

EMISSIONS ACTIVITY CATEGORY FORM COKE MANUFACTURING

This form is to be completed for each coke manufacturing operation. State/Federal regulations which may apply to coke manufacturing are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.

Note: This emissions activity category (EAC) form does not include roadways and parking areas, storage piles, and material handling operations which may also be associated with a coke manufacturing facility. Therefore, additional EAC forms for those emissions units may need to be submitted.

1. Reason this form is being submitted (Check one)

- New Permit and Renewal or Modification of Air Permit Number(s) (e.g. F001) P901, F002
F004

2. Maximum Operating Schedule: 24 hours per day; 365 days per year

If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples. _____

3. Identification of fugitive dust emissions units:

<u>Check Those</u> <u>Emissions Units Present</u>	<u>Fugitive Dust</u> <u>Emissions Units</u>	<u>How many?</u>
<input checked="" type="checkbox"/>	Coal crushing (F002)	<u>1</u>
<input checked="" type="checkbox"/>	Charging (P901)	<u>1</u>
<input checked="" type="checkbox"/>	Coking (P901)	<u>1</u>
<input checked="" type="checkbox"/>	Pushing (P901)	<u>1</u>
<input checked="" type="checkbox"/>	Coke grinding and screening (F004)	<u>1</u>
<input checked="" type="checkbox"/>	Other (describe): <u>Address on other EAC Forms</u>	_____

4. General coke-oven battery data:

a. Battery number	<u>A</u>	<u>B</u>	<u>C</u>	_____
b. No. of ovens per battery	<u>40</u>	<u>20</u>	<u>40</u>	_____
c. Battery manufacturer	<u>Custom</u>	<u>Custom</u>	<u>Custom</u>	_____
d. Type of battery	<u>Heat Recovery</u>	<u>Heat Recovery</u>	<u>Heat Recovery</u>	_____
e. Oven height (meters)	<u>N/A*</u>	<u>N/A*</u>	<u>N/A*</u>	*Heat Recovery
f. Maximum oven temp. (°F)	_____	_____	_____	Ovens

5. Coal pulverizing and screening process data:

a. Manufacturer of pulverizing and screening equipment

 Gundlach Cage Paktors or equivalent: 85% - 1/8"

b. Make or model number _____

c. Maximum capacity of pulverizing and screening equipment _____ pounds coal/hour

d. Maximum hourly production rate for the pulverizing and screening equipment
 500 tons coal/hour

e. Maximum annual production for the pulverizing and screening equipment

f. 912,500 tons coal/year

6. Charging process data:

	<u> A </u>	<u> B </u>	<u> C </u>	<u> </u>
a. Battery number				
b. Type of charging equipment	<u>Heat Recovery</u>	<u>Heat Recovery</u>	<u>Heat Recovery</u>	<u> </u>
c. No. of charging ports per oven	<u> NA </u>	<u> NA </u>	<u> NA </u>	<u> </u>
d. No. of gas collector mains	<u> NA </u>	<u> NA </u>	<u> NA </u>	<u> </u>
e. Maximum capacity of charging equipment (tons coal/charge)	<u> 50 </u>	<u> 50 </u>	<u> 50 </u>	<u> </u>
f. Maximum no. of charges per battery per hour	<u> 10 </u>	<u> 10 </u>	<u> 10 </u>	<u> </u>
g. Maximum no. of charges per battery per day	<u> 30 </u>	<u> 15 </u>	<u> 30 </u>	<u> </u>
h. Maximum no. of charges per battery per year	<u> 7,300 </u>	<u> 3,650 </u>	<u> 7,300 </u>	<u> </u>
i. Average charging cycle time per oven (minutes)*	<u> 5 </u>	<u> 5 </u>	<u> 5 </u>	<u> </u>
j. Average quantity of coal per charge (tons/charge)	<u> 50 </u>	<u> 50 </u>	<u> 50 </u>	<u> </u>
k. Maximum quantity of coal charged per battery per hour (tons/hour)	<u> 500 </u>	<u> 500 </u>	<u> 500 </u>	<u> </u>
l. Maximum quantity of coal charged per battery per year (tons/year)	<u> 365,000 </u>	<u> 182,500 </u>	<u> 365,000 </u>	<u> </u>
m. Is coal preheating used prior to charging? (yes/no) If yes, what type of control device?	<u> NO </u>	<u> NO </u>	<u> NO </u>	<u> </u>
n. Operating steam vacuum in collection main (inches water)	<u> NA </u>	<u> NA </u>	<u> NA </u>	<u> </u>

*The charging cycle time begins when the coal from the charging system starts to enter the oven and ends when the last charge port lid is replaced.

7. Coking (doors, offtake piping and lids) process data:

	A	B	C	
a. Battery number	<u> A </u>	<u> B </u>	<u> C </u>	<u> </u>
b. No. of doors per battery	<u> 80 </u>	<u> 40 </u>	<u> 80 </u>	<u> </u>
c. No. of offtake pipes per battery	<u> NA </u>	<u> NA </u>	<u> NA </u>	<u> </u>
d. No. of jumper pipes connecting two ovens per battery	<u> NA </u>	<u> NA </u>	<u> NA </u>	<u> </u>
e. No. of charging hole lids per oven per battery	<u> NA </u>	<u> NA </u>	<u> NA </u>	<u> </u>
f. Average coking time per battery (hours)	<u> 48 </u>	<u> 48 </u>	<u> 48 </u>	<u> </u>

8. Pushing process data:

	A	B	C	
a. Battery number	<u> A </u>	<u> B </u>	<u> C </u>	<u> </u>
b. Maximum no. of pushes per battery per hour	<u> 10 </u>	<u> 10 </u>	<u> 10 </u>	<u> </u>
c. Maximum no. of pushes per battery per day	<u> 20 </u>	<u> 10 </u>	<u> 20 </u>	<u> </u>
d. Maximum no. of pushes per battery per year	<u> 7,300 </u>	<u> 3,650 </u>	<u> 7,300 </u>	<u> </u>
e. Average pushing cycle time per oven (minutes)*	<u> 5 </u>	<u> 5 </u>	<u> 5 </u>	<u> </u>
f. Average quantity of coke produced per push per oven (tons)	<u> 35.9 </u>	<u> 35.9 </u>	<u> 35.9 </u>	<u> </u>
g. Maximum quantity of coke produced per battery per hour (tons/hour)	<u> 359 </u>	<u> 359 </u>	<u> 359 </u>	<u> </u>
h. Maximum quantity of coke produced per battery per year (tons/year)	<u>261,800</u>	<u>130,900</u>	<u>261,800</u>	<u> </u>
i. Percentage by weight of each type of coke produced:				
Green coke	<u> 0% </u>	<u> 0% </u>	<u> 0% </u>	<u> </u>
Moderately green	<u> 0% </u>	<u> 0% </u>	<u> 0% </u>	<u> </u>
Clean coke	<u> 100% </u>	<u> 100% </u>	<u> 100% </u>	<u> </u>

*The pushing cycle time commences with the moving of the coke mass from an oven and concludes when the quench car enters the quench tower.

9. Coke grinding and screening process data:

a. Manufacturer of grinding and screening equipment

NA

- b. Make or model number _____ NA _____
- c. Maximum capacity of grinding and screening equipment _____ tons coke/hour
- d. Maximum hourly production rate for the grinding and screening equipment 500 tons coke/hour
- e. Maximum annual production for the grinding and screening equipment 654,449 tons coke/year

10. Control methods to be used for fugitive dust emissions from coke manufacturing:

(List the methods to be used to control fugitive dust emissions from each of the specific activities shown below. Use the control method codes listed below, (A) through (R), to identify them.)

<u>Fugitive Dust Emissions Units</u>	<u>Control Method Codes</u>			<u>Coke-Oven Battery Number</u>
	<u>A</u>	<u>B</u>	<u>C</u>	
Coal crushing (F003)	<u>C</u>	<u>C</u>	<u>C</u>	_____
Charging (P901)	<u>H</u>	<u>H</u>	<u>H</u>	_____
Coking (P901)	<u>L</u>	<u>L</u>	<u>L</u>	_____
Pushing (P901)	<u>Other</u>	<u>Other</u>	<u>Other</u>	_____
Coke grinding and screening (F004)	<u>Q</u>	<u>Q</u>	<u>Q</u>	_____
Other (describe):				_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

The various control methods and their respective code letters are given in the following sections. Please complete the requested information for any control method(s) cited above.

Coal Crushing

(A) Watering:

Year installed _____
 Source of water _____
 Method of application _____
 Frequency of application _____
 Application rate _____ gallons sprayed/ton processed
 Application points _____
 Estimated control efficiency _____ %

(B) Wet suppression (chemical):

Year installed _____
 Source of chemical(s) _____
 Type of chemical(s) used _____
 Method of application _____
 Frequency of application _____
 Dilution _____ gallons chemical/1,000 gallons water

Application rate _____ gallons sprayed/ton processed

Application points _____

Estimated control efficiency _____ %

(C) Enclosure:

Year installed _____

Describe enclosure

___ Complete enclosure - wet material _____

Estimated enclosure capture efficiency 99 %

(D) Enclosure, vent to fabric filter:

Describe enclosure

Estimated enclosure capture efficiency _____ %

(E) Other (describe):

Year installed _____

Charging

(F) Charging on-the-main/staged charging:

Year implemented _____

Describe (or attach) the staged charging operating procedure:

Estimated control efficiency (assuming the uncontrolled emission rate is that occurring with conventional charging) _____ %

(G) Closed pipeline charging:

Year installed _____

(K) Shed, fabric filter:

Describe enclosure

_____ Es

Estimated shed capture efficiency _____ %

(L) Other (describe):

Lime spray dryer for SO₂ control, followed by a baghouse for PM, PM₁₀, and Lead

Year installed _____

Pushing

(M) Capture to wet scrubber:

Type of capture system

- shed, wet scrubber
- enclosed hot coke car, wet scrubber
- hood, mobile wet scrubber
- hood, stationary wet scrubber
- other (describe) _____

Is fugitive dust from the hot coke car captured and controlled during car movement to the quench tower? yes no

Describe capture system (shed, enclosure, hood)

Estimated capture efficiency (include fugitive dust emissions occurring during hot coke car movement to quench tower) _____ %

(N) Capture to baghouse:

Type of capture system

- hood ducted to baghouse
- other (describe) _____

Is fugitive dust from the hot coke car captured and controlled during car movement to the quench tower? yes no

Describe capture system (shed, enclosure, hood)

Estimated capture efficiency (include fugitive dust emissions occurring during hot coke car movement to quench tower) _____ %

(O) Shed, wet electrostatic precipitator: _____

Describe shed capture system

Estimated shed capture efficiency (include fugitive dust emissions occurring during hot coke car movement to quench tower) _____ %

*Other: Flat car push, mobile hood, multicyclone.

Coke Grinding and Screening

(P) Enclosure:

Year installed _____

Describe enclosure:

Estimated enclosure capture efficiency _____ %

(Q) Enclosure, vent to fabric filter:

Describe enclosure:

Close capture hood

Estimated enclosure capture efficiency 95 %

(R) Other (describe):

Year installed: _____