

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 3275A

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. 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)	<u>Emission Rates</u>	
			<u>lb/hr</u>	<u>TPY</u>
001	A Plant Scrubber (5)	VOC	28.19	
002	C-100 Scrubber (5)	VOC	28.19	
003	C-300 Scrubber (5)	VOC	28.19	
005	C-1100 Scrubber (5)	VOC	28.19	
013	Pilot Plant Scrubber (5)	VOC	28.19	
	Total for Scrubber EPNs	VOC	28.19	4.05
	001, 002, 003, 005, and 013			
008	C-900 Scrubber	EO/PO	0.181	0.06
007	C-Plant Carbon Adsorption		VOC	0.03
	<0.01	CS ₂	0.08	<0.01
WWC-1	WWS Carbon Adsorber (6)	VOC	4.90	
WWC-2	WWS Carbon Adsorber (6)	VOC	4.90	
WWC-3	WWS Carbon Adsorber (6)	VOC	4.90	
WWC-4	WWS Carbon Adsorber (6)	VOC	4.90	
WWC-5	WWS Carbon Adsorber (6)	VOC	4.90	
WWC-6	WWS Carbon Adsorber (6)	VOC	4.90	
WWC-7	WWS Carbon Adsorber (6)	VOC	4.90	

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			lb/hr	TPY
WWC-8	WWS Carbon Adsorber (6)	VOC	4.90	
WWC-9	WWS Carbon Adsorber (6)	VOC	4.90	
WWC-10	WWS Carbon Adsorber (6)	VOC	4.90	
	Total from all WWS Carbon		VOC	4.90
	8.60			
	Absorbers			
TK-1A	Storage Tank (7)	VOC	5.05	
TK-1B	Storage Tank (7)	VOC	5.05	
TK-1C	Storage Tank (7)	VOC	5.05	
TK-2A	Storage Tank (7)	VOC	5.05	
TK-2B	Storage Tank (7)	VOC	5.05	
TK-2C	Storage Tank (7)	VOC	5.05	
TK-2D	Storage Tank (7)	VOC	5.05	
ST-900A	Storage Tank (7)	VOC	5.05	
ST-900B	Storage Tank (7)	VOC	5.05	
ST-906	Storage Tank (7)	VOC	5.05	
ST-907	Storage Tank (7)	VOC	5.05	
ST-908	Storage Tank (7)	VOC	5.05	
ST-909	Storage Tank (7)	VOC	5.05	
ST-910	Storage Tank (7)	VOC	5.05	

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
ST-911	Storage Tank (7)	VOC	5.05	
ST-912	Storage Tank (7)	VOC	5.05	
ST-913	Storage Tank (7)	VOC	5.05	
ST-914	Storage Tank (7)	VOC	5.05	
ST-918	Storage Tank (7)	VOC	5.05	
ST-919	Storage Tank (7)	VOC	5.05	
ST-920	Storage Tank (7)	VOC	5.05	
ST-921	Storage Tank (7)	VOC	5.05	
ST-922	Storage Tank (7)	VOC	5.05	
ST-923	Storage Tank (7)	VOC	5.05	
ST-924	Storage Tank (7)	VOC	5.05	
ST-923	Storage Tank (7)	VOC	5.05	
ST-924	Storage Tank (7)	VOC	5.05	
ST-925	Storage Tank (7)	VOC	5.05	
ST-926	Storage Tank (7)	VOC	5.05	
ST-927	Storage Tank (7)	VOC	5.05	
ST-928	Storage Tank (7)	VOC	5.05	
ST-929	Storage Tank (7)	VOC	5.05	

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
ST-930	Storage Tank (7)	VOC	5.05	
ST-931	Storage Tank (7)	VOC	5.05	
ST-932	Storage Tank (7)	VOC	5.05	
ST-933	Storage Tank (7)	VOC	5.05	
ST-934	Storage Tank (7)	VOC	5.05	
ST-935	Storage Tank (7)	VOC	5.05	
ST-936	Storage Tank (7)	VOC	5.05	
ST-937	Storage Tank (7)	VOC	5.05	
ST-938	Storage Tank (7)	VOC	5.05	
ST-939	Storage Tank (7)	VOC	5.05	
ST-940	Storage Tank (7)	VOC	5.05	
ST-941	Storage Tank (7)	VOC	5.05	
ST-942	Storage Tank (7)	VOC	5.05	
ST-943	Storage Tank (7)	VOC	5.05	
ST-944	Storage Tank (7)	VOC	5.05	
ST-945	Storage Tank (7)	VOC	5.05	
ST-946	Storage Tank (7)	VOC	5.05	

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
ST-947	Storage Tank (7)	VOC	5.05	
ST-948	Storage Tank (7)	VOC	5.05	
ST-949	Storage Tank (7)	VOC	5.05	
ST-950	Storage Tank (7)	VOC	5.05	
ST-951	Storage Tank (7)	VOC	5.05	
ST-952	Storage Tank (7)	VOC	5.05	
ST-960	Storage Tank (7)	VOC	5.05	
ST-961	Storage Tank (7)	VOC	5.05	
ST-962	Storage Tank (7)	VOC	5.05	
ST-963	Storage Tank (7)	VOC	5.05	
ST-964	Storage Tank (7)	VOC	5.05	
ST-965	Storage Tank (7)	VOC	5.05	
ST-966	Storage Tank (7)	VOC	5.05	
ST-967	Storage Tank (7)	VOC	5.05	
ST-968	Storage Tank (7)	VOC	5.05	
ST-970	Storage Tank (7)	VOC	5.05	
ST-971	Storage Tank (7)	VOC	5.05	
ST-972	Storage Tank (7)	VOC	5.05	

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
ST-973	Storage Tank (7)	VOC	5.05	
ST-974	Storage Tank (7)	VOC	5.05	
ST-975	Storage Tank (7)	VOC	5.05	
ST-980	Storage Tank (7)	VOC	5.05	
ST-981	Storage Tank (7)	VOC	5.05	
ST-982	Storage Tank (7)	VOC	5.05	
ST-983	Storage Tank (7)	VOC	5.05	
ST-984	Storage Tank (7)	VOC	5.05	
ST-985	Storage Tank (7)	VOC	5.05	
ST-986	Storage Tank (7)	VOC	5.05	
ST-987	Storage Tank (7)	VOC	5.05	
ST-990	Storage Tank (7)	VOC	5.05	
ST-991	Storage Tank (7)	VOC	5.05	
ST-992	Storage Tank (7)	VOC	5.05	
ST-993	Storage Tank (7)	VOC	5.05	
ST-994	Storage Tank (7)	VOC	5.05	
ST-995	Storage Tank (7)	VOC	5.05	

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
ST-1102	Storage Tank (7)	VOC	5.05	
ST-1103	Storage Tank (7)	VOC	5.05	
ST-1104	Storage Tank (7)	VOC	5.05	
ST-1105	Storage Tank (7)	VOC	5.05	
ST-2000	Storage Tank (7)	VOC	5.05	
	Total for all Storage Tanks		VOC	
	4.132			
	TK-1A through ST-2000			
GTK-1	Gasoline Storage Tank	VOC	29.48	0.12
DTK-1	Diesel Storage Tank	VOC	0.11	<0.01
MU-1	Mud Unit	VOC	0.08	<0.01
LD-PP	Pilot Plant Drum/Tote Loading	VOC		9.84
LD-A	Plant-A Drum/Tote Loading	VOC		9.84
LD-B	Plant-B Drum/Tote Loading	VOC		9.84
LD-C	Plant-C Drum/Tote Loading	VOC		9.84
RAIL	Rail Loading	VOC	9.84	
STRUCK	South Truck Loading	VOC	9.84	
WTRUCK	West Truck Loading	VOC	9.84	

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
	Total for all Loading	VOC		2.86
FU-TKS	TK-1A-C, 2A-D Fugitives (4) 0.021	VOC		0.005
FU-001	903, 904, 905 Fugitives (4) 0.13	VOC		0.03
FU-002	982, 983, 986, 987 Fugitives (4) 0.17	VOC		0.04
FU-003	984, 985, 980, 981 Fugitives (4) 0.192	VOC		0.044
FU-004	930, 931, 934, 935 Fugitives (4) 0.164	VOC		0.04
FU-005	933, 938, 939 Fugitives (4) 0.102	VOC		0.023
FU-006	932, 936, 937 Fugitives (4) 0.15	VOC		0.033
FU-007	973, 974, 975 Fugitives (4) 0.15	VOC		0.033
FU-008	927, 928, 929 Fugitives (4) 0.124	VOC		0.03
FU-009	924, 925, 926 Fugitives (4) 0.10	VOC		0.023
FU-010	970, 971, 972 Fugitives (4) 0.16	VOC		0.04

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
FU-011	921, 922, 923 Fugitives (4) 0.113	VOC		0.03
FU-012	918, 919, 920 Fugitives (4) 0.11	VOC		0.024
FU-013	966, 967, 968 Fugitives (4) 0.16	VOC		0.04
FU-014	946, 965 Fugitives (4)	VOC	0.02	0.09
FU-015	964, 962, 963, 947, 948, 949 Fugitives (4)	VOC	0.063	0.28
FU-016	940, 941, 960, 961 Fugitives (4) 0.152	VOC		0.04
FU-017	943, 944, 945, 910, 911 Fugitives (4)	VOC	0.05	0.211
FU-018	908, 909, 914, 942 Fugitives (4) 0.16	VOC		0.04
FU-019	906, 907, 912, 913 Fugitives (4) 0.16	VOC		0.04
FU-020	A-Plant Fugitives (4)	VOC	0.941	4.12
FU-021	B-Plant Fugitives (4)	VOC	1.15	5.04
FU-022	A-Plant Loading Fugitives (4) 0.233	VOC		0.053
		PM	0.70	0.10
FU-023	B-Plant Loading Fugitives (4)	VOC		0.01

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
	0.05	PM	0.70	0.07
FU-024	South Truck Rack (4)	VOC	0.102	0.45
FU-025	West Truck Rack (4)	VOC	0.022	0.095
FU-026	C-Plant Fugitives (4)	VOC	0.28	1.222
FU-027	E0/P0 Storage/Unloading System (4)	VOC	0.16	0.693
FU-028	951 Fugitives (4)	VOC	0.012	0.051
FU-029	Pilot Plant Fugitives (4) 0.51	VOC		0.12
FU-030	950, 952 Fugitives (4)	VOC	0.02	0.07
FU-031	994, 995, 1102, 1103, 1104, 0.292 1105 Fugitives (4)	VOC		0.07
FU-032	990, 991 Fugitives (4)	VOC	0.014	0.063
FU-033	992, 993 Fugitives (4)	VOC	0.02	0.08
FU-034	2000 Fugitives (4)	VOC	0.01	0.04
009	A-Hot Oil Heater	VOC	0.01	0.03
		NO _x	0.12	0.53
		SO ₂	0.001	0.005
		CO	0.03	0.11
		PM	0.014	0.06

010	B-Hot Oil Heater	VOC	0.011	0.05
		NO _x	0.20	0.88
		SO ₂	0.001	0.003
		CO	0.042	0.18
		PM	0.024	0.11
011	A-Plant Boiler	VOC	0.044	0.19
		NO _x	0.84	3.67
		SO ₂	0.005	0.02
		CO	0.18	0.77
		PM	0.10	0.44
012	B-Boiler	VOC	0.041	0.18
		NO _x	2.05	8.98
		SO ₂	0.009	0.04
		CO	0.513	2.25
		PM	0.201	0.88
CT1	Cooling Tower No. 1	VOC	0.20	0.87
CT2	Cooling Tower No. 2	VOC	0.20	0.87
CT3	Cooling Tower No. 3	VOC	0.20	0.87
014	V-1500 Blender (B Plant)	VOC	39.70	0.75
015	V-2001 Blender (C Plant)	VOC	38.72	0.27

(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.

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- (3) VOC - volatile organic compounds as defined in General Rule 101.1
- CS₂ - carbon disulfide
 - NO_x - total oxides of nitrogen
 - SO₂ - sulfur dioxide
 - PM - particulate matter
 - EO - ethylene oxide
 - PO - propylene oxide
 - CO - carbon monoxide
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) Total annual emissions for Scrubbers EPNs 001, 002, 003, 005, and 013 will not exceed 4.57 TPY. Maximum short-term emissions from each of these scrubbers may be 56.38 lb/hr.
- (6) Total annual emissions from all wastewater carbon absorbers will not exceed 8.60 TPY. Maximum short-term emissions from each of these absorbers may be 4.90 lb/hr.
- (7) Total annual emissions from all storage tanks will not exceed 4.05 TPY. Maximum short-term emissions from each of these storage tanks may be 5.05 lb/hr.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

_____ Hrs/day _____ Days/week _____ Weeks/year or 8,760
Hrs/year

Dated_____