

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 18836

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 *	Source	Air Contaminant	<u>Emission Rates</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
<b><u>Interim limits</u></b> - The following emission rates are effective until start-up of Train 4:				
CB-1	Compounding Building 1	VOC	6.20	27.20
		PM <sub>10</sub>	0.09	0.35
CB-2	Compounding Building 2	VOC	2.40	10.20
		PM <sub>10</sub>	0.06	0.27
CT-711	Cooling Tower (4)	VOC	1.05	4.60
CT-711A	Cooling Tower (4)	VOC	0.84	3.68
FLARE	Facility Flare	VOC	54.0	20.0
		NO <sub>x</sub>	16.9	8.9
		CO	122.1	45.3
		SO <sub>2</sub>	0.01	0.05
FUGITIVE	Process Fugitives (4)	VOC	4.65	20.37
HF-405	Bag Unloading Filter	PM <sub>10</sub>	0.20	0.05
HF-415	Additive Baghouse	PM <sub>10</sub>	0.65	2.83
HF-463	Railcar Unloading Baghouse 0.44		PM <sub>10</sub>	0.10
HF-481	Vacuum Cleaning Baghouse		PM <sub>10</sub>	6.00

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AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
	1.40			

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

## AIR CONTAMINANTS DATA

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

Interim limits (continued)BOILERS: Case 1 - Natural gas/plant fuel gas

HH-731A, HH-731B	Boilers A and B	VOC	0.22	0.97
		NO <sub>x</sub>	11.16	48.87
		CO	2.79	12.22
		SO <sub>2</sub>	1.05	4.62
		PM/PM <sub>10</sub>	1.09	4.88

BOILERS: Case 2 - Combination of natural gas/plant fuel gas plus by-product liquid wax

HH-731A, HH-731B	Boilers A and B	VOC	0.50	1.42
		NO <sub>x</sub>	10.86	48.21
		CO	2.80	12.24
		SO <sub>2</sub>	2.90	8.67
		PM	10.17	24.71
		PM <sub>10</sub>	8.20	20.38
		HCl	2.23	4.88

HST-101	Catalyst Preparation Area	VOC	61.0
	0.68		

Condenser (Backup service only)

HT-171	Toluene Tank	VOC	0.18	0.11
HT-601	Solvent Tank	VOC	0.40	0.72
HT-602	Solvent Tank	VOC	1.08	2.30
HT-606	Solvent Tank	VOC	0.58	1.02
HT-608	Seal Oil Tank	VOC	0.20	<0.01

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## AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
Point No. (1)	Name (2)	Name (3) lb/hr		TPY
HT-735	Boiler Liquid Fuel Tank	VOC	0.15	0.38
HT-793	Diesel Fuel Tank	VOC	0.02	<0.01
<b><u>Interim limits</u></b> (continued)				
HT-794	Diesel Fuel Tank	VOC	0.02	<0.01
HT-797	Diesel Fuel Tank	VOC	0.03	<0.01
HT-798	Diesel Fuel Tank	VOC	0.06	<0.01
HT-799	Gasoline Tank	VOC	15.05	0.13
HT-801	Slop Oil Tank	VOC	5.41	0.02
HV-124	ATE System Seal Pot	VOC	11.49	3.90
HV-125	DEAC System Seal Pot	VOC	11.39	1.04
HV-305	Alcohol Feed Tank	VOC	0.13	<0.01
HX-411	Extruder CAS (Backup service only)	VOC	7.8	1.12
		PM <sub>10</sub>	1.9	1.90
PP-1	Pilot Plant	VOC	0.69	0.65
		PM <sub>10</sub>	0.01	0.01
WWTP-2	Aerated Lagoon	VOC	0.43	1.88
HBL-431	Product Blending System	PM <sub>10</sub>	1.18	2.50
		VOC (5)	38.00	71.00
HT-441	Product Storage Silos	PM <sub>10</sub>	0.24	0.63
		VOC (5)		

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AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u> lb/hr		<u>TPY</u>
HF-454	Fines Removal Baghouse	PM <sub>10</sub> VOC (5)	0.65	2.85

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## AIR CONTAMINANTS DATA

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

**Interim limits** (continued)

HF-456	Fines Removal Baghouse	PM <sub>10</sub> VOC (5)	2.69	11.78
HTB-451	Product Loading System	PM <sub>10</sub> VOC (5)	0.26	0.63
HQ-460	Bagging and Boxing Silos 0.17	PM <sub>10</sub> VOC (5)		0.09

**Final limits** - The following emission rates become effective upon start-up of Train 4:

CB-1	Compounding Building 1	VOC PM <sub>10</sub>	6.20 0.09	27.20 0.35
CB-2	Compounding Building 2	VOC PM <sub>10</sub>	2.40 0.06	10.20 0.27
CB-3	Compounding Building 3	VOC PM <sub>10</sub>	0.50 0.06	0.09 0.19
CT-711	Cooling Tower (4)	VOC	1.05	4.60
CT-711A	Cooling Tower (4)	VOC	1.68	7.36
FLARE	Facility Flare	VOC NO <sub>x</sub> CO SO <sub>2</sub>	63.00 19.75 142.65 0.01	26.19 11.61 59.16 0.05
FUGITIVE	Process Fugitives (4)	VOC	7.09	31.3

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

## AIR CONTAMINANTS DATA

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

HF-405	Bag Unloading Filter	PM <sub>10</sub>	0.20	0.05
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HF-415	Additive Baghouse	PM <sub>10</sub>	0.84	3.68
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**Final limits** (continued)

HF-463	Railcar Unloading Baghouse 0.44	PM <sub>10</sub>		0.10
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HF-481	Vacuum Cleaning Baghouse 1.40	PM <sub>10</sub>		6.00
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**BOILERS: Case 1 - Natural gas/plant fuel gas**

HH-731A, HH-731B	Boilers A and B	VOC	0.22	0.97
		NO <sub>x</sub>	4.78	20.95
		CO	5.81	25.43
		SO <sub>2</sub>	1.05	4.62
		PM/PM <sub>10</sub>	1.11	4.88

**BOILERS: Case 2 - Combination of natural gas/plant fuel gas plus by-product liquid wax**

HH-731A, HH-731B	Boilers A and B	VOC	0.50	1.42
		NO <sub>x</sub>	8.32	28.69
		CO	6.26	27.42
		SO <sub>2</sub>	2.90	8.67
		PM	10.17	24.71
		PM <sub>10</sub>	8.20	20.38
		HCl	2.23	4.88

HST-101	Catalyst Preparation Area 0.68 Condenser (Backup service only)	VOC		61.0
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## AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
HT-171	Toluene Tank	VOC	0.21	0.17
HT-601	Solvent Tank	VOC	0.51	0.97
HT-602	Solvent Tank	VOC	1.19	2.56
HT-606	Solvent Tank	VOC	0.63	1.14
HT-608	Seal Oil Tank	VOC	0.20	<0.01

**Final limits** (continued)

HT-735	Boiler Liquid Fuel Tank	VOC	0.39	0.78
HT-793	Diesel Fuel Tank	VOC	0.02	<0.01
HT-794	Diesel Fuel Tank	VOC	0.02	<0.01
HT-797	Diesel Fuel Tank	VOC	0.03	<0.01
HT-798	Diesel Fuel Tank	VOC	0.06	<0.01
HT-799	Gasoline Tank	VOC	15.05	0.13
HT-801	Slop Oil Tank	VOC	5.41	0.02
HV-124	ATE System Seal Pot	VOC	11.49	4.60
HV-125	DEAC System Seal Pot	VOC	11.39	1.17
HV-305	Alcohol Feed Tank	VOC	0.13	<0.01
HX-411	Extruder CAS	VOC	7.8	1.12
	(Backup service only)	PM <sub>10</sub>	1.9	1.90



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Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
Point No. (1)	Name (2)	Name (3) lb/hr		TPY
PP-1	Pilot Plant	VOC	0.69	0.65
		PM <sub>10</sub>	0.01	0.01
WWTP-2	Aerated Lagoon	VOC	0.46	2.1
HBL-431	Product Blending System	PM <sub>10</sub>	1.74	2.69
		VOC (5)	40.1	83.7
HT-441	Product Storage Silos	PM <sub>10</sub>	0.24	0.63
		VOC (5)		
<b><u>Final limits</u></b> (continued)				
HF-454	Fines Removal Baghouse	PM <sub>10</sub>	0.65	2.85
		VOC (5)		
HF-456	Fines Removal Baghouse	PM <sub>10</sub>	3.67	16.08
		VOC (5)		
HTB-451	Product Loading System	PM <sub>10</sub>	0.35	0.82
		VOC (5)		
HQ-460	Bagging and Boxing Silos		PM <sub>10</sub>	0.09
	0.17			
		VOC (5)		
L-735	Process Fuel Oil Loading (6)		VOC	32.35
	0.9			
	Process Fuel Oil Loading (7)		VOC	1.61
	0.05			

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.

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- (2) Specific point source name. For fugitive sources use area name or fugitive source name.
- (3) VOC - volatile organic compounds as defined in General Rule 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 less than 10 microns
  - HCl - hydrogen chloride
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) The VOC emissions for all dry pellet handling equipment including Emission Point Nos. HBL-431, HT-441, HTB-451, HF-454, HF-456, and HQ-460 are combined into HBL-431 for purposes of this table.
- (6) Allowable prior to loading controls required by September 30, 1999.
- (7) Allowable after loading controls required by September 30, 1999.

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

Hrs/year 8,760

Dated \_\_\_\_\_