

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 4005

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 **
S1 and 2	Plant 1 Scrubber System (Scrubber Nos. 1 and 2)	VOC	0.86	0.04
		Acetone	0.79	0.01
79S-2A, B, and C	Plant 2 Scrubber/CAS System (Scrubbers 79S-2A, B, and C)	VOC	0.18	0.01
S-7944	Scrubber S-7944	VOC	0.02	0.01
S-7951	Scrubber S-7951	VOC	0.05	0.01
S-7954	Scrubber S-7954	Monochloroacetic acid	0.01	0.01
F-1	Flare F-1	VOC	1.67	0.01
		NO <sub>x</sub>	0.42	0.26
		CO	0.79	2.12
		SO <sub>2</sub>	0.01	0.01
F-2	Flare F-2	VOC	6.92	0.74
		NO <sub>x</sub>	0.83	0.66
		CO	1.57	4.26
		SO <sub>2</sub>	0.02	0.11
TO-1	Thermal Oxidizer TO-1	VOC	0.39	0.15
		Acetone	0.04	0.01
		NO <sub>x</sub>	0.51	2.24
		CO	0.43	1.88
		SO <sub>2</sub>	0.06	0.27
		PM <sub>10</sub>	0.04	0.17
B-1	Plant Boiler	VOC	0.06	0.02
		NO <sub>x</sub>	0.59	1.75

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY **
		CO	0.99	0.63
		SO <sub>2</sub>	0.24	0.98
		PM <sub>10</sub>	0.10	0.41
CWT	3 Cooling Towers	VOC	0.34	1.47
		PM/PM <sub>10</sub>	0.01	0.06
LOAD	Truck Loading Losses	VOC	8.95	0.65
FUG	Plant Fugitives (4)	VOC	1.81	7.92
FWP	2 Fire Water Pumps (20 hours per year on each pump)	VOC	1.33	0.01
		NO <sub>x</sub>	16.43	0.16
		CO	3.54	0.04
		SO <sub>2</sub>	1.09	0.01
		PM <sub>10</sub>	1.17	0.01
HOH	4 Hot Oil Heaters	VOC	0.06	0.28
		NO <sub>x</sub>	0.99	4.34
		CO	0.99	4.33
		SO <sub>2</sub>	0.01	0.03
		PM <sub>10</sub>	0.09	0.39
T-4101	Tank 4101	VOC	1.24	0.24
T-4106	Tank 4106	VOC	0.34	0.06
T-4107	Tank 4107	VOC	2.00	0.01
T-4119	Tank 4119	VOC	0.56	0.07
T-4125	Tank 4125	Spent Carbon	1.32	0.01
T-4128	Tank 4128	VOC	0.17	0.14
T-4129	Tank 4129	Phosphorous acid	0.01	0.01

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			lb/hr	TPY **
T-4130	Tank 4130	Phosphorous acid	0.01	0.01
T-4131	Tank 4131	Phosphorous acid	0.01	0.01
T-4133	Tank 4133	Polyphosphorous acid	0.05	0.01
T-4134	Tank 4134	VOC	0.17	0.13
T-4135	Tank 4135	VOC	0.17	0.09
T-4137	Tank 4137	VOC	2.00	0.02
T-4140	Tank 4140	HCl	0.10	0.01
T-4141	Tank 4141	Phosphorous acid	0.01	0.01
T-4144	Tank 4144	VOC	0.86	0.11
T-4145	Tank 4145	VOC	0.17	0.09
T-7903	Tank 7903	VOC	0.17	0.06
T-7904	Tank 7904	VOC	3.03	0.11
T-7905	Tank 7905	VOC	1.23	0.03
T-7906	Tank 7906	VOC	1.40	0.13
T-7907	Tank 7907	VOC	1.40	0.13
T-7908	Tank 7908	VOC	0.17	0.07
T-7909	Tank 7909	VOC	0.06	0.09
T-7910	Tank 7910	VOC	0.17	0.11
T-7911	Tank 7911	VOC	0.17	0.10

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY **
T-7912	Tank 7912	Distillate Fuel No. 2	0.05	0.01
T-7915	Tank 7915	Distillate Fuel No. 2	0.05	0.01
T-7920	Tank 7920	VOC	0.17	0.06
T-7925	Tank 7925	VOC	0.02	0.09
T-7929	Tank 7929	VOC	0.17	0.08
T-7930	Tank 7930	VOC	0.17	0.12
T-7934	Tank 7934	VOC	0.14	0.15
T-7935	Tank 7935	VOC	0.18	0.19
T-7936	Tank 7936	VOC	0.31	0.12
T-7938	Tank 7938	VOC	0.17	0.11
T-7939	Tank 7939	Distillate Fuel No. 2	0.05	0.01
T-7941	Tank 7941	VOC	0.31	0.01
T-7945	Tank 7945	KOH	0.01	0.01
T-7947	Tank 7947	VOC	0.01	0.04
T-7948	Tank 7948	VOC	0.17	0.15
T-7949	Tank 7949	VOC	0.17	0.10
T-7950	Tank 7950	VOC	0.17	0.16
T-7953	Tank 7953	VOC	1.23	0.03
T-7955	Tank 7955	VOC	0.17	0.18

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY **
T-7956	Tank 7956	VOC	0.17	0.14
T-7957	Tank 7957	VOC	0.17	0.15
T-7958	Tank 7958	VOC	0.17	0.15
T-7959	Tank 7959	VOC	0.17	0.15
T-7960	Tank 7960	VOC	0.19	0.30
T-7961	Tank 7961	Methanol	16.40	0.74
T-7962	Tank 7962	Isopropanol	12.89	0.22
T-7963	Tank 7963	VOC	0.17	0.03
T-7964	Tank 7964	VOC	0.17	0.25
T-7965	Tank 7965	VOC	0.17	0.09
T-7967	Tank 7967	VOC	0.17	0.13
T-7968	Tank 7968	VOC	0.84	0.12
T-7971	Tank 7971	Potassium Borate	0.05	0.01
T-7972	Tank 7972	VOC	0.17	0.17
T-7975	Tank 7975	VOC	1.93	0.02
T-7976	Tank 7976	VOC	0.17	0.28
T-7977	Tank 7977	VOC	0.17	0.21
T-7978	Tank 7978	VOC	0.13	0.38
T-7981	Tank 7981	Toluene	0.03	0.14

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY **
T-7982	Tank 7982	VOC	0.17	0.37
T-7983	Tank 7983	VOC	0.17	0.13
T-7984	Tank 7984	VOC	0.17	0.28
T-7985	Tank 7985	VOC	0.17	0.35
T-7987	Tank 7987	Caustic Soda	0.01	0.01
ACCUTANK	Accumulator Tank	VOC	0.25	0.01
SITE	MSS Emission Cap (6)	VOC	29.09	1.44

- (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  
 NO<sub>x</sub> - total oxides of nitrogen  
 CO - carbon monoxide  
 SO<sub>2</sub> - sulfur dioxide  
 PM - particulate matter  
 PM<sub>10</sub> - particulate matter equal to or less than 10 microns in diameter  
 HCl - hydrogen chloride  
 KOH - potassium hydroxide
- (4) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable special conditions and permit application representations.

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- (5) Fuel gas for the combustion devices and assist/pilot gas for the flares authorized by this permit includes landfill gas as represented in the permit amendment application. Pipeline quality, sweet natural gas is also authorized.
- (6) Emission rate includes controlled and uncontrolled emissions associated with planned MSS activities.

\* 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

\*\* Compliance with the annual emission rates is based on a rolling 12-month period.

Dated December 28, 2010