

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES SHORT-TERM

Permit No. 1078

Attachment A.1

These attachments (A.1 and A.2) list 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) <u>hour</u>	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates *	
			Pounds	per
ST 1-1	Tank 1-1	VOC	40.04	
ST 1-2	Tank 1-2	VOC	40.04	
ST 4-1	Tank 4-1	VOC	40.04	
ST 8-1	Tank 8-1	VOC	40.04	
ST 12-1	Tank 12-1	VOC	100.11	
ST 12-2	Tank 12-2	VOC	100.11	
ST 12-3	Tank 12-3	VOC	100.11	
ST 12-4	Tank 12-4	VOC	100.11	
ST 12-5	Tank 12-5	VOC	100.11	
ST 12-6	Tank 12-6	VOC	100.11	
ST 12-7	Tank 12-7	VOC	100.11	
ST 12-8	Tank 12-8	VOC	100.11	
ST 12-9	Tank 12-9	VOC	100.11	

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AIR CONTAMINANTS DATA**

Emission Point No. (1) <u>hour</u>	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates * Pounds per
ST 12-10	Tank 12-10	VOC	100.11
ST 12-11	Tank 12-11	VOC	100.11
ST 12-12	Tank 12-12	VOC	100.11
ST 12-13	Tank 12-13	VOC	100.11
ST 12-14	Tank 12-14	VOC	100.11
ST 12-15	Tank 12-15	VOC	100.11
ST 12-16	Tank 12-16	VOC	100.11
ST 12-17	Tank 12-17	VOC	100.11
ST 12-18	Tank 12-18	VOC	100.11
ST 12-19	Tank 12-19	VOC	100.11
ST 12-20	Tank 12-20	VOC	100.11
ST 12-21	Tank 12-21	VOC	100.11
ST 12-22	Tank 12-22	VOC	100.11
ST 12-23	Tank 12-23	VOC	100.11
ST 12-24	Tank 12-24	VOC	100.11

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Emission Point No. (1) <u>hour</u>	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates * Pounds per
ST 12-25	Tank 12-25	VOC	100.11
ST 12-26	Tank 12-26	VOC	100.11
ST 12-27	Tank 12-27	VOC	100.11
ST 12-28	Tank 12-28	VOC	100.11
ST 12-29	Tank 12-29	VOC	100.11
ST 12-30	Tank 12-30	VOC	100.11
ST 12-31	Tank 12-31	VOC	100.11
ST 12-32	Tank 12-32	VOC	100.11
ST 12-33	Tank 12-33	VOC	100.11
ST 12-34	Tank 12-34	VOC	100.11
ST 12-35	Tank 12-35	VOC	100.11
ST 12-36	Tank 12-36	VOC	100.11
ST 12-37	Tank 12-37	VOC	100.11
ST 12-38	Tank 12-38	VOC	100.11
ST 12-39	Tank 12-39	VOC	100.11
ST 12-40	Tank 12-40	VOC	100.11

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Emission Point No. (1) <u>hour</u>	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates *	
			Pounds	per
ST 12-41	Tank 12-41	VOC	100.11	
ST 12-42	Tank 12-42	VOC	100.11	
ST 12-43	Tank 12-43	VOC	100.11	
ST 12-44	Tank 12-44	VOC	100.11	
ST 12-45	Tank 12-45	VOC	100.11	
ST 12-46	Tank 12-46	VOC	100.11	
ST 12-47	Tank 12-47	VOC	100.11	
ST 12-48	Tank 12-48	VOC	100.11	
ST 12-49	Tank 12-49	VOC	100.11	
ST 12-50	Tank 12-50	VOC	100.11	
ST 12-51	Tank 12-51	VOC	100.11	
ST 15-1	Tank 15-1	VOC	100.11	
ST 15-2	Tank 15-2	VOC	100.11	
ST 25-5	Tank 25-5	Acrylic Acid	22.5	
ST 25-6	Tank 25-6	Acrylic Acid	22.5	
ST 30-1	Tank 30-1	VOC	100.11	

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AIR CONTAMINANTS DATA**

Emission Point No. (1) <u>hour</u>	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates * Pounds per
ST 30-2	Tank 30-2	VOC	100.11
ST 30-3	Tank 30-3	VOC	100.11
ST 30-4	Tank 30-4	VOC	100.11
ST 30-5	Tank 30-5	VOC	100.11
ST 30-6	Tank 30-6	VOC	100.11
ST 30-7	Tank 30-7	VOC	100.11
ST 33-1	Tank 33-1	VOC	100.11
ST 33-2	Tank 33-2	VOC	100.11
ST 35-4	Tank 35-4	VOC	100.11
ST 35-5	Tank 35-5	VOC	100.11
ST 35-6	Tank 35-6	VOC	100.11
ST 35-7	Tank 35-7	VOC	100.11
ST 35-8	Tank 35-8	VOC	100.11
ST 35-9	Tank 35-9	VOC	100.11
ST 35-10	Tank 35-10	VOC	100.11
ST 35-11	Tank 35-11	VOC	100.11

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Emission Point No. (1) <u>hour</u>	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates * Pounds per
ST 35-13	Tank 35-13	VOC	100.11
ST 35-14	Tank 35-14	VOC	100.11
ST 35-15	Tank 35-15	VOC	100.11
ST 35-16	Tank 35-16	VOC	100.11
ST 35-17	Tank 35-17	VOC	100.11
ST 36-1	Tank 36-1	VOC	100.11
ST 36-2	Tank 36-2	VOC	100.11
ST 36-3	Tank 36-3	VOC	100.11
ST 36-4	Tank 36-4	VOC	100.11
ST 36-5	Tank 36-5	VOC	100.11
ST 50-1	Tank 50-1	VOC	100.11
ST 80-1	Tank 80-1	VOC	280.3
ST 80-2	Tank 80-2	VOC	280.3
ST 80-3	Tank 80-3	VOC	280.3
ST 80-4	Tank 80-4	VOC	280.3
ST 80-5	Tank 80-5	VOC	280.3

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Emission Point No. (1) <u>hour</u>	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates * Pounds per
ST 80-6	Tank 80-6	VOC	280.3
ST 80-7	Tank 80-7	VOC	280.3
ST 80-8	Tank 80-8	VOC	280.3
ST 80-9	Tank 80-9	VOC	280.3
ST 80-10	Tank 80-10	VOC	280.3
ST 80-11	Tank 80-11	VOC	280.3
ST 80-12	Tank 80-12	VOC	280.3
ST 80-13	Tank 80-13	VOC	280.3
ST 80-14	Tank 80-14	VOC	280.3
ST 80-15	Tank 80-15	VOC	280.3
ST 80-16	Tank 80-16	VOC	280.3
ST 80-17	Tank 80-17	VOC	280.3
ST 80-18	Tank 80-18	VOC	280.3
ST 80-19	Tank 80-19	VOC	280.3
ST 80-20	Tank 80-20	VOC	280.3
ST 80-21	Tank 80-21	VOC	280.3

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AIR CONTAMINANTS DATA**

Emission Point No. (1) <u>hour</u>	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates * Pounds per
ST 80-22	Tank 80-22	VOC	280.3
ST 80-23	Tank 80-23	VOC	280.3
ST 80-24	Tank 80-24	VOC	280.3
ST 80-25	Tank 80-25	VOC	280.3
ST 80-26	Tank 80-26	VOC	280.3
ST 80-27	Tank 80-27	VOC	280.3
ST 80-28	Tank 80-28	VOC	280.3
ST 80-29	Tank 80-29	VOC	280.3
ST 80-30	Tank 80-30	VOC	280.3
ST 80-31	Tank 80-31	VOC	280.3
ST 80-32	Tank 80-32	VOC	280.3
ST 80-33	Tank 80-33	VOC	280.3
ST 80-34	Tank 80-34	VOC	280.3
ST 100-1**	Tank 100-1	VOC	2.36
ST 100-2**	Tank 100-2	VOC	2.36
ST 100-3**	Tank 100-3	VOC	2.36

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AIR CONTAMINANTS DATA**

Emission Point No. (1) <u>hour</u>	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates *	
			Pounds	per
ST 100-4**	Tank 100-4	VOC	2.36	
ST 100-5**	Tank 100-5	VOC	2.36	
ST 100-6**	Tank 100-6	VOC	2.36	
ST 100-7**	Tank 100-7	VOC	2.05	
ST 100-8**	Tank 100-8	VOC	2.05	
ST 100-9**	Tank 100-9	VOC	2.05	
ST 100-10**	Tank 100-10	VOC	2.05	
ST 100-11**	Tank 100-11	VOC	1.61	
ST 100-12**	Tank 100-12	VOC	1.61	
ST 100-13**	Tank 100-13	VOC	1.61	
ST 100-14**	Tank 100-14	VOC	1.61	
ST 100-15**	Tank 100-15	VOC	1.61	
ST 100-16**	Tank 100-16	VOC	1.61	
ST 100-17**	Tank 100-17	VOC	1.61	
ST 100-18**	Tank 100-18	VOC	1.61	
ST 100-19**	Tank 100-19	VOC	1.61	

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AIR CONTAMINANTS DATA**

Emission Point No. (1) <u>hour</u>	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates * Pounds per
ST 100-20**	Tank 100-20	VOC	1.61
ST 160-1	Tank 160-1	VOC	280.3
ST 160-2	Tank 160-2	VOC	280.3
ST 160-3	Tank 160-3	VOC	280.3
ST 160-4	Tank 160-4	VOC	280.3
ST 160-5	Tank 160-5	VOC	280.3
ST 160-6	Tank 160-6	VOC	280.3
TRK-A1	Track A1 (14 Car Spots)	VOC (18.9 lb/hr/car spot)	264.6
TRK-A2	Track A2 (14 Car Spots)	VOC (18.9 lb/hr/car spot)	264.6
TRK-B1	Track B1 (14 Car Spots)	VOC (18.9 lb/hr/car spot)	264.6
TRK-B2	Track B2 (14 Car Spots)	VOC (18.9 lb/hr/car spot)	264.6
TRK-B3	Track B3 (10 Car Spots)	VOC (18.9 lb/hr/car spot)	189.0
TRK-C1	Track C1 (8 Car Spots)	VOC (18.9 lb/hr/car spot)	151.2

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Emission Point No. (1) <u>hour</u>	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates * Pounds per
TRK-C2	Track C2 (8 Car Spots)	VOC (18.9 lb/hr/car spot)	151.2
TRK-D	Track D (9 Car Spots)	VOC (18.9 lb/hr/car spot)	170.4
TRK-E	Track E (9 Car Spots)	VOC (18.9 lb/hr/car spot)	170.4
TRK-F1	Track F1 (6 Car Spots)	VOC (18.9 lb/hr/car spot)	113.4
TRK-F2	Track F2 (6 Car Spots)	VOC (18.9 lb/hr/car spot)	113.4
TRK-F3	Track F3 (6 Car Spots)	VOC (18.9 lb/hr/car spot)	113.4
TRK-G1	Track G1 (10 Car Spots)	VOC (18.9 lb/hr/car spot)	189.0
TRK-G2	Track G2 (10 Car Spots)	VOC (18.9 lb/hr/car spot)	189.0
TRK-H1	Track H1 (5 Car Spots)	VOC (18.9 lb/hr/car spot max)	37.8 (4)
TRK-H2	Track H2 (5 Car Spots)	VOC (18.9 lb/hr/car spot max)	37.8 (4)
TRK-H3	Track H3 (5 Car Spots)	VOC (18.9 lb/hr/car spot max)	37.8 (4)

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AIR CONTAMINANTS DATA**

Emission Point No. (1) <u>hour</u>	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates * Pounds per
TRK-H4	Track H4 (5 Car Spots)	VOC (18.9 lb/hr/car spot max)	37.8 (4)

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Emission Point No. (1) <u>hour</u>	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates * Pounds per
LUB RACK	Lubrizol R-Rack (3 Truck Spots)	VOC (18.9 lb/hr/truck spot)	56.8
1ST 12s TR RACK	First 12s Truck Rack (12 Truck Spots)	VOC (18.9 lb/hr/truck spot)	227.2
2ND 12s TR RACK	Second 12s Truck Rack (12 Truck Spots)	VOC (18.9 lb/hr/truck spot)	227.2
1ST 80s TR RACK	First 80s Truck Rack (12 Truck Spots)	VOC (18.9 lb/hr/truck spot)	227.2
C-TR RACK	C-Truck Rack (4 Truck Spots)	VOC (18.9 lb/hr/truck spot)	75.6
F-TR RACK	F-Truck Rack (4 Truck Spots)	VOC (18.9 lb/hr/truck spot)	75.6
TR RACK G	Truck Rack G (12 Truck Spots)	VOC (18.9 lb/hr/truck spot)	227.2
TR RACK H	Truck Rack H (10 Truck Spots)	VOC (18.9 lb/hr/truck spot)	189.0
BGDK-1	Barge Dock No. 1	VOC	94.7
BGDK-2	Barge Dock No. 2	VOC	94.7
BGDK-3	Barge Dock No. 3	VOC	94.7
BGDK-4	Barge Dock No. 4	VOC	94.7

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AIR CONTAMINANTS DATA**

Emission Point No. (1) <u>hour</u>	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates *	
			Pounds	per
BGDK-5	Barge Dock No. 5	VOC	94.7	
BGDK-6	Barge Dock No. 6	VOC	94.7	
BGDK-7	Barge Dock No. 7	VOC	94.7	
BGDK-8	Barge Dock No. 8	VOC	94.7	
BGDK-9	Barge Dock No. 9	VOC	94.7	
BGDK-10	Barge Dock No. 10	VOC	94.7	
BGDK-BKR	Bunker Fuel Dock	VOC	94.7	
SHPDK-1	Ship Dock No. 1	VOC	113.6	
SHPDK-2	Ship Dock No. 2	VOC	113.6	
SHPDK-3	Ship Dock No. 3	VOC	113.6	
SHPDK-7	Ship Dock No. 7	VOC	113.6	
SHPDK-8	Ship Dock No. 8	VOC	113.6	
FL-12s	12s Truck and Railcar Flare	VOC	54.1	
		CO	29.7	
		NO _x	3.5	
		HCl/HBr	12.72	
FL-35-12	Tank 35-12 Dedicated Flare	Butene, 1-	4.71	

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AIR CONTAMINANTS DATA**

Emission Point No. (1)	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates *	
			Pounds	per hour

CO	1.22
NO _x	0.61

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AIR CONTAMINANTS DATA**

Emission Point No. (1) <u>hour</u>	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates *	
			Pounds	per
FL-105-1	Tank 105-1 Flare	VOC	100.0	
		CO	110.0	
		NO _x	12.8	
FL-105-2	Tank 105-2 Flare	VOC	100.0	
		CO	110.0	
		NO _x	12.8	
FL-105-3	Tank 105-3 Flare	VOC	100.0	
		CO	110.0	
		NO _x	12.8	
FL-SPR	Spheres Flare	VOC	200.0	
		CO	110.0	
		NO _x	12.8	
FL-50-2	Tank 50-2 Flare	VOC	32.0	
		CO	16.8	
		NO _x	1.96	
FL-80s	80s Truck and Railcar Flare	VOC	23.6	
		CO	13.0	
		NO _x	1.5	
		HCl/HBr	12.72	
FL-3	Marine Loading Flare No. 3	VOC	122.00	
		CO	63.7	
		NO _x	7.43	
		HCl	14.77	
		HBr	16.5	

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AIR CONTAMINANTS DATA**

Emission Point No. (1)	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates *	
			Pounds	per hour

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AIR CONTAMINANTS DATA**

Emission Point No. (1) <u>hour</u>	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates *	
			Pounds	per
FL-5A	Marine Loading Flare No. 5A	VOC	122.00	
		CO	63.7	
		NO _x	7.43	
		HCl	14.77	
		HBr	16.5	
FL-5B	Marine Loading Flare No. 5B	VOC	122.00	
		CO	63.7	
		NO _x	7.43	
		HCl	14.77	
		HBr	16.5	
FL-5C	Marine Loading Flare No. 5C	VOC	122.00	
		CO	63.7	
		NO _x	7.43	
		HCl	14.77	
		HBr	16.5	
FL-5D	Marine Loading Flare No. 5D	VOC	122.00	
		CO	63.7	
		NO _x	7.43	
		HCl	14.77	
		HBr	16.5	
FL-5E	Marine Loading Flare No. 5E	VOC	122.00	
		CO	63.7	
		NO _x	7.43	
		HCl	14.77	
		HBr	16.5	

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Emission Point No. (1) <u>hour</u>	Source Name (2)	Contaminant Name (3)	Short-Term Emission Rates *	
			Pounds	per
FL-5F	Marine Loading Flare No. 5F	VOC	122.00	
		CO	63.7	
		NO _x	7.43	
		HCl	14.77	
		HBr	16.5	
FL-5G	Marine Loading Flare No. 5G	VOC	122.00	
		CO	63.7	
		NO _x	7.43	
		HCl	14.77	
		HBr	16.5	
FUG	Fugitive Emissions (5)	VOC	5.59	

(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 30 Texas Administrative Code Section 101.1

NO_x - total oxides of nitrogen

CO - carbon monoxide

HCl - hydrochloric acid

HBr - hydrobromic acid

(4) The H1, H2, H3, and H4 Spots 1 to 3, (12 spots total) are limited to loading a maximum of two spots at any one time with same chemical at the maximum chemical loading rate stated in the permit attachments. The 12 spots are also restricted from loading chemicals with a short-term ESL < 2 µg/m³.

(5) Fugitive emissions are estimates only.

* Emission rates are based on continuous operation.

** All short-term tank emission rates are based on fixed-roof tanks except Tank Nos. 100-1 to 100-20 which are based on internal floating roof tanks storing methyl-tert-butyl ether.

Dated _____

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES
ANNUAL

Permit No. 1078

Attachment A.2

AIR CONTAMINANTS DATA

Emission Emission Rates * Point No. (1) <u>per Year</u>	Source Name (2)	Air Contaminant Name (3)	Annual
			Tons
1-1 through 160-6	Storage Tanks	VOC	201.4
TRK A through H and LUB RACK	Truck and Rail Loading All Spots (no controls)	VOC	5.3
BGDK-1 through 10 and BGDK-BKR SHPDK-1, 2, 3, 7, and 8	Barge and Ship Loading All Docks (no controls)	VOC	11.7

FL-12s, FL-50-2, FL-80s, FL-SPR, FL-105-1, 2, 3, and FL-35-12	Flares - Land Loading and Controlled Storage Tanks	VOC	6.59
		CO	7.92
		NO _x	1.04
		HCl	2.33†
		HBr	4.0†
FL-3, 5A through 5G	Flares - Marine Loading	VOC	20.9
		CO	57.3
		NO _x	7.2
		HCl	2.33†
		HBr	4.0†
FUG	Fugitives (5)	VOC	24.38

- (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 30 Texas Administrative Code Section 101.1
NO_x - total oxides of nitrogen
CO - carbon monoxide
HCl - hydrochloric acid
HBr - hydrobromic acid
- (4) The H1, H2, H3, and H4 Spots 1 to 3, (12 spots total) are limited to loading a maximum of two spots at any one time with same chemical at the maximum chemical loading rate stated in the permit attachments. The 12 spots are also restricted from loading chemicals with a short-term ESL < 2 µg/m³.
- (5) Fugitive emissions are estimates only.

* Emission rates are based on continuous operation.

** All short-term tank emission rates are based on fixed-roof tanks except Tank Nos. 100-1 to 100-20 which are based on internal floating roof tanks storing methyl-tert-butyl ether.

† Total facility HCl emissions shall not exceed 2.33 ton per year (tpy) and total facility HBr emissions shall not exceed 4.0 tpy.

Dated _____