Emission Sources - Maximum Allowable Emission Rates

Permit Number 20686

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)
CTCOOLT04	Cooling Tower No. 3	VOC	0.08	0.35
		PM	0.02	0.09
		PM_{10}	0.02	0.09
		$PM_{2.5}$	0.02	0.09
CTCOOLT05	Cooling Tower No. 6	VOC	0.08	0.35
		PM	0.02	0.09
		PM_{10}	0.02	0.09
		$PM_{2.5}$	0.02	0.09
EEFIREWA02	P-175 Engine	VOC	1.20	0.06
		NO_x	1.20	0.06
		CO	1.00	0.05
		SO_2	<0.01	<0.01
		PM	0.06	<0.01
		PM_{10}	0.06	<0.01
		$PM_{2.5}$	0.06	<0.01

Emission Sources - Maximum Allowable Emission Rates

EEFIREWB02	P-2 Engine	VOC	0.57	0.24
		NOx	7.13	3.03
		CO	1.54	0.65
		SO_2	0.47	0.20
		PM	0.51	0.22
		PM_{10}	0.51	0.22
		$PM_{2.5}$	0.51	0.22
FCWELL04	Material Handling Fugitives (5)	PM	0.01	0.01
		PM_{10}	0.01	0.01
		$PM_{2.5}$	0.01	0.01
FETKFLR02	Tank Vent Flare (H-602)	VOC	27.38	(6)
		NO_x	5.35	(6)
		CO	10.15	(6)
		HCl	0.30	(6)
		SO_2	0.35	(6)
		Ammonia	0.11	(6)
FETKFLR03	Alternate Tank Vent Flare (H-601)	VOC	27.30	(6)
		NO_x	4.72	(6)
		CO	8.89	(6)
		HCl	0.30	(6)
		SO_2	0.33	(6)
		Ammonia	0.11	(6)

Emission Sources - Maximum Allowable Emission Rates

FETKFLR02 FETKFLR03	Total Annual Allowable Emissions for Primary and Alternate Tank Vent Flares (6)	VOC	---	18.17
		NO_x	---	6.33
		CO	---	12.59
		HCl	---	0.13
		SO_2	---	0.78
		Ammonia	---	0.02
FU1DU01	346 Unit Fugitives (5)	VOC	0.02	0.10
FU4BOLS01	No. 4 Boiler System Fugitives (5)(7)	VOC	0.01	0.04
FUBARGE01	Barge Fugitives (5)	VOC	0.01	0.01
FUBAYOU01	Bayou Tank Farm Fugitives (5)	VOC	0.01	0.03
FUC09DU01	345 Unit Fugitives (5)	VOC	0.02	0.08
FUC21DU01	343 Unit Fugitives (5)	VOC	0.03	0.13
FUC25DU01	342 Unit Fugitives (5)	VOC	0.03	0.11
FUC27DU01	341 Unit Fugitives (5)	VOC	0.04	0.16
FUC33DU01	344 Unit Fugitives (5)	VOC	0.04	0.15
FUC35DU01	347 Unit Fugitives (5)	VOC	0.07	0.30
FUCAS1201	CA Storage Area 12 Fugitives (5)	VOC	0.01	0.02
FUCAS1601	CA Storage Area 16 Fugitives (5)	VOC	0.01	0.06
FUCAS1701	CA Storage Area 17 Fugitives (5)	VOC	0.01	0.02
FUCRS19A01	Crude Acid Storage Area Fugitives (5)	VOC	0.01	0.01
FUCAS19B01	CA Storage Area 19B Fugitives (5)	VOC	0.02	0.08
FUCAS29A01	CA Storage Area 29A Fugitives (5)	VOC	0.01	0.02
FUCAS33B01	CA Storage Area 33B Fugitives (5)	VOC	0.01	0.04
FUCAS33C01	CA Storage Area 33C Fugitives (5)	VOC	0.01	0.01

Emission Sources - Maximum Allowable Emission Rates

FUCAS33D01	CA Storage Area 33D Fugitives (5)	VOC	0.01	0.03
FUCAS33E01	CA Storage Area 33E Fugitives (5)	VOC	0.01	0.01
FUCAS9701	CA Storage Area 97 Fugitives (5)	VOC	0.01	0.02
FUCLUPS01	348 Unit Storage Fugitives (5)	VOC	0.01	0.02
FUCLUPU01	348 Unit Fugitives (5)	VOC	0.03	0.11
FUCO2SU01	321 Unit Fugitives (5)(7)	VOC	0.11	0.47
FUCOLATS01	Carbolate Storage Fugitives (5)	VOC	0.01	0.01
FUCOOLT01	Cooling Tower	VOC	0.01	0.02
FUCRAS601	Crude Acid Storage 6 Fugitives (5)	VOC	0.01	0.05
FUCRAS801	Crude Acid Storage Area 8 Fugitives (5)	VOC	0.01	0.01
FUCRUDU01	333 Unit Fugitives (5)	VOC	0.04	0.19
FUCSNPS01	Caustic and Nap Oil Storage Fugitives (5)(7)	VOC	0.04	0.15
FUCUIIP01	335 Unit Process Fugitives (5)	VOC	0.04	0.18
FUCUIIS01	335 Unit Storage Fugitives (5)	VOC	0.03	0.11
FUCYCBS01	Cresylate/Carbolate Storage Fugitives (5)	VOC	0.02	0.07
FUDRUM01	Drum Loading Fugitives (5)	VOC	0.01	0.01
FUDRYU01	MP85 Unit Fugitives (5)	VOC	0.01	0.02
FUEXTRU01	312Unit Fugitives (5)(7)	VOC	0.32	1.38
FUFIREWA01	Firewater House A Fugitives (5)	VOC	0.01	0.01
FUFIREWB01	Firewater House B Fugitives (5)	VOC	0.01	0.01
FUGAST01	Gas Storage Fugitives (5)	VOC	0.06	0.27
FUIEXU01	332 Unit Fugitives (5)	VOC	0.02	0.08

Emission Sources - Maximum Allowable Emission Rates

FULAB01	Lab Sump Fugitives (5)	VOC	0.01	0.01
FUNBEX01	316 Unit Fugitives (5)(7)	VOC	0.13	0.57
FUOXRU01	349 Unit Fugitives (5)	VOC	0.05	0.22
FUPAHRU01	PAHR Unit Fugitives (5)	VOC	0.12	0.53
FUPWNOS01	Process Water and Nap Oil Storage Fugitives (5)	VOC	0.02	0.07
FUPWS1801	Process Water Storage T-18 Fugitives (5)	VOC	0.02	0.09
FUPWS22201	Process Water Storage T-222 Fugitives (5)	VOC	0.01	0.01
FUPWS22301	Process Water Storage T-223 Fugitives (5)	VOC	0.01	0.01
FURLU37A01	Rail Loading/Unloading Area 37A Fugitives (5)	VOC	0.01	0.05
FURLU37B01	Rail Loading/Unloading Area 37B Fugitives (5)	VOC	0.01	0.01
FURLU37C01	Rail Loading/Unloading Area 37C Fugitives (5)	VOC	0.01	0.02
FURLU37D01	Rail Loading/Unloading Area 37D Fugitives (5)	VOC	0.01	0.01
FURMDSOS01	Raw Material/Disulfide Storage Fugitives (5)	VOC	0.12	0.50
FURSDUS01	Residue Storage Fugitives (5)	VOC	0.01	0.02
FUSAPOU01	329 Unit Fugitives (5)(7)	VOC	0.01	0.01
FUSRU01	315 Unit Fugitives (5)(7)	VOC	0.27	1.20
FUSWETU01	301 Unit Fugitives (5)(7)	VOC	0.35	1.51
FUT22701	T-227 Area Fugitives (5)(7)	VOC	0.01	0.05
FUT27501	T-275 Area Fugitives	VOC	0.01	0.01

Emission Sources - Maximum Allowable Emission Rates

	(5)			
FUTKFLR01	Tank Vent Flare Fugitives (5)	VOC	0.40	1.74
FUTLU85B01	Tank Truck Unloading Fugitives Area 85B (5)(9)	VOC	0.01	0.02
FUTTLU2401	Tank Truck Unloading Area 24 (5)	VOC	0.01	0.02
FUVAFU01	334 Unit Fugitives (5)	VOC	0.03	0.12
FUWASHU01	313 Unit Fugitives (5)(7)	VOC	0.12	0.52
FUWELFS01	361 Unit Feed Storage Fugitives (5)	VOC	0.01	0.05
FUWELFS201	361 Unit Storage Fugitives (5)	VOC	0.01	0.05
FUWELL01	361 Unit Fugitives (5)	VOC	0.01	0.02
FUTTLU2402	Tank Truck Fugitives for Area 24 (5)(9)	VOC	0.06	0.01
FUTTLU2402	Tank Truck Unloading Area 24 (8)(9)	VOC	41.18	(8)
FURLU37B02	Railcar Spots 12-20 Loading Losses (8)	VOC	41.18	(8)
FURLU37D02	Railcar Spots 27-32 Loading Losses (8)	VOC	41.18	(8)
FUTTLU2402 FURLU37B02 FURLU37D02	Naphthalene Oil Loading Loss Cap (8)	VOC	---	0.65
HE1DU02	Heater H-2	VOC	0.04	0.16
		NO_x	0.66	2.90
		CO	0.55	2.39
		SO_2	0.03	0.12
		PM	0.05	0.22
		PM_{10}	0.05	0.22
		$PM_{2.5}$	0.05	0.22
HE2BOIL02	Boiler No. 2	VOC	0.42	1.84
		NO_x	4.69	20.54

Emission Sources - Maximum Allowable Emission Rates

		CO	5.86	25.67
		SO_2	0.33	1.45
		PM	0.59	2.58
		PM_{10}	0.59	2.58
		$PM_{2.5}$	0.59	2.58
HEC21DU02	Heater H-21	VOC	0.08	0.34
		NO_x	1.41	6.25
		CO	1.18	5.15
		SO_2	0.06	0.26
		PM	0.11	0.47
		PM_{10}	0.11	0.47
		$PM_{2.5}$	0.11	0.47
HEC25DU02	Heater H-25	VOC	0.07	0.29
		NO_x	1.24	5.45
		CO	1.02	4.49
		SO_2	0.05	0.23
		PM	0.09	0.41
		PM_{10}	0.09	0.41
		$PM_{2.5}$	0.09	0.41
HEC27DU02	Heater H-27	VOC	0.08	0.36
		NO_x	1.52	6.70
		CO	1.26	5.52
		SO_2	0.06	0.28
		PM	0.11	0.50
		PM_{10}	0.11	0.50
		$PM_{2.5}$	0.11	0.50

Emission Sources - Maximum Allowable Emission Rates

HEC33DU02	Heater H-8	VOC	0.08	0.34
		NO_x	1.41	6.25
		CO	1.18	5.15
		SO_2	0.06	0.26
		PM	0.11	0.47
		PM_{10}	0.11	0.47
		$PM_{2.5}$	0.11	0.47
HEC35DU02	Heater H-347001	VOC	0.18	0.77
		NO_x	1.94	8.58
		CO	2.69	11.77
		SO_2	0.14	0.60
		PM	0.24	1.07
		PM_{10}	0.24	1.07
		$PM_{2.5}$	0.24	1.07
HEC9DU02	Heater H-1	VOC	0.04	0.15
		NO_x	0.65	2.86
		CO	0.54	2.35
		SO_2	0.03	0.12
		PM	0.05	0.21
		PM_{10}	0.05	0.21
		$PM_{2.5}$	0.05	0.21
HECRUDU02	Heater H-7	VOC	0.08	0.37
		NO_x	1.56	6.84
		CO	1.29	5.63
		SO_2	0.07	0.29
		PM	0.12	0.51

Emission Sources - Maximum Allowable Emission Rates

		PM_{10}	0.12	0.51
		$PM_{2.5}$	0.12	0.51
HECRUDU03	Heater H-5	VOC	0.05	0.20
		NO_x	0.52	2.28
		CO	0.71	3.13
		SO_2	0.04	0.16
		PM	0.06	0.28
		PM_{10}	0.06	0.28
		$PM_{2.5}$	0.06	0.28
HECUIIP02	Heater H-33501	VOC	0.03	0.14
		NO_x	0.30	1.32
		CO	0.50	2.17
		SO_2	0.03	0.11
		PM	0.04	0.20
		PM_{10}	0.04	0.20
		$PM_{2.5}$	0.04	0.20
HECUIIP03	Heater H-33502	VOC	0.01	0.04
		NO_x	0.08	0.34
		CO	0.13	0.55
		SO_2	0.01	0.03
		PM	0.01	0.05
		PM_{10}	0.01	0.05
		$PM_{2.5}$	0.01	0.05

Emission Sources - Maximum Allowable Emission Rates

HEOXRU13	Heater H-349001	VOC	0.17	0.75
		NO_x	2.14	9.36
		CO	4.89	21.41
		SO_2	0.25	1.09
		PM	0.44	1.94
		PM_{10}	0.44	1.94
		$PM_{2.5}$	0.44	1.94
SEBAYOU02	Scrubber S-1002	VOC	0.28	0.01
SEBAYOU03	Scrubber S-1000	VOC	0.28	0.02
SEC21DU07	Scrubber S-141	VOC	0.86	0.26
SEC25DU03	Scrubber S-25	VOC	0.78	0.10
SECAS1607	Scrubber S-86	VOC	0.44	0.02
SECAS33B10	Scrubber S-78	VOC	2.47	0.45
SECAS33D08	Scrubber S-82	VOC (10)	0.22	0.02
	MSS Railcar Cleaning	VOC (11)(12)	--	0.02
SECAS33E07	Scrubber S-5	VOC	0.17	0.01
SECAS9702	Scrubber S-260	VOC (10)	1.19	0.06
	MSS Railcar Cleaning	VOC (11)(12)	--	0.02
SECLUPS02	Scrubber S-18	VOC	1.95	0.31
SECRAS602	Scrubber S-83	VOC	0.07	0.07
SEIEXU03	Scrubber S-332-001	VOC	0.17	0.02
SET27504	Scrubber S-275	VOC	0.16	0.01
VEBARGE02	Tank T-1009	VOC	7.48	0.10
VEBARGE03	Tank T-1014	VOC	0.05	0.01
VECOOLT02	Tank T-950	VOC	0.01	0.01
VEFIREWA03	Tank T-1012	VOC	0.01	0.01

Emission Sources - Maximum Allowable Emission Rates

VEFIREWB03	Tank T-1013	VOC	0.06	0.01
VEGAST02	Tank T-1010	VOC	0.14	0.01
VEGAST03	Tank T-1011	VOC	24.01	0.25
VEWELL02	F-603/F-604 Vent	VOC	11.87	1.74
VECAS33E05	Tank T-54	KOH	0.01	0.01
VECSNPS02	Tank T-211017	NaOH	0.01	0.01
VECSNPS03	Tank T-211028	NaOH	0.01	0.01
VECSNPS04	Tank T-211029	NaOH	0.01	0.01
VESAS02	Tank T-93	H_2SO_4	0.01	0.01
	Total Site Emissions	Each HAP	--	6.11
		Sum of all HAP	--	20.00
Maintenance, Startup, and Shutdown				
FLAREMSS	MSS Emissions controlled by Flare	VOC	28.38	0.68
		NOx	2.93	0.01
		CO	5.85	0.02
CASMSS	MSS Emissions controlled by Carbon Adsorption	VOC	9.69	2.42
SCRUBMSS	MSS Emissions controlled by Scrubber	VOC	13.17	0.36
UNCONMSS	Uncontrolled MSS emissions	VOC	2.07	0.24
ATTACHA	Inherently low emitting MSS activities	VOC	4.25	0.09
		PM	0.02	0.01
		PM_{10}	0.01	0.01
		$PM_{2.5}$	0.01	0.01
MSS CAP	MSS Emissions Cap	VOC	--	3.49

(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

Emission Sources - Maximum Allowable Emission Rates

NOx	-	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
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
HCl	-	hydrogen chloride
NaOH	-	sodium hydroxide
KOH	-	potassium hydroxide
H_2SO_4	-	sulfuric acid

(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) The Total Annual Emissions for EPN's FETKFLR02 and FETKFLR03 shall not to exceed the limits represented by this annual emissions cap. Additionally the Alternate Tank Vent Flare (FETKFLR03) is not to be used simultaneously with FETKFLR02; however, the pilot flames may be ignited and maintained simultaneously.

(7) These fugitives will no longer be authorized once piping has been purged. Piping shall be purged no later than the next scheduled turnaround for each respective unit.

(8) Emission rates for EPNs FURLU37B02, FURLU37D02, and FUTTLU2402 are based on a total loading throughput of 500,000 gallons per year of naphthalene oil. Therefore, the annual throughput of naphthalene oil from all three loading EPNs shall not exceed 500,000 gallons per year. Annual emissions from EPNs FURLU37B02, FURLU37D02, and FUTTLU2402 are not to exceed 0.65 tpy.

(9) These emissions represent Cresylic Acid Fractions.

(10) Emissions represent the combined emission rate from production and MSS.

(11) Annual emissions are in addition to those authorized for normal production.

(12) Emissions represent the combined emission rate for MSS activities.

Date: June 21, 2018