

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 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. 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>	
			lb/hr	TPY

### Storage Tank Area

T-101	Tank	VOC	2.44	0.038
T-102	Tank	VOC	8.85	0.167
T-103	Tank	VOC	0.18	0.005
T-104	Tank	VOC	<0.01	<0.01
T-105	Tank	VOC	8.28	0.08
T-106	Tank	VOC	3.45	0.04
T-107	Tank	VOC	0.012	<0.01
T-108	Tank	VOC	4.07	0.06
T-109	Tank	VOC	0.01	<0.01
T-111	Tank	VOC	<0.01	0.013
T-112	Tank	VOC	0.01	0.04
T-113	Tank	VOC	3.50	0.06
T-114	Tank	VOC	2.20	0.05
T-115	Tank	VOC	0.02	0.10
T-116	Tank	VOC	0.05	0.144
T-201	Tank	VOC	1.67	0.04

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T-202	Tank	VOC	<0.01	<0.01
T-203	Tank	VOC	0.02	0.04
T-204	Tank	VOC	1.85	0.07

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY

**Storage Tank Area (continued)**

T-206	Tank	VOC	7.53	0.37
T-207	Tank	VOC	<0.01	<0.01
T-208	Tank	VOC	1.97	0.03
T-209	Tank	VOC	1.64	0.04
T-210	Tank	VOC	<0.01	<0.01
T-211	Tank	VOC	2.91	0.08
T-212	Tank	VOC	3.13	0.06
T-213	Tank	VOC	<0.01	0.01
T-215	Tank	VOC	13.53	0.24
T-216	Tank	VOC	0.01	0.05
T-217	Tank	VOC	0.05	0.11
T-218	Tank	VOC	0.021	<0.01
T-219	Tank	VOC	6.84	0.14
T-220	Tank	VOC	0.034	0.13

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T-221	Tank	VOC	0.04	0.12
T-222	Tank	VOC	0.140	0.60
T-301	Tank	VOC	<0.01	<0.01
T-302	Tank	VOC	0.21	<0.01
T-303	Tank	VOC	0.21	<0.01
T-304	Tank	VOC	0.08	0.112
T-305	Tank	VOC	0.05	0.12

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY

**Storage Tank Area (continued)**

T-306	Tank	VOC	2.56	0.09
T-401	Tank	VOC	0.02	<0.01
T-402	Tank	VOC	<0.01	<0.01
T-403	Tank	VOC	<0.01	<0.01
T-404	Tank	VOC	0.79	0.04
T-405	Tank	VOC	0.30	0.02
T-406	Tank	VOC	1.94	0.05
T-407	Tank	VOC	3.81	0.12
T-408	Tank	VOC	1.84	0.16
T-409	Tank	VOC	<0.01	<0.01
T-410	Tank	VOC	1.15	0.04

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T-411	Tank	VOC	<0.01	<0.01
T-412	Tank	VOC	13.95	0.11
T-413	Tank	VOC	3.90	0.04
T-414	Tank	VOC	<0.01	<0.01
T-415	Tank	VOC	<0.01	<0.01
T-416	Tank	VOC	0.15	<0.01
T-417	Tank	VOC	3.91	0.04
T-418	Tank	VOC	0.09	<0.01
T-419	Tank	VOC	<0.01	<0.01

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY

**Storage Tank Area (continued)**

T-420	Tank	VOC	<0.01	<0.01
T-501	Tank	VOC	3.90	0.08
T-502	Tank	VOC	8.20	0.21
T-503	Tank	VOC	<0.01	<0.01
T-504	Tank	VOC	8.42	0.12
T-505	Tank	VOC	4.65	0.06
T-506	Tank	VOC	<0.01	<0.01
T-507	Tank	VOC	3.75	0.04

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T-508	Tank	VOC	2.77	0.05
T-509	Tank	VOC	8.45	0.31
T-510	Tank	VOC	3.94	0.15
T-511	Tank	VOC	4.00	0.06
T-512	Tank	VOC	3.20	0.09
T-513	Tank	VOC	3.71	0.08
T-514	Tank	VOC	3.91	0.15
T-515	Tank	VOC	3.68	0.06
T-516	Tank	VOC	3.81	0.04
T-517	Tank	VOC	3.93	0.09
T-518	Tank	VOC	3.95	0.04
T-519	Tank	VOC	<0.01	<0.01

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY

**Storage Tank Area (continued)**

T-520	Tank	VOC	<0.01	<0.01
T-521	Tank	VOC	<0.01	<0.01
T-522	Tank	VOC	3.15	0.04
T-601	Tank	VOC	3.91	0.09
T-602	Tank	VOC	1.26	0.06

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T-603	Tank	VOC	6.31	0.17
T-604	Tank	VOC	3.16	0.18
T-605	Tank	VOC	3.85	0.06
T-606	Tank	VOC	3.78	0.05
T-607	Tank	VOC	0.02	<0.01
T-608	Tank	VOC	4.74	0.07
Z-703	Scrubber	HCl	<0.01	<0.01
		VOC	<0.01	<0.01
Z-709	Scrubber	VOC	0.17	0.02
Z-710	Scrubber	VOC	0.16	0.04
Z-711	Scrubber	H <sub>2</sub> S	<0.01	<0.01
		VOC	0.03	<0.01
STOR	Process Fugitives (4)	VOC	1.81	7.97
B-601V	Boiler (6) (37.5 MM BTU/hr)	CO	1.34	0.48
		NO <sub>x</sub>	5.84	2.10
		PM <sub>10</sub>	0.54	0.19
		SO <sub>2</sub>	6.87	2.47
		SO <sub>3</sub>	0.10	0.04
		VOC	0.10	0.04

## AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY

### Plant Utilities Area Burning No. 2 Fuel Oil

B-602V	Boiler (6) (37.5 MM BTU/hr)	CO	1.34	0.48
		NO <sub>x</sub>	5.84	2.10

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

PM <sub>10</sub>	0.54	0.19
SO <sub>2</sub>	6.87	2.47
SO <sub>3</sub>	0.10	0.04
VOC	0.10	0.04

## Burning Natural Gas

B-601V	Boiler (37.5 MM BTU/hr)	CO	1.23	5.37
		NO <sub>x</sub>	5.25	23.00
		PM <sub>10</sub>	0.17	0.79
		SO <sub>2</sub>	0.02	0.09
		VOC	0.10	0.44
B-602V	Boiler (37.5 MM BTU/hr)	CO	1.23	5.37
		NO <sub>x</sub>	5.25	23.00
		PM <sub>10</sub>	0.17	0.79
		SO <sub>2</sub>	0.02	0.09
		VOC	0.10	0.44
H-601V	Heater (11.0 MM BTU/hr)	CO	0.36	1.58
		NO <sub>x</sub>	1.54	6.75
		PM <sub>10</sub>	0.05	0.23
		SO <sub>2</sub>	0.01	0.03
		VOC	0.03	0.13
T-700	API Covered Separator	VOC	0.82	3.60
G-601	Standby Generator	CO	7.10	0.09
		NO <sub>x</sub>	11.70	0.15
		PM <sub>10</sub>	0.40	<0.01
		SO <sub>2</sub>	0.86	0.01
		VOC	1.20	0.02
FWP	Fire Water Pumps	CO	38.50	0.50
		NO <sub>x</sub>	63.40	0.83
		PM <sub>10</sub>	2.20	0.03
		SO <sub>2</sub>	4.60	0.06
		VOC	6.30	0.08

## AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY

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### Plant Utilities Area

#### Burning Natural Gas (continued)

T-349	Tank	VOC	0.02	<0.01
T-355	Tank	VOC	0.10	0.43
T-356	Tank	VOC	5.99	0.06
T-549	Tank	VOC	4.97	0.10
V-605	Tank	VOC	<0.01	<0.01
T-701	Tank	VOC	0.97	0.03
UTIL-FUG	Process Fugitives (4)	VOC	0.13	0.57

### Plant 3 - Intermediates Chemical Processing

DP-3	Drum Loading	VOC	0.60	2.20
T-350	Tank	VOC	<0.01	<0.01
TP-804	Truck Loading	VOC	1.68	0.95
V-311	Tank	VOC	2.49	0.02
V-312	Tank	CH <sub>2</sub> O	<0.01	<0.01
V-301V	Emergency Vent	VOC	EMERGENCY USE ONLY	
PL3	Process Fugitives (4)	VOC	0.70	3.00
HW-300	Hot Well 300 (7)	VOC	5.34	5.12



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### AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
Plant 2 - Amine Condensation Polymerization Area				
DP1, DP2	Drum Loading	VOC	1.21	2.20
HW-200	Hot Well 200 (5)	VOC	26.50	1.38
		HCl	0.03	<0.01
HW-201	Hot Well 201 (5)	VOC	2.71	7.89
T-253	Tank	VOC	0.08	<0.01
T-254	Tank	VOC	0.01	0.05
T-255	Tank	VOC	2.20	0.01
T-256	Tank	VOC	<0.01	<0.01
T-260	Tank	VOC	<0.01	<0.01
T-261	Tank	VOC	1.22	0.03
TP-816	Tank Truck Loading	Solvent 14	1.68	1.79
V-023	Reactor Vent	VOC	0.01	<0.01
V-024	Tank	VOC	0.88	<0.01
V-025	Tank	VOC	0.88	<0.01
V-206V	Process/Emergency Vent	VOC	<0.01	<0.01
Z-104	Caustic Scrubber	H <sub>2</sub> S	<0.01	<0.01
		VOC	0.21	0.21

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Z-705	Tank T-250 Scrubber	VOC	<0.01	<0.01
Z-707	V-022 Scrubber	NH <sub>3</sub>	0.12	<0.01
Z-708	Scrubber	NH <sub>3</sub>	0.05	<0.01
		VOC	<0.01	<0.01
Z-712	Tank T-252 Scrubber	VOC	<0.01	<0.01
		HCl	<0.01	<0.01

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY

**Plant 2 - Amine Condensation Polymerization Area (continued)**

Z-713	Methyl Chloride Scrubber	CH <sub>3</sub> Cl	2.65	0.14
Z-714	Flare	CO	1.11	4.00
		NO <sub>x</sub>	0.21	0.75
		VOC	0.96	0.29
PL2	Process Fugitives (4)	H <sub>2</sub> S	0.03	0.13
		VOC	1.81	7.93
CS2-FUG	CS2 Drum Fugitives	CS <sub>2</sub>	0.01	<0.001

**Plant 5 - Blending and Drumming**

F-501	Filter Press	VOC	0.53	0.32
F-502	Filter Press	VOC	0.53	0.32
F-503	Sparkler Filter	VOC	<0.01	<0.01
PT-1	Portable Tank Filling	VOC	1.61	2.93
V-50	Tank	VOC	3.28	0.45

V-51	Tank	VOC	4.84	0.300
V-52	Tank	VOC	0.93	0.23
V-53	Tank	VOC	0.34	0.10
V-54	Tank	VOC	0.50	0.06
Z-501/502	Drum Loading	VOC	4.82	5.13
Z-701V	Vacuum Vent Scrubber	VOC	12.54	3.14
		HCl	<0.01	<0.01
PL5-FUG	Fugitives (4)	VOC	0.28	1.24

- (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)
  - NH<sub>3</sub> - ammonia
  - CO - carbon monoxide
  - HCl - hydrogen chloride
  - H<sub>2</sub>S - hydrogen sulfide
  - CH<sub>2</sub>O - formaldehyde
  - CH<sub>3</sub>Cl - methyl chloride
  - NO<sub>x</sub> - total oxides of nitrogen
  - PM<sub>10</sub> - particulate matter less than 10 microns
  - SO<sub>2</sub> - sulfur dioxide
  - SO<sub>3</sub> - sulfur trioxide
  - VOC - volatile organic compounds as defined in General Rule 101.1
  - CS<sub>2</sub> - carbon disulfide
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) Each hot well will be removed from service as a final control device pursuant to Special Condition No. 49 and comply with Special Conditions No. 50 and 51.
- (6) Fuel oil at 0.18 weight percent sulfur for 30 days of firing.
- (7) This source will be sent to Flare, EPN Z-714, pursuant to Special Condition No. 35.

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

Hrs/day\_\_\_\_Days/week\_\_\_\_Weeks/year\_\_\_\_or Hrs/year 8,760

Dated\_\_\_\_\_

