

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 9626

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		Air Contaminant		<u>Emission Rates *</u>	
	Name (2)	Name (3)	lb/hr	TPY		
FCC-3A	Feed Hopper Bag Filter			PM	<0.1	0.2
FCC-5A	Calciner			VOC	0.46	2.02
				NO <sub>x</sub>	1.85	8.09
				SO <sub>2</sub>	0.01	0.04
				PM	0.08	0.34
				CO	0.54	2.36
FCC-8	Flash Dryer Bag Filter			VOC	0.05	0.22
				NO <sub>x</sub>	1.39	6.08
				SO <sub>2</sub>	0.01	0.03
				PM	1.0	4.4
				CO	0.19	0.85
FCC-9	Molsieve Calciner			VOC	0.03	0.11
				NO <sub>x</sub>	0.69	3.01
				SO <sub>2</sub>	<0.01	<0.01
				PM	0.02	0.11
				CO	0.10	0.42
FCC-9A	Final Product Bag Filter			PM	1.6	7.2
FCC-10	Flash Dryer Bag Filter			VOC	0.05	0.22
				NO <sub>x</sub>	1.39	6.08
				SO <sub>2</sub>	<0.01	0.03
				PM	1.0	4.4
				CO	0.19	0.85
FCC-11	Reslurry Tank Bag Filter			PM	0.3	1.2
FCC-11A	Calciner Scrubber			NH <sub>3</sub>	2.4	10.5
				PM	<0.10	<0.10

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Emission	Source	Air Contaminant	<u>Emission Rates *</u>			
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY		
FCC-12	Molsieve Calciner			VOC	0.03	0.11
				NO <sub>x</sub>	0.69	3.01
				SO <sub>2</sub>	<0.01	0.01
				PM	0.02	0.11
				CO	0.10	0.42

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>		
			lb/hr	TPY	
FCC-14	HCl Scrubber		HCl	<0.10	<0.10
FCC-15	Ammonia Scrubber		NH <sub>3</sub>	1.96	8.58
FCC-16	Portaclay/Reslurry Bag Filter		PM	0.05	0.24
FCC-17	Sulfuric Acid Storage Tank		H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01
			SO <sub>3</sub>	<0.01	<0.01
FCC-18	Strike Tanks Vent		PM <sub>10</sub>	0.46	0.63
FCC-19	Kaolin Dosing Bag Hopper		PM	0.3	1.3
FCC-20	Kaolin Silo Bag Filter		PM <sub>10</sub>	0.26	0.28
FCC-21	Spray Dryer Scrubbers (Five)		VOC	0.34	1.50
			NO <sub>x</sub>	15.80	69.40
			SO <sub>2</sub>	0.04	0.30
			PM <sub>10</sub>	12.92	56.60
			CO	3.81	16.70
21.1-21.3	Crude Product Bag Filter		PM	0.1	0.6
FCC-23	Separator Fines Bag Filter		PM	0.2	0.8
FCC-27	Steam Boiler		VOC	0.2	0.8
			NO <sub>x</sub>	7.3	32.2
			SO <sub>2</sub>	<0.1	0.2
			PM	0.3	1.3
			CO	2.1	9.4
FCC-34	Ammonia Absorber		NH <sub>3</sub>	<0.01	0.03
FCC-40	Kaolin Unloading Bag Filter		PM <sub>10</sub>	0.13	0.19

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>		
			lb/hr	TPY	
FCC-41	Sulfuric Acid Storage Tank		H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01
			SO <sub>3</sub>	<0.01	<0.01
FCC-42	Filter Hoods Vent (5)		NH <sub>3</sub>	0.08	0.35
FCC-43	Ammonium Chloride Tank (5)		NH <sub>3</sub>	<0.01	0.02

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
RDL-1	Spray Dryer No. 1	PM <sub>10</sub>	0.46	0.93
		SiO <sub>2</sub> (4)	<0.01	<0.01
		Na <sub>2</sub> SO <sub>4</sub> (4)	0.06	0.12
		NO <sub>x</sub>	0.77	1.54
		CO	0.02	0.04
		VOC	<0.01	0.01
		SO <sub>2</sub>	<0.01	<0.01
RDL-3	Ammonia Scrubber	PM <sub>10</sub> (4)	0.46	0.70
		SiO <sub>2</sub> (4)	<0.01	<0.01
		Na <sub>2</sub> SO <sub>4</sub> (4)	0.02	0.03
		NO <sub>x</sub>	3.96	2.97
		NH <sub>3</sub>	0.04	0.03
RDL-2	Spray Dryer No. 2	PM <sub>10</sub> (4)	0.46	0.93
		SiO <sub>2</sub> (4)	<0.01	<0.01
		Na <sub>2</sub> SO <sub>4</sub> (4)	0.06	0.12
		NO <sub>x</sub>	0.77	1.54
		CO	0.02	0.04
		VOC	<0.01	0.01
RDL-5	Steam Boiler	SO <sub>2</sub>	<0.01	<0.01
		PM <sub>10</sub>	<0.01	0.01
		NO <sub>x</sub>	0.05	0.20
		CO	<0.01	0.04
		VOC	<0.01	0.01

- (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)
  - PM - particulate matter
  - PM<sub>10</sub> - particulate matter less than 10 microns
  - 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
  - CO - carbon monoxide

$\text{NH}_3$	- ammonia
$\text{HCl}$	- hydrochloric acid
$\text{H}_2\text{SO}_4$	- sulfuric acid
$\text{SiO}_2$	- silicon oxide (crystalline quartz)
$\text{Na}_2\text{SO}_4$	- sodium sulfate

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- (4) Overall PM<sub>10</sub> emission rates include SiO<sub>2</sub> and Na<sub>2</sub>SO<sub>4</sub> emission rates.
  - (5) Emission points incorporated into permit from Standard Exemption Registration Number 26870.
- \* Emission rates are based on and the facilities are limited by the following maximum operating schedule:
- Hrs/day 24 Days/week 7 Weeks/year 52 or Hrs/year \_\_\_\_\_

Dated \_\_\_\_\_