Emission Sources - Maximum Allowable Emission Rates

Permit Number 21083

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)
1A	Vent Stack	VOC	1.71	3.01
		Cresol-U	0.04	0.02
2	Hot Oil Heater No. 1	VOC	0.08	0.35
		NO_x	1.47	6.43
		CO	1.23	5.40
		PM	0.11	0.49
		PM_{10}	0.11	0.49
		$PM_{2.5}$	0.11	0.49
		SO_2	0.04	0.17
3A	Steam Boiler	VOC	0.05	0.20
		NO_x	0.82	3.60
		CO	0.69	3.03
		PM	0.06	0.30
		PM_{10}	0.06	0.30
		$PM_{2.5}$	0.06	0.30
		SO_2	0.02	0.10
4	Fugitives (5)	VOC	1.45	6.35
		Cresol-U	0.13	0.56

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5	Hot Oil Heater No. 2	VOC	0.06	0.28
		NO_x	1.18	5.17
		CO	0.99	4.34
		PM	0.09	0.39
		PM_{10}	0.09	0.39
		$PM_{2.5}$	0.09	0.39
		SO_2	0.03	0.14
LOAD	Purifying Unit / Pentene Column Load	VOC	0.60	0.07
PUFUG	Purifying Unit / Pentene Column Fugitives	VOC	0.05	0.24
HOTOILMSS	Hot Oil Heater 1 and 2 MSS	VOC	0.01	0.01
CASMSS	Carbon Canisters MSS Stack	VOC	0.05	0.06
		Cresol-U	0.02	0.01
VACTRKMSS	Vacuum Truck Loading Tank Degas	VOC	1.41	0.01
		Cresol-U	0.13	0.01
MOLEMSS	Mole Sieve Change Out	PM	0.01	0.01
		PM_{10}	0.01	0.01
		$PM_{2.5}$	0.01	0.01
FUGMSS	MSS Fugitives from Maintenance Operations	VOC	1.11	0.10
		Cresol-U	0.24	0.02
LUBEMSS	Degreasing/Lubrication Maintenance	VOC	4.68	0.09
ISULOAD	ISU Drum / Tote Feed Loading (6)	Pentanol	0.297	<0.01
		Cresol	<0.01	<0.01
ISUTANKS	ISU Storage Tanks (6)	Pentanol	<0.01	<0.01

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		Cresol	<0.01	<0.01
ISUFUG	ISU Process Fugitives (5) (6)	Pentanol	0.096	0.42
		Cresol	<0.01	0.024
RDCKOVENT	Research Distillation Column KO Vent	VOC	<0.01	-
RDCBCVENT	Research Distillation Column Bottoms Can Vent	VOC	<0.01	-
RDCLOAD	Research Distillation Column Loading	VOC	<0.01	-
RDCFUG	Research Distillation Column Fugitives (5)	VOC	0.40	-
RDCCAP	Research Distillation Column Annual Emission Cap	VOC	-	0.60
RDCMSS	Research Distillation Column MSS	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) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1, including Cresol-U.
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
Cresol-U - Cresylic acid (CAS No. 1319-77-3), individual isomers or mixture thereof.
(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) Pentanol and Cresol emissions are included in VOC totals.

Date: July 29, 2022