Categorization of Coke Manufacturing Operations

Integrated v. Merchant Facilities
Recovery v. Non-Recovery Facilities

These charts classify coke manufacturing operations depending on whether they are integrated and whether they are recovery facilities. Integrated facilities form part of larger steelmaking operations; merchant facilities do not. Recovery facilities extract byproducts from the coke manufacturing process (e.g. petroleum liquids); non-recovery facilities do not.

Within the three categories (integrated recovery facilities, merchant recovery facilities, and merchant non-recovery facilities), the facilities are ranked by toxic air emissions reported under the Toxic Release Inventory program. Reported emissions relate to the 2014 calendar year.

Generally speaking, the recovery facilities have more emissions of benzene than the non-recovery facilities. (None of the non-recovery facilities reported emissions of benzene, presumably because they burn the chemical). Therefore, the chart lists benzene emissions from the recovery facilities only.

On the other hand, the non-recovery facilities generally have greater emissions of lead, mercury, sulfuric acid, and hydrochloric acid. Therefore, the chart lists these emissions from the recovery facilities. Although not shown on
the chart, some of the largest recovery facilities have substantial emissions of lead, mercury, sulfuric acid, or hydrochloric acid, comparable to those from the non-recovery facilities.

Stack emissions are emissions that are vented to the atmosphere through a device such as a vent, pipe, or chimney. Typically, they are subject to air pollution control equipment as a means of removing air pollutants. Fugitive emissions are emissions that cannot feasibly be captured and controlled by a stack. Typically, they are subject to work practice standards as a means of limiting air pollutants.

Allegheny County is the location of three of the following plants: (1) the former Shenango facility in Pittsburgh, (2) the U.S. Steel facility in Clairton, and (3) the ArcelorMittal facility in Monessen. All three facilities are located on the Monongahela River. Upwind and twenty miles away in West Virginia there is a fourth coke facility that influences the airshed in Allegheny County. That facility is the Mountain State Carbon facility in Follansbee, West Virginia.

Source: EPA Envirofacts Database,
https://www3.epa.gov/enviro/facts/multisystem.html
The charts on the following pages provide additional information on these facilities, based on their classification.
I. Integrated Recovery Facilities (8)

<table>
<thead>
<tr>
<th>Facility</th>
<th>TRI webpage</th>
<th>Emissions of Toxic Pollutants</th>
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| USS-Clairton Plant 400 State Street, Clairton, PA    | http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=15025SSCLR400ST&pPrev=1 | Total Emissions: 1,177,370.52 pounds (588 tons)  
Benzene: 22,000 pounds in stack emissions (11.0 tons) and 23,000 pounds in fugitive emissions (11.5 tons) |
| USSteel Gary Works 1 North Broadway, Gary, IN        | http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=46402SSGRYONE&NO&pPrev=1 | Total Emissions: 628,689.1 pounds (314 tons)  
Benzene: 14,000 pounds in stack emissions (7.0 tons) and 4,100 pounds in fugitive emissions (2.05 tons) |
Benzene: 37,200 pounds in stack emissions (18.6 tons) and 20,800 pounds in fugitive emissions (10.4 tons) |
| US Steel Granite City Works 1951 State Street, IL    | http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=62040GRNTC20THS&pPrev=1 | Total Emissions: 177,568.95 pounds (88 tons)  
Benzene: 13,000 pounds in stack emissions (6.5 tons) and 5,800 pounds in fugitive emissions (2.9 tons) |
<table>
<thead>
<tr>
<th></th>
<th>Company Name</th>
<th>Address</th>
<th>Emissions Information</th>
<th>Emissions Details</th>
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</table>
| 5 | Mountain State Carbon, LLC         | 1851 Main Street, Follansbee, West Virginia 26037 (near Ohio River) | [Link](http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=26037WHLNGROUTE&pPrev=1) | Total Emissions: 132,553 pounds (66 tons)  
Benzene: 22,000 pounds in stack emissions (11.0 tons) and 27,000 pounds in fugitive emissions (13.5 tons) |
| 6 | AK Steel Corp.                     | 1801 Crawford Street, Middletown, Ohio 45044 (near Great Miami River) | [Link](http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=45043RMCNC1801C&pPrev=1) | Total Emissions: 82,063 pounds (41 tons)  
Benzene: 18,320 pounds in stack emissions (9.2 tons) and 9,671 pounds in fugitive emissions (3.8 tons) |
| 7 | ArcelorMittal Cleveland LLC dba ArcelorMittal Warren | 2234 Main Ave. SW, Warren, Ohio 44481 (near Mahoning River) | [Link](http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=4482LTVST2234M&pPrev=1) | Total Emissions: 55,129.04 pounds (27.5 tons)  
Benzene: 22,121 pounds in fugitive emissions (11 tons) |
| 8 | ArcelorMittal Monessen LLC Coke Plant | 345 Donner Avenue, Monessen, Pennsylvania 15062 (near Monongahela River) | [Link](http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=15062MNSSN345DO&pPrev=1) | Total Emissions: 34,265 pounds (17.1 tons)  
Benzene: 6,855 pounds in stack emissions (3.4 tons) and 3,036 pounds in fugitive emissions (1.5 tons) |
### II. **Merchant Recovery Facilities (6)**

<table>
<thead>
<tr>
<th>Facility</th>
<th>TRI webpage</th>
<th>Total Emissions of Toxic Pollutants</th>
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Benzene: 76,574 pounds in stack emissions (38.8 tons) and 4,656 pounds in fugitive emissions (2.3 tons) |
Benzene: 6,287 pounds in stack emissions (3.1 tons) and 2,802 pounds in fugitive emissions (1.4 tons) |
Benzene: 19,461 pounds in stack emissions (9.7 tons) and 4,865 pounds in fugitive emissions (2.4 tons) |
Benzene: 3,653 pounds in stack emissions (1.8 tons) and 1,708 pounds in fugitive emissions (0.85 tons) |
<p>| Tonawanda Coke Corp. 3875 River Road,                                  | <a href="http://oaspub.epa.gov/enviro/tris_control_v2.tri">http://oaspub.epa.gov/enviro/tris_control_v2.tri</a>                                                                 | Total Emissions: 8,674.48 pounds (4.3 tons) |</p>
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<thead>
<tr>
<th>Location</th>
<th>Emissions Details</th>
<th>URL</th>
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<tbody>
<tr>
<td>Tonawanda, New York 14150</td>
<td>Benzene: 1,991 pounds in stack emissions (0.95 tons) and 2,326 pounds in fugitive emissions (1.2 tons)</td>
<td><img src="https://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=14150TNWIND3875R&amp;pPrev=1" alt="URL" /></td>
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<tr>
<td>(near Niagara River)</td>
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| Erie Coke Corp. 925 East Bay Drive, Erie, Pennsylvania 16507 | Total Emissions: 7,633.2 pounds (3.8 tons))  
Benzene: 4,463 pounds in fugitive emissions (2.2 tons) and 1,924 pounds in stack emissions (0.96 tons) | ![URL](http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=16512RCKCRFOOTO&pPrev=1) |
### III. Merchant Non-Recovery Facilities (5)

<table>
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<th>Facility</th>
<th>TRI webpage</th>
<th>Total Emissions of Toxic Pollutants</th>
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Hydrochloric Acid: 1,311,698 pounds (655.8 tons)  
Lead: 3589 pounds (17.9 tons)  
Mercury: 107 pounds (0.05 tons) |
Hydrochloric Acid: 352,180.96 pounds (176.1 tons)  
Lead: 1,062.78 pounds (0.53 tons)  
Mercury: 97.31 pounds (0.05 tons) |
| **3** Haverhill Coke Co., LLC 2446 Gallia Pike, Franklin Furnace, Ohio 45629 (near Ohio River) | [http://oaspub.epa.gov/enviro/tris_control_v2.tri_webpage?tris_id=4562WHRHL2446G&pPrev=1](http://oaspub.epa.gov/enviro/tris_control_v2.tri_webpage?tris_id=4562WHRHL2446G&pPrev=1) | Total Emissions: 212,676.9 pounds (106.3 tons)  
Hydrochloric Acid: 212,000 pounds (106 tons)  
Lead: 542.8 pounds (0.27 tons)  
Mercury: 134.1 pounds (0.07 tons) |
| **4** Gateway Energy & Coke Co. 2585 Edwardsville Road, Granite City, | [http://oaspub.epa.gov/enviro/tris_control_v2.tri_webpage?tris_id=6204WGTWYN25](http://oaspub.epa.gov/enviro/tris_control_v2.tri_webpage?tris_id=6204WGTWYN25) | Total Emissions: 182,612.1 pounds (91 tons)  
Hydrochloric Acid: 181,955 pounds (90.5 tons) |
<table>
<thead>
<tr>
<th>Location</th>
<th>Emission Source</th>
<th>Lead Emissions</th>
<th>Mercury Emissions</th>
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<tbody>
<tr>
<td>Illinois 62040 (near Mississippi River)</td>
<td>85E&amp;pPrev=1</td>
<td>387.9 pounds (0.19 tons)</td>
<td>269.2 pounds (0.13 tons)</td>
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<td>Suncoke Energy Middletown Operations</td>
<td><a href="http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=4504WSNCKN3353Y&amp;pPrev=1">http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=4504WSNCKN3353Y&amp;pPrev=1</a></td>
<td>Total Emissions: 31,792 pounds (15.5 tons)</td>
<td>Hydrochloric Acid: 6,638 pounds (3.3 tons)</td>
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<tr>
<td>3353 Yankee Road, Middletown, Ohio 45044</td>
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<td>Lead: 108 pounds (0.05 tons)</td>
<td>Mercury: 34 pounds (0.17 tons)</td>
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<tr>
<td>(near Great Miami River)</td>
<td></td>
<td>Sulfuric acid: 25,012 pounds (12.5 tons)</td>
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