

# EMISSION SOURCES - EMISSION CAPS AND INDIVIDUAL EMISSION LIMITATIONS (Initial CAP)

Flexible Permit Numbers 1176 and PSD-TX-782

This table lists the maximum allowable emission caps or rates and all sources of air contaminants 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**

### CO Sources

#### Combustion Sources:

HF-201	PX-1 ISOM Heater H-101	CO
HF-203	PX-1 Reboilers H-103/104	CO
F-204	PX-1 LAF/TDP Furnace H-501	CO
HF-451	PX-2 ISOM Heater H-1101	CO
HF-453	PX-2 H-Reboilers 1103/1104	CO
HF-601	MX-2 Heater H-102	CO
HF-602	MX-2 Heater H-201	CO

#### Flare Systems:

FL-201	PX-1 Flare	CO
FL-401	PX-2 Flare	CO
FL-351	POLYB Flare	CO

	<b>Emission Cap</b>	<b>CO</b>		<b>47.91</b>	<b>221.67</b>
--	---------------------	-----------	--	--------------	---------------

### NO<sub>x</sub> Sources

#### Combustion Sources:

HF-201	PX-1 ISOM Heater H-101	NO <sub>x</sub>
HF-203	PX-1 Reboilers H-103/104	NO <sub>x</sub>
F-204	PX-1 LAF/TDP Furnace H-501	NO <sub>x</sub>
HF-451	PX-2 ISOM Heater H-1101	NO <sub>x</sub>
HF-453	PX-2 H-Reboilers 1103/1104	NO <sub>x</sub>

EMISSION SOURCES - EMISSION CAPS AND INDIVIDUAL EMISSION LIMITATIONS  
(Initial CAP)

AIR CONTAMINANTS DATA

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

Combustion Sources (continued):

HF-601	MX-2 Heater H-102	NO <sub>x</sub>		
--------	-------------------	-----------------	--	--

HF-602	MX-2 Heater H-201	NO <sub>x</sub>		
--------	-------------------	-----------------	--	--

Flare Systems:

FL-201	PX-1 Flare	NO <sub>x</sub>		
--------	------------	-----------------	--	--

FL-401	PX-2 Flare	NO <sub>x</sub>		
--------	------------	-----------------	--	--

FL-351	POLYB Flare	NO <sub>x</sub>		
--------	-------------	-----------------	--	--

<b>Emission Cap</b>	<b>NO<sub>x</sub></b>	<b>64.77</b>	<b>262.11</b>
---------------------	-----------------------	--------------	---------------

PM<sub>10</sub> Sources

Combustion Sources:

HF-201	PX-1 ISOM Heater H-101	PM <sub>10</sub>		
--------	------------------------	------------------	--	--

HF-203	PX-1 Reboilers H-103/104	PM <sub>10</sub>		
--------	--------------------------	------------------	--	--

FB204	PX-1 LAF/TDP Furnace H-501	PM <sub>10</sub>		
-------	----------------------------	------------------	--	--

HF-451	PX-2 ISOM Heater H-1101	PM <sub>10</sub>		
--------	-------------------------	------------------	--	--

HF-453	PX-2 H-Reboilers 1103/1104	PM <sub>10</sub>		
--------	----------------------------	------------------	--	--

HF-601	MX-2 Heater H-102	PM <sub>10</sub>		
--------	-------------------	------------------	--	--

HF-602	MX-2 Heater H-201	PM <sub>10</sub>		
--------	-------------------	------------------	--	--

Cooling Towers:

CT-451	PX-2, MX-2 Cooling Tower	PM <sub>10</sub>		
--------	--------------------------	------------------	--	--

CT-351	PX-3, POLYB Cooling Tower	PM <sub>10</sub>		
--------	---------------------------	------------------	--	--

<b>Emission Cap</b>	<b>PM<sub>10</sub></b>	<b>8.02</b>	<b>35.15</b>
---------------------	------------------------	-------------	--------------

SO<sub>2</sub> Sources

EMISSION SOURCES - EMISSION CAPS AND INDIVIDUAL EMISSION LIMITATIONS  
(Initial CAP)

AIR CONTAMINANTS DATA

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

Combustion Sources:

HF-201	PX-1 ISOM Heater H-101	SO <sub>2</sub>
HF-203	PX-1 Reboilers H-103/104	SO <sub>2</sub>
F-204	PX-1 LAF/TDP Furnace H-501	SO <sub>2</sub>
HF-451	PX-2 ISOM Heater H-1101	SO <sub>2</sub>
HF-453	PX-2 H-Reboilers 1103/1104	SO <sub>2</sub>
HF-601	MX-2 Heater H-102	SO <sub>2</sub>
HF-602	MX-2 Heater H-201	SO <sub>2</sub>

Flare Systems:

FL-201	PX-1 Flare	SO <sub>2</sub>
FL-401	PX-2 Flare	SO <sub>2</sub>
FL-351	POLYB Flare	SO <sub>2</sub>

**Emission Cap**

**SO<sub>2</sub>**

**0.42**

**1.82**

**VOC Sources**

Combustion Sources:

HF-201	PX-1 ISOM Heater H-101	VOC
HF-203	PX-1 Reboilers H-103/104	VOC
F-204	PX-1 LAF/TDP Furnace H-501	VOC
HF-451	PX-2 ISOM Heater H-1101	VOC
HF-453	PX-2 H-Reboilers 1103/1104	VOC
HF-601	MX-2 Heater H-102	VOC
HF-602	MX-2 Heater H-201	VOC

Separators:

FS-201	PX-1 Separator	VOC
S-451	PX-2 Separator	VOC

Regenerator Vent:

EMISSION SOURCES - EMISSION CAPS AND INDIVIDUAL EMISSION LIMITATIONS  
(Initial CAP)

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			lb/hr	TPY**
LPV-452	PX-2 Regeneration Vent	VOC		
Flare Systems:				
FL-201	PX-1 Flare	VOC		
FL-401	PX-2 Flare	VOC		
FL-351	POLYB Flare	VOC		
Loading:				
SP-50	Recovery Dock 50	VOC		
SP-51	Recovery Dock 51	VOC		
SP-52	Recovery Dock 52	VOC		
SP-54	HAB Truck Loading 54	VOC		
SP-201	PX-1 Truck Loading	VOC		
Fugitives:				
FU-201	PX-1 Fugitives	VOC		
FU-451	PX-2 Fugitives	VOC		
FU-551	PX-3 Fugitives	VOC		
FU-152	Dock Fugitives	VOC		
FU-210	PX-1 LAF Fugitives	VOC		
Cooling Towers:				
CT-451	PX-2, MX-2 Cooling Tower	VOC		
CT-351	PX-3, POLYB Cooling Tower	VOC		
Tanks:				
F-411	Utilities	VOC		
ST-201	PX-1 Tank TF-111	VOC		
ST-202	PX-1 Tank TF-112	VOC		
ST-203	PX-1 Tank TF-113	VOC		
ST-204	PX-1 Tank TF-114	VOC		
ST-205	PX-1 Tank TF-115	VOC		

EMISSION SOURCES - EMISSION CAPS AND INDIVIDUAL EMISSION LIMITATIONS  
(Initial CAP)

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			lb/hr	TPY**
ST-206	PX-1 Tank TF-117	VOC		
ST-207	PX-1 Tank TF-118	VOC		
ST-208	PX-1 Tank TF-120	VOC		
ST-209	PX-1 Tank TF-121	VOC		
ST-210	PX-1 Tank TF-116	VOC		
ST-451	PX-2 Tank F-1117	VOC		
ST-452	PX-2 Tank F-1111	VOC		
ST-453	PX-2 Tank F-1112	VOC		
ST-454	PX-2 Tank F-1113	VOC		
ST-455	PX-2 Tank F-1114	VOC		
ST-457	PX-2 Tank F-1118	VOC		
ST-2113	PX-3 Tank TF-2113	VOC		
ST-2114	PX-3 Tank TF-2114	VOC		
ST-2118	PX-3 Tank TF-2118	VOC		
ST-151	Dock Tank TK-201	VOC		
ST-152	Dock Tank TK-202	VOC		
ST-153	Dock Tank TK-203	VOC		
ST-154	Dock Tank TK-204	VOC		
ST-155	Dock Tank TK-205	VOC		
ST-156	Dock Tank TK-206	VOC		
ST-157	Dock Tank TK-207	VOC		
ST-159	Dock Tank TK-208	VOC		
ST-161	Dock Tank TK-401	VOC		
ST-162	Dock Tank TK-402	VOC		
<b>Emission Cap</b>		<b>VOC</b>	<b>283.37</b>	<b>388.10</b>
		<b>Benzene</b>	<b>6.80</b>	<b>29.75</b>
		<b>Styrene</b>	<b>18.98</b>	<b>26.12</b>

**H<sub>2</sub>SO<sub>4</sub> Source**

Loading Operation:

EMISSION SOURCES - EMISSION CAPS AND INDIVIDUAL EMISSION LIMITATIONS  
(Initial CAP)

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			lb/hr	TPY**
SP-54A	Dock 54A	H <sub>2</sub> SO <sub>4</sub>		
	<b>Emission Cap</b>	<b>H<sub>2</sub>SO<sub>4</sub></b>	<b>0.001</b>	<b>0.001</b>
<b>HCl Source</b>				
Combustion Source:				
FL-201	PX-1 Flare (4)	HCl		
	<b>Emission Cap</b>	<b>HCl</b>	<b>0.5</b>	<b>2.1</b>

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point 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  
 SO<sub>2</sub> - sulfur dioxide  
 PM<sub>10</sub> - particulate matter (PM) equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted.  
 CO - carbon monoxide  
 H<sub>2</sub>SO<sub>4</sub> - sulfuric acid  
 HCL - hydrogen chloride
- (4) Emissions of HCL from EPN FL-201 are combustion emissions associated with pressure relief emissions of ethyl chloride from single pressurized Storage Tank identified as MS-101 associated with Permit Numbers 8978 and PSD-TX-459M3.

\* These initial cap emission rates are based on and the facilities are limited by the following maximum operating schedule:

24 Hrs/day 7 Days/week 52 Weeks/year or 8,760 Hrs/year

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

Dated July 29, 2007

EMISSION SOURCES - EMISSION CAPS AND INDIVIDUAL EMISSION LIMITATIONS  
(FINAL CAP, effective December 31, 2007)

Flexible Permit Numbers 1176 and PSD-TX-782

This table lists the maximum allowable emission caps or rates and all sources of air contaminants 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**

**CO Sources**

Combustion Sources:

HF-201	PX-1 ISOM Heater H-101	CO
HF-203	PX-1 Reboilers H-103/104	CO
F-204	PX-1 LAF/TDP Furnace H-501	CO
HF-451	PX-2 ISOM Heater H-1101	CO
HF-453	PX-2 H-Reboilers 1103/1104	CO
HF-601	MX-2 Heater H-102	CO
HF-602	MX-2 Heater H-201	CO

Flare Systems:

FL-201	PX-1 Flare	CO
FL-401	PX-2 Flare	CO
FL-351	POLYB Flare	CO

	Emission Cap	CO	<b>86.01</b>	<b>388.54</b>
--	--------------	----	--------------	---------------

**NO<sub>x</sub> Sources**

Combustion Sources:

HF-201	PX-1 ISOM Heater H-101	NO <sub>x</sub>
HF-203	PX-1 Reboilers H-103/104	NO <sub>x</sub>
F-204	PX-1 LAF/TDP Furnace H-501	NO <sub>x</sub>
HF-451	PX-2 ISOM Heater H-1101	NO <sub>x</sub>

HF-453	PX-2 H-Reboilers 1103/1104	NO <sub>x</sub>
HF-601	MX-2 Heater H-102	NO <sub>x</sub>
HF-602	MX-2 Heater H-201	NO <sub>x</sub>

Flare Systems:

FL-201	PX-1 Flare	NO <sub>x</sub>
FL-401	PX-2 Flare	NO <sub>x</sub>
FL-351	POLYB Flare	NO <sub>x</sub>

<b>NO<sub>x</sub></b>	<b>39.00</b>	<b>158.54</b>
-----------------------	--------------	---------------

### PM<sub>10</sub> Sources

Combustion Sources:

HF-201	PX-1 ISOM Heater H-101	PM <sub>10</sub>
HF-203	PX-1 Reboilers H-103/104	PM <sub>10</sub>
F-204	PX-1 LAF/TDP Furnace H-501	PM <sub>10</sub>
HF-451	PX-2 ISOM Heater H-1101	PM <sub>10</sub>
HF-453	PX-2 H-Reboilers 1103/1104	PM <sub>10</sub>
HF-601	MX-2 Heater H-102	PM <sub>10</sub>
HF-602	MX-2 Heater H-201	PM <sub>10</sub>

Cooling Towers:

CT-451	PX-2, MX-2 Cooling Tower	PM <sub>10</sub>
CT-351	PX-3, POLYB Cooling Tower	PM <sub>10</sub>

<b>PM<sub>10</sub></b>	<b>9.06</b>	<b>39.68</b>
<b>SO<sub>2</sub> Sources</b>		

Combustion Sources:

HF-201	PX-1 ISOM Heater H-101	SO <sub>2</sub>
HF-203	PX-1 Reboilers H-103/104	SO <sub>2</sub>
F-204	PX-1 LAF/TDP Furnace H-501	SO <sub>2</sub>
HF-451	PX-2 ISOM Heater H-1101	SO <sub>2</sub>
HF-453	PX-2 H-Reboilers 1103/1104	SO <sub>2</sub>
HF-601	MX-2 Heater H-102	SO <sub>2</sub>



HF-602	MX-2 Heater H-201	SO <sub>2</sub>		
Flare Systems:				
FL-401	PX-1 Flare	SO <sub>2</sub>		
	PX-2 Flare	SO <sub>2</sub>		
	POLYB Flare	SO <sub>2</sub>		
	<b>Emission Cap</b>	<b>SO<sub>2</sub></b>	<b>0.51</b>	<b>2.23</b>

## VOC Sources

### Combustion Sources:

HF-201	PX-1 ISOM Heater H-101	VOC
HF-203	PX-1 Reboilers H-103/104	VOC
F-204	PX-1 LAF/TDP Furnace H-501	VOC
HF-451	PX-2 ISOM Heater H-1101	VOC
HF-453	PX-2 H-Reboilers 1103/1104	VOC
HF-601	MX-2 Heater H-102	VOC
	MX-2 Heater H-201	VOC

### Separators:

FS-201	PX-1 Separator	VOC
S-451	PX-2 Separator	VOC

### Regenerator Vent:

LPV-452	PX-2 Regeneration Vent	VOC
---------	------------------------	-----

### Flare Systems:

FL-201	PX-1 Flare	VOC
FL-401	PX-2 Flare	VOC
FL-351	POLYB Flare	VOC

### Loading:

SP-50	Recovery Dock 50	VOC
SP-51	Recovery Dock 51	VOC
SP-52	Recovery Dock 52	VOC
SP-54	HAB Truck Loading 54	VOC
SP-201	PX-1 Truck Loading	VOC

### Fugitives:

EMISSION SOURCES - EMISSION CAPS AND INDIVIDUAL EMISSION LIMITATIONS  
(FINAL CAP, Effective December 31, 2007)

FU-201	PX-1 Fugitives	VOC
FU-451	PX-2 Fugitives	VOC
FU-551	PX-3 Fugitives	VOC
FU-152	Dock Fugitives	VOC
FU-210	PX-1 LAF Fugitives	VOC

## Cooling Towers:

CT-451	PX-2, MX-2 Cooling Tower	VOC
CT-351	PX-3, POLYB Cooling Tower	VOC

## Tanks:

	Utilities	VOC
ST-201	PX-1 Tank TF-111	VOC
ST-202	PX-1 Tank TF-112	VOC
ST-203	PX-1 Tank TF-113	VOC
ST-204	PX-1 Tank TF-114	VOC
ST-205	PX-1 Tank TF-115	VOC
ST-206	PX-1 Tank TF-117	VOC
ST-207	PX-1 Tank TF-118	VOC
ST-208	PX-1 Tank TF-120	VOC
ST-209	PX-1 Tank TF-121	VOC
ST-210	PX-1 Tank TF-116	VOC
ST-451	PX-2 Tank F-1117	VOC
ST-452	PX-2 Tank F-1111	VOC
ST-453	PX-2 Tank F-1112	VOC
ST-454	PX-2 Tank F-1113	VOC
ST-455	PX-2 Tank F-1114	VOC
ST-457	PX-2 Tank F-1118	VOC
ST-2113	PX-3 Tank TF-2113	VOC
ST-2114	PX-3 Tank TF-2114	VOC
ST-2118	PX-3 Tank TF-2118	VOC
ST-151	Dock Tank TK-201	VOC
ST-152	Dock Tank TK-202	VOC
ST-153	Dock Tank TK-203	VOC
ST-154	Dock Tank TK-204	VOC

EMISSION SOURCES - EMISSION CAPS AND INDIVIDUAL EMISSION LIMITATIONS  
(FINAL CAP, Effective December 31, 2007)

ST-155	Dock Tank TK-205	VOC		
ST-156	Dock Tank TK-206	VOC		
ST-157	Dock Tank TK-207	VOC		
ST-159	Dock Tank TK-208	VOC		
ST-161	Dock Tank TK-401	VOC		
ST-162	Dock Tank TK-402	VOC		
	Utilities Tank 411	VOC		
<b>Emission Cap</b>		<b>VOC</b>	<b>261.30</b>	<b>322.01</b>
		<b>Benzene</b>	<b>6.79</b>	<b>29.71</b>
		<b>Styrene</b>	<b>19.85</b>	<b>31.56</b>

**H<sub>2</sub>SO<sub>4</sub> Source**

Loading Operation:

SP-54A	Dock 54A	H <sub>2</sub> SO <sub>4</sub>		
<b>Emission Cap</b>		<b>H<sub>2</sub>SO<sub>4</sub></b>	<b>0.001</b>	<b>0.001</b>

**HCl Source**

Combustion Source:

FL-201	PX-1 Flare (4)	HCl		
<b>Emission Cap</b>		<b>HCl</b>	<b>0.5</b>	<b>2.1</b>

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point 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
- SO<sub>2</sub> - sulfur dioxide
- PM<sub>10</sub> - particulate matter (PM) equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted.
- CO - carbon monoxide
- H<sub>2</sub>SO<sub>4</sub> - sulfuric acid
- HCl - hydrogen chloride

EMISSION SOURCES - EMISSION CAPS AND INDIVIDUAL EMISSION LIMITATIONS  
(FINAL CAP, Effective December 31, 2007)

- (4) Emissions of HCL from EPN FL-201 are combustion emissions associated with pressure relief emissions of ethyl chloride from single pressurized storage tank identified as MS-101 associated with Permit Numbers 8978 and PSD-TX-459M3.

These initial cap emission rates are based on and the facilities are limited by the following maximum operating schedule:

24 Hrs/day 7 Days/week 52 Weeks/year or 8,760 Hrs/year

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

Dated July 29, 2008