

EMISSION SOURCES -EMISSION CAPS AND RATES  
(INITIAL CAP)  
**06/06/02 DRAFT**

Permit No. 1176/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 Rates*	Source	Air Contaminant	<u>Emission</u>
Point No. (1)		Name (2)	Name (3)
	lb/hr	TPY**	

**CO Sources**

Combustion Sources:

HF-201	PX-1 ISOM HEATER H-101	CO
HF-203	PX-1 REBOILERS H-103/4	CO
F-204	PX-1 LAF/TDP FURNACE H-501	CO
F-251	STYRENE STEAM SUPER HEATER HF-201	CO
BF-151	UTILITIES BOILER B-501	CO
BF-152	UTILITIES BOILER B-601	CO
BF-155	UTILITIES GAS FIRED HEAT	
	RECOVERY STEAM GENERATOR/TURBINE	CO
LPV-152	630 HP DIESEL START-UP ENGINE	CO
HF-501	MX-1 HEATER H-3401	CO
HF-451	PX-2 ISOM HEATER H-1101	CO
HF-452	PX-2 REBOILER H-1102	CO
HF-453	PX-2 H-REBOILERS 1103/4	CO
HF-601	MX-2 HEATER H-101	CO
HF-602	MX-2 HEATER H-602	CO
HF-603	MX-2 HEATER H-603	CO
HF-604	MX-2 HEATER H-604	CO
H-1105	PRU HEATER H-1105	CO
H-1106	PRU HEATER H-1106	CO

Flare Systems:

FL-201	PX-1 FLARE	CO
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FL-401	PX-2 FLARE	CO	
FL-351	POLYB FLARE	CO	
	<b>Emission Cap</b>	<b>CO</b>	<b>75.56</b>
	<b>342.78</b>		

AIR CONTAMINANTS DATA

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

**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-103/4	NO <sub>x</sub>	
F-204	PX-1 LAF/TDP FURNACE H-501	NO <sub>x</sub>	
F-251	STYRENE STEAM SUPER HEATER HF-201	NO <sub>x</sub>	
BF-151	UTILITIES BOILER B-501	NO <sub>x</sub>	
BF-152	UTILITIES BOILER B-601	NO <sub>x</sub>	
BF-155	UTILITIES GAS FIRED HEAT		
	RECOVERY STEAM GENERATOR/TURBINE	NO <sub>x</sub>	
LPV-152	630 HP DIESEL START UP ENGINE		NO <sub>x</sub>
HF-501	MX-1 HEATER H-3401	NO <sub>x</sub>	
HF-451	PX-2 ISOM HEATER H-1101	NO <sub>x</sub>	
HF-452	PX-2 REBOILER H-1102	NO <sub>x</sub>	
HF-453	PX-2 H-REBOILERS 1103/4	NO <sub>x</sub>	
HF-601	MX-2 HEATER H-101	NO <sub>x</sub>	
HF-602	MX-2 HEATER H-602	NO <sub>x</sub>	
HF-603	MX-2 HEATER H-603	NO <sub>x</sub>	
HF-604	MX-2 HEATER H-604	NO <sub>x</sub>	
H-1105	PRU HEATER H-1105	NO <sub>x</sub>	
H-1106	PRU HEATER H-1106	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>

**Emission Cap NO<sub>x</sub> 424.28 1628.86**

### 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-103/4	PM <sub>10</sub>
F-204	PX-1 LAF/TDP FURNACE H-501	PM <sub>10</sub>
F-251	STYRENE STEAM SUPER HEATER HF-201	PM <sub>10</sub>
BF-151	UTILITIES BOILER B-501	PM <sub>10</sub>
BF-152	UTILITIES BOILER B-601	PM <sub>10</sub>
BF-155	UTILITIES GAS FIRED HEAT RECOVERY STEAM GENERATOR/TURBINE	PM <sub>10</sub>
LPV-152	630 HP DIESEL START UP ENGINE	PM <sub>10</sub>
HF-501	MX-1 HEATER H-3401	PM <sub>10</sub>
HF-451	PX-2 ISOM HEATER H-1101	PM <sub>10</sub>
HF-452	PX-2 REBOILER H-1102	PM <sub>10</sub>
HF-453	PX-2 H-REBOILERS 1103/4	PM <sub>10</sub>
HF-601	MX-2 HEATER H-101	PM <sub>10</sub>
HF-602	MX-2 HEATER H-602	PM <sub>10</sub>
HF-603	MX-2 HEATER H-603	PM <sub>10</sub>
HF-604	MX-2 HEATER H-604	PM <sub>10</sub>
H-1105	PRU HEATER H-1105	PM <sub>10</sub>
H-1106	PRU HEATER H-1106	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>

**Emission Cap**  
**131.16**

**PM<sub>10</sub> 29.93**

### SO<sub>2</sub> Sources

#### Combustion Sources:

HF-201	PX-1 ISOM HEATER H-101	SO <sub>2</sub>
HF-203	PX-1 REBOILERS H-103/4	SO <sub>2</sub>
F-204	PX-1 LAF/TDP FURNACE H-501	SO <sub>2</sub>
F-251	STYRENE STEAM SUPER HEATER HF-201	SO <sub>2</sub>
BF-151	UTILITIES BOILER B-501	SO <sub>2</sub>
BF-152	UTILITIES BOILER B-601	SO <sub>2</sub>
BF-155	UTILITIES GAS FIRED HEAT RECOVERY STEAM GENERATOR/TURBINE	SO <sub>2</sub>
LPV-152	630HP DIESEL START-UP ENGINE	SO <sub>2</sub>

HF-501	MX-1 HEATER H-3401	SO <sub>2</sub>
HF-451	PX-2 ISOM HEATER H-1101	SO <sub>2</sub>
HF-452	PX-2 REBOILER H-1102	SO <sub>2</sub>
HF-453	PX-2 H-REBOILERS 1103/4	SO <sub>2</sub>
HF-601	MX-2 HEATER H-101	SO <sub>2</sub>
HF-602	MX-2 HEATER H-602	SO <sub>2</sub>
HF-603	MX-2 HEATER H-603	SO <sub>2</sub>
HF-604	MX-2 HEATER H-604	SO <sub>2</sub>
H-1105	PRU HEATER H-1105	SO <sub>2</sub>
H-1106	PRU HEATER H-1106	SO <sub>2</sub>

**Emission Cap**

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

**17.18**

**29.41**

**VOC Sources**

Combustion Sources:

HF-201	PX-1 ISOM HEATER H-101	VOC
HF-203	PX-1 REBOILERS H-103/4	VOC
F-204	PX-1 LAF/TDP FURNACE H-501	VOC
F-251	STYRENE STEAM SUPER HEATER HF-201	VOC
BF-151	UTILITIES BOILER B-501	VOC
BF-152	UTILITIES BOILER B-601	VOC
BF-155	UTILITIES GAS FIRED HEAT RECOVERY STEAM GENERATOR/TURBINE	VOC
LPV-152	630HP DIESEL START-UP ENGINE	VOC
HF-501	MX-1 HEATER H-3401	VOC
HF-451	PX-2 ISOM HEATER H-1101	VOC
HF-452	PX-2 REBOILER H-1102	VOC
HF-453	PX-2 H-REBOILERS 1103/4	VOC
HF-601	MX-2 HEATER H-101	VOC
HF-602	MX-2 HEATER H-602	VOC
HF-603	MX-2 HEATER H-603	VOC
HF-604	MX-2 HEATER H-604	VOC
H-1105	PRU HEATER H-1105	VOC
H-1106	PRU HEATER H-1106	VOC

Separators:

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

Regenerator Vent:

LPV-452	PX-2 REGENERATION VENT	VOC
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Flare Systems:

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

Loading:

SP-50	MARINE LOADING DOCK 50	VOC
SP-51	MARINE LOADING DOCK 51	VOC
SP-52	MARINE LOADING 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
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

**Emission Cap  
394.16**

**VOC 284.76**

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

Loading Operation:

SP-54A DOCK 54A H<sub>2</sub>SO<sub>4</sub>

**Emission Cap**

**H<sub>2</sub>SO<sub>4</sub> 0.001 0.001**

- ) Emission point identification - either specific equipment designation or emission point number from plot plan.
- ) Specific point source name.
  - VOC - volatile organic compounds as defined in General Rule 101.1
  - NO<sub>x</sub> - total oxides of nitrogen
  - SO<sub>2</sub> - sulfur dioxide
  - PM - particulate matter
  - CO - carbon monoxide

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

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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.

# EMISSION SOURCES -EMISSION CAPS AND RATES (INTERIM CAP)

Permit No. 1176/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 Rates*	Source	Air Contaminant	<u>Emission</u>
Point No. (1)		Name (2)	Name (3)
	lb/HR	TPY**	

## CO Sources

### Combustion Sources:

HF-201	PX-1 ISOM HEATER H-101	CO
HF-203	PX-1 REBOILERS H-103/4	CO
F-204	PX-1 LAF/TDP FURNACE H-501	CO
F-251	STYRENE STEAM SUPER HEATER HF-201	CO
BF-151	UTILITIES BOILER B-501	CO
BF-152	UTILITIES BOILER B-601	CO
BF-155	UTILITIES GAS FIRED HEAT RECOVERY STEAM GENERATOR/TURBINE	CO
LPV-152	630 HP DIESEL START-UP ENGINE	CO
HF-501	MX-1 HEATER H-3401	CO
HF-451	PX-2 ISOM HEATER H-1101	CO
HF-452	PX-2 REBOILER H-1102	CO
HF-453	PX-2 H-REBOILERS 1103/4	CO
HF-601	MX-2 HEATER H-101	CO
HF-602	MX-2 HEATER H-602	CO
HF-603	MX-2 HEATER H-603	CO
HF-604	MX-2 HEATER H-604	CO
H-1105	PRU HEATER H-1105	CO
H-1106	PRU HEATER H-1106	CO

### Flare Systems:

FL-201	PX-1 FLARE	CO
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FL-401	PX-2 FLARE	CO		
FL-351	POLYB FLARE	CO		
<b>Emission Cap</b>		<b>CO</b>	<b>75.56</b>	<b>342.78</b>

AIR CONTAMINANTS DATA

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

**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-103/4	NO <sub>x</sub>	
F-204	PX-1 LAF/TDP FURNACE H-501	NO <sub>x</sub>	
F-251	STYRENE STEAM SUPER HEATER HF-201	NO <sub>x</sub>	
BF-151	UTILITIES BOILER B-501	NO <sub>x</sub>	
BF-152	UTILITIES BOILER B-601	NO <sub>x</sub>	
BF-155	UTILITIES GAS FIRED HEAT RECOVERY STEAM GENERATOR/TURBINE	NO <sub>x</sub>	
LPV-152	630 HP DIESEL START UP ENGINE		NO <sub>x</sub>
HF-501	MX-1 HEATER H-3401	NO <sub>x</sub>	
HF-451	PX-2 ISOM HEATER H-1101	NO <sub>x</sub>	
HF-452	PX-2 REBOILER H-1102	NO <sub>x</sub>	
HF-453	PX-2 H-REBOILERS 1103/4	NO <sub>x</sub>	
HF-601	MX-2 HEATER H-101	NO <sub>x</sub>	
HF-602	MX-2 HEATER H-602	NO <sub>x</sub>	
HF-603	MX-2 HEATER H-603	NO <sub>x</sub>	
HF-604	MX-2 HEATER H-604	NO <sub>x</sub>	
H-1105	PRU HEATER H-1105	NO <sub>x</sub>	
H-1106	PRU HEATER H-1106	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>405.18</b>	<b>1555.56</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-103/4	PM <sub>10</sub>
F-204	PX-1 LAF/TDP FURNACE H-501	PM <sub>10</sub>
F-251	STYRENE STEAM SUPER HEATER HF-201	PM <sub>10</sub>
BF-151	UTILITIES BOILER B-501	PM <sub>10</sub>
BF-152	UTILITIES BOILER B-601	PM <sub>10</sub>
BF-155	UTILITIES GAS FIRED HEAT RECOVERY STEAM GENERATOR/TURBINE	PM <sub>10</sub>
LPV-152	630 HP DIESEL START UP ENGINE	PM <sub>10</sub>
HF-501	MX-1 HEATER H-3401	PM <sub>10</sub>
HF-451	PX-2 ISOM HEATER H-1101	PM <sub>10</sub>
HF-452	PX-2 REBOILER H-1102	PM <sub>10</sub>
HF-453	PX-2 H-REBOILERS 1103/4	PM <sub>10</sub>
HF-601	MX-2 HEATER H-101	PM <sub>10</sub>
HF-602	MX-2 HEATER H-602	PM <sub>10</sub>
HF-603	MX-2 HEATER H-603	PM <sub>10</sub>
HF-604	MX-2 HEATER H-604	PM <sub>10</sub>
H-1105	PRU HEATER H-1105	PM <sub>10</sub>
H-1106	PRU HEATER H-1106	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>

**Emission Cap**

**PM<sub>10</sub> 29.93 131.16**

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

Combustion Sources:

HF-201	PX-1 ISOM HEATER H-101	SO <sub>2</sub>
HF-203	PX-1 REBOILERS H-103/4	SO <sub>2</sub>
F-204	PX-1 LAF/TDP FURNACE H-501	SO <sub>2</sub>
F-251	STYRENE STEAM SUPER HEATER HF-201	SO <sub>2</sub>
BF-151	UTILITIES BOILER B-501	SO <sub>2</sub>
BF-152	UTILITIES BOILER B-601	SO <sub>2</sub>
BF-155	UTILITIES GAS FIRED HEAT RECOVERY STEAM GENERATOR/TURBINE	SO <sub>2</sub>
LPV-152	630HP DIESEL START-UP ENGINE	SO <sub>2</sub>
HF-501	MX-1 HEATER H-3401	SO <sub>2</sub>

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HF-451	PX-2 ISOM HEATER H-1101	SO <sub>2</sub>
HF-452	PX-2 REBOILER H-1102	SO <sub>2</sub>
HF-453	PX-2 H-REBOILERS 1103/4	SO <sub>2</sub>
HF-601	MX-2 HEATER H-101	SO <sub>2</sub>
HF-602	MX-2 HEATER H-602	SO <sub>2</sub>
HF-603	MX-2 HEATER H-603	SO <sub>2</sub>
HF-604	MX-2 HEATER H-604	SO <sub>2</sub>
H-1105	PRU HEATER H-1105	SO <sub>2</sub>
H-1106	PRU HEATER H-1106	SO <sub>2</sub>

**Emission Cap**

SO<sub>2</sub>

17.18 29.41

**VOC Sources**

Combustion Sources:

HF-201	PX-1 ISOM HEATER H-101	VOC
HF-203	PX-1 REBOILERS H-103/4	VOC
F-204	PX-1 LAF/TDP FURNACE H-501	VOC
F-251	STYRENE STEAM SUPER HEATER HF-201	VOC
BF-151	UTILITIES BOILER B-501	VOC
BF-152	UTILITIES BOILER B-601	VOC
BF-155	UTILITIES GAS FIRED HEAT	
	RECOVERY STEAM GENERATOR/TURBINE	VOC
LPV-152	630HP DIESEL START-UP ENGINE	VOC
HF-501	MX-1 HEATER H-3401	VOC
HF-451	PX-2 ISOM HEATER H-1101	VOC
HF-452	PX-2 REBOILER H-1102	VOC
HF-453	PX-2 H-REBOILERS 1103/4	VOC
HF-601	MX-2 HEATER H-101	VOC
HF-602	MX-2 HEATER H-602	VOC
HF-603	MX-2 HEATER H-603	VOC
HF-604	MX-2 HEATER H-604	VOC
H-1105	PRU HEATER H-1105	VOC
H-1106	PRU HEATER H-1106	VOC

Separators:

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

Regenerator Vent:

LPV-452	PX-2 REGENERATION VENT	VOC
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Flare Systems:

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

Loading:

SP-50	MARINE LOADING DOCK 50	VOC
SP-51	MARINE LOADING DOCK 51	VOC
SP-52	MARINE LOADING 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
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

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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>280.53</b>	<b>402.77</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>

- (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 General Rule 101.1  
NO<sub>x</sub> - total oxides of nitrogen  
SO<sub>2</sub> - sulfur dioxide  
PM - particulate matter  
CO - carbon monoxide

\* 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.

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EMISSION SOURCES – EMISSION CAPS AND RATES  
(FINAL CAP)  
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Permit Nos. 1176/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 Rates	Source	Air Contaminant	<u>Emission</u>
Point No. (1)		Name (2)	Name (3)
	lb/hr	TPY	

**CO Sources**

Combustion Sources:

HF-201	PX-1 ISOM HEATER H-101	CO
HF-203	PX-1 REBOILERS H-103/4	CO
F-204	PX-1 LAF/TDP FURNACE H-501	CO
F-251	STYRENE STEAM SUPER HEATER HF-201	CO
BF-151	UTILITIES BOILER B-501	CO
BF-152	UTILITIES BOILER B-601	CO
BF-155	UTILITIES GAS FIRED HEAT RECOVERY STEAM GENERATOR/TURBINE	CO
LPV-152	630 HP DIESEL START-UP ENGINE	CO
HF-501	MX-1 HEATER H-3401	CO
HF-451	PX-2 ISOM HEATER H-1101	CO
HF-452	PX-2 REBOILER H-1102	CO
HF-453	PX-2 H-REBOILERS 1103/4	CO
HF-601	MX-2 HEATER H-101	CO
HF-602	MX-2 HEATER H-602	CO
HF-603	MX-2 HEATER H-603	CO
HF-604	MX-2 HEATER H-604	CO
H-1105	PRU HEATER H-1105	CO

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H-1106	PRU HEATER H-1106	CO
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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>55.60</b>
<b>255.34</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-103/4	NO <sub>x</sub>	
F-204	PX-1 LAF/TDP FURNACE H-501	NO <sub>x</sub>	
F-251	STYRENE STEAM SUPER HEATER HF-201	NO <sub>x</sub>	
BF-151	UTILITIES BOILER B-501	NO <sub>x</sub>	
BF-152	UTILITIES BOILER B-601	NO <sub>x</sub>	
BF-155	UTILITIES GAS FIRED HEAT		
	RECOVERY STEAM GENERATOR/TURBINE	NO <sub>x</sub>	
LPV-152	630HP DIESEL START-UP ENGINE		NO <sub>x</sub>
HF-501	MX-1 HEATER H-3401	NO <sub>x</sub>	
HF-451	PX-2 ISOM HEATER H-1101	NO <sub>x</sub>	
HF-452	PX-2 REBOILER H-1102	NO <sub>x</sub>	
HF-453	PX-2 H-REBOILERS 1103/4	NO <sub>x</sub>	
HF-601	MX-2 HEATER H-101	NO <sub>x</sub>	
HF-602	MX-2 HEATER H-602	NO <sub>x</sub>	
HF-603	MX-2 HEATER H-603	NO <sub>x</sub>	
HF-604	MX-2 HEATER H-604	NO <sub>x</sub>	
H-1105	PRU HEATER H-1105	NO <sub>x</sub>	
H-1106	PRU HEATER H-1106	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>

Emission Cap	NOx	142.17	512.42
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### **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-103/4	PM <sub>10</sub>
F-204	PX-1 LAF/TDP FURNACE H-501	PM <sub>10</sub>
F-251	STYRENE STEAM SUPER HEATER HF-201	PM <sub>10</sub>
BF-151	UTILITIES BOILER B-501	PM <sub>10</sub>
BF-152	UTILITIES BOILER B-601	PM <sub>10</sub>
BF-155	UTILITIES GAS FIRED HEAT RECOVERY STEAM GENERATOR/TURBINE	PM <sub>10</sub>
LPV-152	630 HP DIESEL START_UP ENGINE	PM <sub>10</sub>
HF-501	MX-1 HEATER H-3401	PM <sub>10</sub>
HF-451	PX-2 ISOM HEATER H-1101	PM <sub>10</sub>
HF-452	PX-2 REBOILER H-1102	PM <sub>10</sub>
HF-453	PX-2 H-REBOILERS 1103/4	PM <sub>10</sub>
HF-601	MX-2 HEATER H-101	PM <sub>10</sub>
HF-602	MX-2 HEATER H-602	PM <sub>10</sub>
HF-603	MX-2 HEATER H-603	PM <sub>10</sub>
HF-604	MX-2 HEATER H-604	PM <sub>10</sub>
H-1105	PRU HEATER H-1105	PM <sub>10</sub>
H-1106	PRU HEATER H-1106	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>27.40</b>
<b>120.03</b>		

### **SO<sub>2</sub> Sources**

#### Combustion Sources:

HF-201	PX-1 ISOM HEATER H-101	SO <sub>2</sub>
HF-203	PX-1 REBOILERS H-103/4	SO <sub>2</sub>
F-204	PX-1 LAF/TDP FURNACE H-501	SO <sub>2</sub>

Combustion Sources (continued):

F-251	STYRENE STEAM SUPER HEATER HF-201	SO <sub>2</sub>		
BF-151	UTILITIES BOILER B-501	SO <sub>2</sub>		
BF-152	UTILITIES BOILER B-601	SO <sub>2</sub>		
BF-155	UTILITIES GAS FIRED HEAT			
	RECOVERY STEAM GENERATOR/TURBINE	SO <sub>2</sub>		
LPV-152	630 HP DIESEL START_UP ENGINE	SO <sub>2</sub>		
HF-501	MX-1 HEATER H-3401	SO <sub>2</sub>		
HF-451	PX-2 ISOM HEATER H-1101	SO <sub>2</sub>		
HF-452	PX-2 REBOILER H-1102	SO <sub>2</sub>		
HF-453	PX-2 H-REBOILERS 1103/4	SO <sub>2</sub>		
HF-601	MX-2 HEATER H-101	SO <sub>2</sub>		
HF-602	MX-2 HEATER H-602	SO <sub>2</sub>		
HF-603	MX-2 HEATER H-603	SO <sub>2</sub>		
HF-604	MX-2 HEATER H-604	SO <sub>2</sub>		
H-1105	PRU HEATER H-1105	SO <sub>2</sub>		
H-1106	PRU HEATER H-1106	SO <sub>2</sub>		
<b>Emission Cap</b>		<b>SO<sub>2</sub></b>	<b>2.01</b>	<b>8.79</b>

**VOC Sources**

Combustion Sources:

HF-201	PX-1 ISOM HEATER H-101	VOC	
HF-203	PX-1 REBOILERS H-103/4	VOC	
F-204	PX-1 LAF/TDP FURNACE H-501	VOC	
F-251	STYRENE STEAM SUPER HEATER HF-201	VOC	
BF-151	UTILITIES BOILER B-501	VOC	
BF-152	UTILITIES BOILER B-601	VOC	
BF-155	UTILITIES GAS FIRED HEAT		
	RECOVERY STEAM GENERATOR/TURBINE	VOC	
LPV-152	630 HP DIESEL START_UP ENGINE	VOC	
HF-501	MX-1 HEATER H-3401	VOC	
HF-451	PX-2 ISOM HEATER H-1101	VOC	
HF-452	PX-2 REBOILER H-1102	VOC	
HF-453	PX-2 H-REBOILERS 1103/4	VOC	
HF-601	MX-2 HEATER H-101	VOC	
HF-602	MX-2 HEATER H-602	VOC	
HF-603	MX-2 HEATER H-603	VOC	
HF-604	MX-2 HEATER H-604	VOC	
H-1105	PRU HEATER H-1105	VOC	

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H-1106	PRU HEATER H-1106	VOC
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Separators:

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

Regenerator Vent:

LPV-452	PX-2 REGENERATION VENT	VOC
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Flare Systems:

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

Loading:

SP-50	MARINE LOADING DOCK 50	VOC
SP-51	MARINE LOADING DOCK 51	VOC
SP-52	MARINE LOADING 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

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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	
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	
F-411	UTILITIES TANK 411	VOC	
<b>Emission Cap</b>		<b>VOC</b>	<b>280.28</b>
404.28			

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

Loading Operation:

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

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name.
  - VOC - volatile organic compounds as defined in General Rule 101.1
  - NO<sub>x</sub> - total oxides of nitrogen
  - SO<sub>2</sub> - sulfur dioxide
  - PM - particulate matter
  - CO - carbon monoxide

\*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.