-305S	Tank 305S	VOC	0.15	0.10
T-306S	Tank 306S	VOC	0.15	0.10

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T-307S	Tank 307S	VOC	0.01	0.01
T-308S	Tank 308S	VOC	0.01	0.01
T-311S	Tank 311S	VOC	0.01	<0.01
T-314S	Tank 314S	VOC	0.01	<0.01
T-316S	Tank 316S	VOC	<0.01	<0.01
T-318S	Tank 318S	VOC	<0.01	<0.01
T-319S	Tank 319S	VOC	0.04	0.03
T-321S	Tank 321S	VOC	0.01	0.01
T-332S	Tank 332S	VOC	0.04	0.03
T-333S	Tank 333S	VOC	0.53	0.10
T-334	Tank 334	VOC	0.32	0.40
T-334S	Tank 334S	VOC	0.14	0.01
T-335	Tank 335	VOC	0.01	0.01
T-335S	Tank 335S	VOC	0.04	<0.01
T-336	Tank 336	VOC	0.05	0.09
T-336S	Tank 336S	VOC	0.01	<0.01
T-337S	Tank 337	VOC	0.04	0.03
T-338S	Tank 338	VOC	0.92	0.5
T-401	Tank 401	VOC	1.24	1.04
T-404	Tank 404	VOC	0.90	0.31
T-406S	Tank 406S	VOC	0.82	2.41
T-408S	Tank 408S	VOC	1.25	1.58
T-409	Tank 409	VOC	1.32	0.23
T-410	Tank 410	VOC	1.32	0.23
T-411	Tank 411	VOC	1.32	0.23
T-412	Tank 412	VOC	3.56	2.16

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T-422	Tank 422	VOC	0.17	0.09
T-424	Tank 424	VOC	0.52	0.20
T-425	Tank 425	VOC	0.52	0.20
T-427	Tank 427	VOC	0.52	0.21
T-428	Tank 428	VOC	1.52	0.74
T-429	Tank 429	VOC	1. 52	0. 74
T-430	Tank 430	VOC	1. 52	0.74
T-431	Tank 431	VOC	0.52	0.16
T-432	Tank 432	VOC	0.52	0.16
T-433	Tank 433	VOC	0.75	0.07
T-434	Tank 434	VOC	1.14	0.08
T-435	Tank 435	VOC	0.67	1.42
T-750	Tank 750	VOC	0.05	0.02
T-900-1	Pressurized Tank 900-1	VOC	0.00	0.00
T-900-2	Pressurized Tank 900-2	VOC	0.00	0.00
T-900-3	Pressurized Tank 900-3	VOC	0.00	0.00
T-900TK02	Tank 900TK02	VOC	0.01	0.06
T-900TK03	Tank 900TK03	VOC	0.01	0.06
T-903	Tank 903	H <sub>2</sub> O	0.00	0.00
T-904	Tank 904	H <sub>2</sub> O	0.00	0.00
T-95	Tank 95	VOC	1.45	2.18
T-96	Tank 96	VOC	0.72	0.99
T-97	Tank 97	VOC	0.72	0.99
FUG-1	Equipment Fugitives (5)	VOC	26.37	115.49
FUG-T-435	Equipment Fugitives, T-435 (5)	VOC	0.07	0.30

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100TK10	Tank 100TK10	VOC	0.1	<0.01
T-GRNPLS	Tank TGRNPLS	VOC	2.18	0.03
100TK11	Tank 100TK11	VOC	1.94	0.02
FUG 100TK11	Fugitive Piping Components, 100TK11	VOC	0.05	0.21
FUG 900V20	Fugitive Piping Components, 900V20	VOC	0.03	0.12
300-V-56	300V56 SFU Oily Water Drum	VOC	1.52	<0.01
FUG-ASU	ASU piping component fugitive emissions	VOC	<0.01	0.02
FUG 800V-33	Fugitive Piping Components, 800V-33	VOC	<0.01	0.01
L-5	Jet Loading Truck Loading Rack, L-5	VOC	4.2	1.32
FUG L-5	Fugitive Piping Components, L-5	VOC	0.13	0.58
RL-ATB	Railcar Loading Rack - ATB, Uncontrolled	VOC	2.85	3.20
FUG-ATB	Fugitive Piping Components, RL-ATB	VOC	0.08	0.33
FUG-ASU	ASU Fugitive Piping Components	VOC	<0.01	0.02
FUG-800V33	800V33 Fugitive Piping Components	VOC	<0.01	0.01
FUG-UNLDBLND	Diesel Blending Fugitive Piping Components	VOC	0.05	0.23
FUG-ISOM	ISOM Fugitive Piping Components	VOC	0.23	0.99
FUG-BIO	Biodiesel Fugitive Piping Components	VOC	0.06	0.27
FUG T-406S	T-406S Fugitive Piping Components	VOC	0.04	0.17
TK-REFPERCH	Mixing Tank, Reformate-Perchlorate	VOC	0.12	<0.01
TK-METH	Mixing Tank, Methanol	VOC	0.03	<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

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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>S - hydrogen sulfide

- (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) Boiler EPN 900-B-4 is listed three times for the purposes of allowing two different types of fuel to be used, fuel gas and/or liquid petroleum gas-natural gas and has different hourly emission rates. The annual emission rates are cumulative.
- (7) Emission rates are represented for Internal Floating Roof Tanks T-215, T-216, T-217, T-218, T-219, and T-220 with secondary seal installed.

Date: February 18, 2020