Emission Sources - Maximum Allowable Emission Rates

Permit Number 3836

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)
Storage Tank Area				
T-202	Tank T-202	NaOH	0.05	0.01
T-207	Tank T-207	VOC	0.71	0.03
T-401	Tank T-401	VOC	0.01	0.01
T-403	Tank T-403	VOC	0.01	0.01
T-404	Tank T-404	VOC	0.08	0.01
T-405	Tank T-405	VOC	0.11	0.01
T-418	Tank T-418	VOC	0.09	0.01
T-603	Tank T-603	VOC	1.18	0.07
T-604	Tank T-604	VOC	3.97	0.06
Z-703	Scrubber for Tanks T-121, T-122, T-123, and T-124	HCl	0.02	0.01
		VOC	0.32	0.06
Z-709	Scrubber for Tanks T-117, T-118, T-119, and T-120	VOC	0.13	0.01
Z-711	Scrubber for Tank T-214	H_2S	0.01	0.01
		VOC	0.03	0.01
STOR-FUG	Fugitives Tank Farm Area (5)	VOC	1.36	5.93
V-605	Tank V-605	VOC	0.01	0.01
T-350	Tank T-350	VOC	0.01	0.01
T-253	Tank T-253	VOC	0.07	0.01
Z-704	Scrubber for Tank T-262	VOC	0.32	0.01
Z-705	Scrubber for Tank T-250	VOC	0.06	0.01

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Z-707	Scrubber for Tank V-2022	NH_3	0.02	0.01
		VOC	0.38	0.01
Plant Utilities Area				
B-601	Utility Boiler	CO	0.04	0.16
		NOx	0.33	1.46
		PM	0.28	1.21
		PM_{10}	0.28	1.21
		$PM_{2.5}$	0.28	1.21
		SO_2	0.05	0.24
		VOC	0.20	0.87
B-602	Utility Boiler	CO	0.04	0.16
		NOx	0.33	1.46
		PM	0.28	1.21
		PM_{10}	0.28	1.21
		$PM_{2.5}$	0.28	1.21
		SO_2	0.05	0.24
		VOC	0.20	0.87
H-602	Hot Oil Heater	CO	0.37	1.62
		NO_x	0.22	0.95
		PM	0.15	0.65
		PM_{10}	0.15	0.65
		$PM_{2.5}$	0.15	0.65
		SO_2	0.03	0.13
		VOC	0.11	0.47
G-601	Emergency Generator (6)	CO	3.84	0.10

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		NO_x	17.83	0.46
		PM	1.27	0.03
		PM_{10}	1.27	0.03
		$PM_{2.5}$	1.27	0.03
		SO_2	1.18	0.03
		VOC	1.45	0.04
FWP-1	Fire Water Pump-1 (6)	CO	2.17	0.18
		NO_x	10.08	0.84
		PM	0.72	0.06
		PM_{10}	0.72	0.06
		$PM_{2.5}$	0.72	0.06
		SO_2	0.67	0.06
		VOC	0.82	0.07
FWP-2	Fire Water Pump-2 (6)	CO	2.17	0.18
		NO_x	10.08	0.84
		PM	0.72	0.06
		PM_{10}	0.72	0.06
		$PM_{2.5}$	0.72	0.06
		SO_2	0.67	0.06
		VOC	0.82	0.07
FWP-3	Fire Water Pump-3 (6)	CO	2.17	0.18
		NO_x	10.08	0.84
		PM	0.72	0.06
		PM_{10}	0.72	0.06
		$PM_{2.5}$	0.72	0.06

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		SO2	0.67	0.06
		VOC	0.82	0.07
UTIL-FUG	Utilities Area Fugitives (5)	VOC	0.11	0.50
Plant 2- Amine Condensation Polymerization Area				
V-023	Reactor Vent	VOC	3.27	0.03
Z-708	Scrubber for Tanks T-251, T-257 (Tropylene), T-258, and T-259	VOC	0.98	0.02
		NH_3	0.02	0.01
		H_2S	0.03	0.01
Z-712	Scrubber for Tank T-252	HCl	0.02	0.02
		VOC	0.01	0.01
Z-713	Methyl Chloride Scrubber	CH_3Cl	5.30	0.16
PL2-FUG	Plant 2 Area Fugitives (5)	VOC	0.48	2.08
CS2-FUG	Carbon Disulfide Handling Fugitives (5)	CS_2	0.01	0.01
Plant 3 - Intermediates Chemical Processing				
PL3-FUG	Plant 3 Area Fugitives (5)	VOC	0.60	2.62
Z-715	Oxide Scrubber	EO	0.25	0.14
		PO	0.95	0.17
Plant 5 - Blending and Drumming				
F-501	Filter Press 501	VOC	0.53	0.95
PL5-FUG	Plant 5 Area Fugitives (5)	VOC	0.19	0.83
General Area				
Loading	Loading (7)	VOC	5.57	2.04
CT-601	Utility Cooling Tower	PM	0.17	0.73
		PM_{10}	0.17	0.73

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		$PM_{2.5}$	0.17	0.73
Z-714	Flare	CO	8.28	3.50
		NOx	6.08	3.50
		VOC	25.91	3.65
		H_2S	0.01	0.02
		SO_2	2.33	2.35
		PM	0.10	0.23
		PM_{10}	0.10	0.23
		$PM_{2.5}$	0.10	0.23
		HCl	1.16	0.26
Maintenance, Start up, and Shutdown Activities (8)				
Z-714	Flare - Combustion (48 hrs/yr) (9)	CO	0.12	0.01
		NO_X	0.06	0.01
		VOC	0.41	0.01
Z-714 Tanks -MSS	Flare (48 hrs/yr) Tanks MSS Emissions (9)	VOC	0.42	0.01
Scrubber Tanks - MSS	Tank De-heeled Emissions (3 hrs/yr for one tank)	VOC	0.23	0.01
Uncontrolled Tanks-MSS	Uncontrolled Tanks (3 hrs/yr for one tank)	VOC	2.96	0.01
Maintenance, Start up, and Shutdown Activities (2 hrs/yr for each scrubber during tank degassing emissions control and 20 hrs/yr fugitive emissions for each area) (5)				
Z-703	Tank Scrubber	VOC	0.10	0.01
Z-704	Tank Scrubber	VOC	0.01	0.01
Z-705	Tank Scrubber	VOC	0.01	0.01
Z-707	Tank Scrubber	VOC	0.01	0.01
Z-708	Tank Scrubber	VOC	0.18	0.01
Z-709	Tank Scrubber	VOC	0.09	0.01

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Z-711	Tank Scrubber	VOC	0.03	0.01
Z-712	Tank Scrubber	VOC	0.01	0.01
Z-717	Tank Scrubber	VOC	0.01	0.01
PL2-FUG	Plant 2 Area Fugitives (5)	VOC	0.01	0.01
PL3-FUG	Plant 3 Area Fugitives (5)	VOC	0.01	0.01
PL5-FUG	Plant 5 Area Fugitives (5)	VOC	0.01	0.01
STOR-FUG	Fugitives Tank Farm Area (5)	VOC	0.01	0.01
UTIL-FUG	Utilities Area Fugitives (5)	VOC	0.01	0.01
CS2-FUG	Carbon Disulfide Handling Fugitives (5)	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) NaOH - sodium hydroxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
HCl - hydrogen chloride
H_2S - hydrogen sulfide
NH_3 - ammonia
CO - carbon monoxide
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
EO - ethylene oxide
PO - propylene oxide
CH_3Cl - methyl chloride
CS_2 - carbon disulfide
(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) Operated for emergency use and required maintenance only.
(7) The loading emission rates will consist of emissions from drum loading, ipak loading, truck loading, and railcar loading.
(8) The maintenance, startup, and shutdown activities shall comply with the requirements specified in the Special Condition Nos. 33 and 34 of this permit.
(9) The 48 hrs/yr parentheticals for Z−714 Flare and Tanks MSS indicate that the allowable is “in addition” to the allowable emissions for EPN Z-714, Source Flare, routine “General Area” emissions.

Emission Sources - Maximum Allowable Emission Rates

Date: September 8, 2017