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
   - Renewal or Modification of Air Permit Number(s) (e.g. F001) P901, F00
     and
     - 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:

   Check Those Fugitive Dust Emissions Units Present Emissions Units How many?

   - Coal crushing (F002) 1
   - Charging (P901) 1
   - Coking (P901) 1
   - Pushing (P901) 1
   - Coke grinding and screening (F004) 1
   - Other (describe):
     - Address on other EAC Forms

4. General coke-oven battery data:

   a. Battery number
   - A
   - B
   - C

   b. No. of ovens per battery
   - 40
   - 20
   - 40

   c. Battery manufacturer
   - Custom
   - Custom
   - Custom

   d. Type of battery
   - Heat Recovery
   - Heat Recovery
   - Heat Recovery

   e. Oven height (meters)
   - N/A*
   - N/A*
   - N/A*

   f. Maximum oven temp. (°F)
   - N/A*
   - N/A*
   - N/A*

*Heat Recovery 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
      __912,500______ tons coal/year

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

MARCH 2009
*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:

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

8. Pushing process data:

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

*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
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.)

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.

**Control Method Codes**

<table>
<thead>
<tr>
<th>Fugitive Dust Emissions Units</th>
<th>Coke-Oven Battery Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal crushing (F003)</td>
<td>A  B  C</td>
</tr>
<tr>
<td>Charging (P901)</td>
<td>C  C  C</td>
</tr>
<tr>
<td>Coking (P901)</td>
<td>H  H  H</td>
</tr>
<tr>
<td>Pushing (P901)</td>
<td>L  L  L</td>
</tr>
<tr>
<td>Coke grinding and screening</td>
<td>Q  Q  Q</td>
</tr>
<tr>
<td>(F004)</td>
<td></td>
</tr>
<tr>
<td>Other (describe):</td>
<td></td>
</tr>
</tbody>
</table>

**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 _______ %

(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 _______________
Describe the pipeline charging system
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

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

(H) Other (describe):
Traveling hood with baghouse
Year installed _______________

Coking

(I) Door and topside maintenance:
Year implemented _______________
Describe (or attach) the door and topside maintenance program:
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

Estimated control efficiency (assuming the uncontrolled emission rate is that occurring with conventional coking practices and maintenance procedures) _______________ %

(J) Hood, wet electrostatic precipitator:
Describe hood capture system
____________________________________________________________________
____________________________________________________________________

Estimated hood capture efficiency ________________ %
(K) Shed, fabric filter:

Describe enclosure
______________________________________________________________________
______________________________________________________________________
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, multicycle.

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: _______________