EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 4850

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)
TK401	Tank 401	VOC	4.69	1.50
TK402	Tank 402	VOC	4.69	1.50
TK403	Tank 403	VOC	4.69	1.50
TK404	Tank 404	VOC	4.69	1.50
TK405	Tank 405	VOC	4.69	1.50
TK406	Tank 406	VOC	4.69	1.50
TK417	Tank 417	VOC	4.69	1.50
TK501	Tank 501	VOC	4.69	1.50
TK502	Tank 502	VOC	4.69	1.50
TK503	Tank 503	VOC	4.69	1.50
TK504	Tank 504	VOC	4.69	1.50
TK505	Tank 505	VOC	4.69	1.50
TK506	Tank 506	VOC	4.69	1.50
TK507	Tank 507	VOC	4.69	1.50
TK508	Tank 508	VOC	4.69	1.50
TK509	Tank 509	VOC	4.69	1.50
TK510	Tank 510	VOC	4.69	1.50
TK511	Tank 511	VOC	4.69	1.50
TK512	Tank 512	VOC	4.69	1.50
TK513	Tank 513	VOC	4.69	1.50

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

TK514	Tank 514	VOC	4.69	1.50
TK515	Tank 515	VOC	4.69	1.50
TK516	Tank 516	VOC	4.69	1.50
TK517	Tank 517	VOC	4.69	1.50
TK518	Tank 518	VOC	4.69	1.50
TK519	Tank 519	VOC	4.69	1.50
TANKCAP	Storage Tank Emissions Cap (6)	VOC	122.07	18.19
TK-217	Tank 217	VOC	1.06	1.34
		Benzene (13)	0.03	0.06
TK-218	Tank 218	VOC	1.06	1.74
TK-219	Tank 219	VOC	1.06	1.74
TK-221	Tank 221	VOC	1.06	1.69
TK-222	Tank 222	VOC	1.06	1.74
TK-223	Tank 223	VOC	1.06	1.74
TK-250	Tank 250	VOC	1.37	2.01
TK-251	Tank 251	VOC	1.42	2.21
TK-252	Tank 252	VOC	1.42	2.21
TK-253	Tank 253	VOC	1.21	1.31
TK-254	Tank 254	VOC	1.22	1.35
TK-255	Tank 255	VOC	1.41	2.25
TK-256	Tank 256	VOC	1.13	0.87
TK-257	Tank 257	VOC	1.13	0.87
TK-258	Tank 258	VOC	1.36	1.95

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

TK-259	Tank 259	VOC	1.41	2.25
TK-296	Tank 296	VOC	6.68	0.09
TK-301	Tank 301	VOC	0.49	1.39
TK-308	Tank 308	VOC	3.98	6.56
TK-311	Tank 311	VOC	40.30	5.71
TK-312	Tank 312	VOC	50.38	5.71
TK-316	Tank 316	VOC	0.96	1.50
		Benzene (13)	0.03	0.05
TK-324	Tank 324	VOC	3.98	11.58
TK-330	Tank 330	VOC	5.61	6.54
TK-341	Tank 341	VOC	12.22	0.49
TK-342	Tank 342	VOC	1.12	1.35
TK-343	Tank 343	VOC	1.12	1.35
TK-344	Tank 344	VOC	1.31	1.31
TK-345	Tank 345	VOC	1.80	2.70
TK-362	Tank 362	VOC	3.03	8.08
TK-363	Tank 363	VOC	27.30	0.79
TK-367	Tank 367	VOC	5.03	9.59
TK-368	Tank 368	VOC	5.03	9.59
TK-369	Tank 369	VOC	5.03	9.59
TK-370	Tank 370	VOC	1.58	2.90
TK-371	Tank 371	VOC	5.08	12.20
TK-372	Tank 372	VOC	2.60	9.65
TK-373	Tank373	VOC	2.62	9.43

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

TK-374	Tank 374	VOC	2.66	9.31
TK-375	Tank 375	VOC	5.08	12.19
TK-382	Tank 382	VOC	1.17	3.87
TK-384	Tank 384	VOC	1.17	5.11
TK-386	Tank 386	VOC	4.69	4.59
		H_2S	<0.01	<0.01
TK-387	Tank 387	VOC	5.22	8.19
		H_2S	<0.01	<0.01
TK-388	Tank 388	VOC	1.86	4.10
TK-389	Tank 389	VOC	5.21	8.18
		H_2S	<0.01	<0.01
TK-390	Tank 390	VOC	1.18	3.94
TK-391	Tank 391	VOC	1.52	3.49
TK-393	Tank 393	VOC	2.76	8.95
TK-407	Tank 407	VOC	4.05	3.26
TK-408	Tank 408	VOC	4.05	3.26
TK-409	Tank 409	VOC	4.05	3.26
TK-410	Tank 410	VOC	4.05	3.26
TK-411	Tank 411	VOC	4.05	3.26
TK-412	Tank 412	VOC	4.05	3.26
TK-413	Tank 413	VOC	4.05	3.26
TK-414	Tank 414	VOC	4.05	3.26
TK-415	Tank 415	VOC	4.05	3.26
TK-416	Tank 416	VOC	4.05	3.26

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

TKLAND	Tank Roof Landings	VOC (11)	1990.63	161.52
		Benzene (11) (13)	--	5.65
MARINECAP	Total loading fugitives - Ship Docks 1 and 2 and Barge Docks 2 and 3	VOC	290.42	92.77
		Benzene (13)	9.15	2.69
SD1	Ship Dock No.1	VOC	261.24	92.77
		Benzene (13)	9.14	2.69
SD2	Ship Dock No. 2	VOC	261.24	92.77
		Benzene (13)	9.14	2.69
BD2	Barge Dock 2	VOC	61.23	92.77
		Benzene (13)	2.15	2.69
BD3	Barge Dock 3	VOC	30.62	92.77
		Benzene (13)	1.08	2.69
TKVCU	Controlled Tank Roof Landing VCU (9)	VOC	63.19	4.37
		Benzene (13)	2.21	0.15
		NO_x	22.59	6.43
		CO	41.49	11.80
		PM	1.13	0.29
		PM_{10}	1.13	0.29
		$PM_{2.5}$	1.13	0.29
		H_2S	0.13	<0.01
		SO_2	11.90	0.73
PORT_VCU	Controlled Tank Roof Landing VCU (10)	VOC	22.00	6.02
		Benzene (13)	0.77	0.21

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

		NO_x	2.00	1.23
		CO	12.13	8.57
		PM	0.33	0.32
		PM_{10}	0.33	0.32
		$PM_{2.5}$	0.33	0.32
		H_2S	0.04	0.03
		SO_2	4.22	2.58

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

PORT-VCU	TK-373 roof landing emissions (12)	VOC	22.00	2.09
		Benzene (13)	0.77	0.07
		NO_x	2.00	0.19
		CO	12.12	1.38
		PM	0.33	0.05
		PM_{10}	0.33	0.05
		$PM_{2.5}$	0.33	0.05
		SO_2	3.23	0.26
		H_2S	0.03	<0.01
PORT-VCU	TK-372 roof landing emissions (12)	VOC	22.00	2.05
		Benzene (13)	0.77	0.07
		NO_x	2.0	0.18
		CO	12.12	1.36
		PM	0.33	0.05
		PM_{10}	0.33	0.05
		$PM_{2.5}$	0.33	0.05
		SO_2	3.23	0.26
		H_2S	0.03	<0.01
VCU-371	TK-371 roof landing emissions (14)	VOC	22.20	2.10
		Benzene (13)	0.77	0.07
		NO_x	2.00	0.19

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

VCU-367	TK-367 roof landing	CO	12.12	1.40
		PM	0.33	0.05
		PM_{10}	0.33	0.05
		$PM_{2.5}$	0.33	0.05
		SO_2	3.23	0.27
		H_2S	0.03	<0.01
		VOC	22.20	1.23
		Benzene (13)	0.77	0.04
		NO_x	2.00	0.11
TK-DEGAS	Portable Tank	CO	12.12	0.91
		PM	0.33	0.04
		PM_{10}	0.33	0.04
		$PM_{2.5}$	0.33	0.04
		SO_2	3.23	0.15
		H_2S	0.03	<0.01
		VOC (7)	8.07	1.79
		NO_x	2.23	0.50
		CO	4.44	1.00
		PM	0.12	0.03
		PM_{10}	0.12	0.03
		$PM_{2.5}$	0.12	0.03

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

		H_2S	0.01	<0.01
FUG-1	Dock Fugitives (5)	SO2	1.18	0.23
		VOC	4.48	19.63
F-4850	Process Fugitives	VOC	5.72	24.82
VRUEAST	Marine VRU	VOC	65.20	24.23
		Benzene (13)	2.28	0.85
VRUWEST	Marine VRU	VOC	65.20	24.23
		Benzene (13)	2.28	0.85
VRUEAST & VRUWEST	Marine VRU Cap	VOC	-	24.23
		Benzene (13)	-	0.85
TK-256	Tank 256	VOC	0.92	0.87
		Benzene (13)	0.03	0.03
TK-257	Tank 257	VOC	0.92	0.87
		Benzene (13)	0.03	0.03
TK-386	Tank 386	VOC	4.70	4.60
TK-387	Tank 387	VOC	5.22	8.19
TK-389	Tank 389	VOC	5.21	8.18
CRFUG	Fugitive	VOC	0.01	0.42
		Benzene (13)	<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 s 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - 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
H_2S - 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) Emissions cap covering normal operation for storage tank EPNs TK401 through TK406, TK417, and TK501 through TK519.
(7) Short term and annual VOC emissions are a subcap of the emission cap (EPN TKLAND).
(8) Includes controlled degassing emissions from MAERT Attachment 1, Group 2 tanks.
(9) Includes controlled emissions for tank roof landing activities (standing idle emissions, degassing, and emissions from refloating of roof during refill) from Storage Tank EPNs TK301, TK401 through TK417, and TK501 through TK519.
(10) Includes controlled emissions for tank roof landing activities (standing idle emissions, degassing, and emissions from refloating of roof during refill) from MAERT Attachment 1, Group 1 tanks.
(11) Includes uncontrolled tank roof landing emissions from SC 6B category tanks (standing idle and refilling), uncontrolled tank opening (venting) emissions from all floating roof tanks, and controlled VOC emissions from controlled degassing of MAERT Attachment 1, Group 2 tanks (EPN TKDEGAS).

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

(12) Hourly and annual emissions are a subcap of the emissions authorized under “Controlled Tank Roof Landings” for EPN PORT_VCU and include emissions from controlled tank roof landings (controlled standing idle and roof refloating) as well as emissions from controlled tank degassing.
(13) Emissions are a subset of authorized VOC emissions for the EPN.
(14) Includes emissions from controlled tank roof landings (standing idle and roof refloating) as well as emissions from controlled degassing. The authorized VOC emissions have been used in the issuance of Emission Reduction Credits (ERCs) and cannot be increased during the service life of the facility.

Date: August 28, 2015

Attachment 1
Permit Number 4850

Tanks Group 1	
EPN	**Description**
TK256	Tank 256
TK257	Tank 257
TK308	Tank 308
TK330	Tank 330
TK372	Tank 372
TK373	Tank 373
TK374	Tank 374
TK375	Tank 375
TK386	Tank 386
TK387	Tank 387
TK388	Tank 388
TK389	Tank 389

Date: March 30, 2015

Attachment 1
Permit Number 4850

Tanks Group 2	
EPN	**Description**
TK217	Tank 217
TK218	Tank 218
TK219	Tank 219
TK221	Tank 221
TK222	Tank 222
TK223	Tank 223
TK250	Tank 250
TK251	Tank 251
TK252	Tank 252
TK253	Tank 253
TK254	Tank 254
TK255	Tank 255
TK258	Tank 258
TK259	Tank 259
TK 296	Tank 296
TK 316	Tank 316
TK 324	Tank 324
TK 342	Tank 342
TK343	Tank 343
TK344	Tank 344
TK345	Tank 345
TK362	Tank 362
TK368	Tank 368
TK369	Tank 369
TK370	Tank 370
TK382	Tank 382
TK384	Tank 384
TK390	Tank 390
TK391	Tank 391
TK393	Tank 393

Date February 17, 2015