

# SWCAA Emission Inventory Instruction Sheet

## Why is an emission inventory required?

Most of the emission inventory reporting requirements originated in Title 40 of the Code of Federal Regulations (40 CFR) Part 51 and were intended for the very largest air pollution sources. These rules require that state and local agencies collect data from air pollution sources and submit the data to the National Emission Inventory (NEI). The information in the NEI database is used by EPA and by states for air quality modeling, tracking progress in meeting requirements under the Federal Clean Air Act, setting policy, and answering questions from the public. EPA recently passed the Air Emissions Reporting Rule (AERR), which requires that state and local agencies collect additional information about the air pollution sources in their jurisdictions. There are also other emission inventory reporting requirements under federal, state, and local rules and regulations. In order to comply with EPA's requirements to report emissions from sources within the ozone maintenance plan area, Southwest Clean Air Agency (SWCAA) also collects information from smaller sources that emit pollutants affecting ground level ozone.

## Who has to be inventoried?

SWCAA collects emission information from a variety of air pollution sources in order to prepare an emission inventory of the sources within the jurisdiction.

The following sources, under 40 CFR Part 51 Subpart Q (40 CFR 51.320), are required to submit emission inventory information to SWCAA for inclusion in the national emission inventory:

- Any "large" source that has the potential to emit any of the following pollutants above the indicated thresholds is required to submit an emission inventory:
  - 100 tons/yr or more of nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), volatile organic compounds (VOC), ammonia (NH<sub>3</sub>), particulate matter (PM) with an aerodynamic diameter of ten microns or less (PM<sub>10</sub>), or PM with an aerodynamic diameter of 2.5 microns or less (PM<sub>2.5</sub>);
  - 1,000 tons/yr or more of carbon monoxide (CO);
  - 5 tons/yr or more of lead;
  - 10 tons/yr or more of any individual hazardous air pollutant (HAP); or
  - 25 tons/yr or more of any combination of HAPs.

The following sources are required under SWCAA 400-105 to submit emission inventory information:

- Any source within the ozone maintenance plan area in Clark County that has the potential to emit 10.0 tons/yr or more of VOCs or 25.0 tons/yr of NO<sub>x</sub>.
- Any source with actual emissions or with the potential to emit:
  - 50 tons/yr of NO<sub>x</sub>, SO<sub>2</sub>, VOC, NH<sub>3</sub>, PM<sub>10</sub>, or PM<sub>2.5</sub>;
  - 500 tons/yr of CO;
  - 1.5 tons/yr of lead;
  - 5 tons/yr or more of any individual hazardous air pollutant (HAP); or
  - 12.5 tons/yr or more of any combination of HAPs;
- Any source that has a federally enforceable "opt-out" permit; or
- Any "small" source that SWCAA has requested emission inventory information.

## What information is reported to EPA?

All of the information submitted for the current emission year is submitted to both Washington State Department of Ecology and EPA. This information is often used by these agencies for planning, permitting, and computer modeling. The information is compiled into both state and federal inventory databases and is generally publically accessible through direct request for information or through the internet. Any information that is marked confidential per 40 CFR 2 Subpart B is still submitted, but will retain the confidentiality flag. The data is not generally released to the public. However, for some purposes, confidential data may be aggregated with other data, such as showing total production for a complete industry.

## General Information Form

This form provides general information about your facility. While we do our best to be sure this information is correct and current, some errors can occur. Please review the information carefully and make corrections as appropriate.

- 1 Facility Name is the name of the facility.
- 2 Physical Address is the physical location of the source. Please do not enter any PO boxes or address descriptions (such as "milepost 3 on Route 20").
- 3 Mailing Address is the address where any mailed information concerning the facility, such as the emission inventory, is to be sent.
- 4 SWCAA ID #, Aerometric Information Retrieval System (AIRS) Plant No., and SWCAA Inspector. The SWCAA ID # and the AIRS No. are unique number assigned by SWCAA or EPA, respective, to each facility. The inspector is the SWCAA representative assigned to your facility, which can change from year to year.
- 5 Facility Contact and Title is the person that has been designated as the emission inventory contact for the facility.
- 6 Universal Business Identifier (UBI) is a nine or ten digit number assigned to a company by a state business licensing authority.
- 7 Standard Industrial Classification (SIC) code is generally used for financial purposes and is generally determined at the time of initial registration with the Washington Department of Revenue or Washington Secretary of State's office. This is a four-digit code that can be obtained via the internet at [http://www.osha.gov/pls/imis/sic\\_manual.html](http://www.osha.gov/pls/imis/sic_manual.html). Call SWCAA if you need help identifying this code.
- 8 North American Industry Classification System (NAICS) is a code classifying a facility and is used federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. This code can be obtained via the internet at <http://www.census.gov/eos/www/naics/>.
- 9 Geographical Coordinates and Universal Transverse Mercator (UTM) coordinates for the facility. If this data is missing or incorrect, please provide the correct data. You may substitute the coordinates for the center of your facility or for the front entrance. Call SWCAA if you are unsure how to determine these coordinates. All sources in SWCAA jurisdiction are in UTM Zone 10.
- 10 Emissions for Last Year is a facilitywide summary of emissions reported on the forms from last year. Differences in rounding errors or methodologies may result in slight differences. You do not need to correct this information if it is incorrect. If you have questions, contact you SWCAA inspector.
- 11 Emissions for This Year is where you can enter a facilitywide summary of emissions from this year.
- 12 Certification of Data Accuracy. Once you have completed filling out all the forms, sign, print your name and title, and enter the date you completed the forms in this section.

2008 Emission Inventory  
Southwest Clean Air Agency  
11815 NE 99th Street, Suite 1204, Vancouver, WA 98682-2322  
Voice: (360) 574-3058 Fax: (360) 576-0925

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Facility Name <span style="float: right;">1</span>		SWCAA ID #:																																				
Physical Address <span style="float: right;">2</span>		AIRS Plant No.																																				
Mailing Address <span style="float: right;">3</span>		SWCAA Inspector <span style="float: right;">4</span>																																				
Facility Contact and Title: <span style="float: right;">5</span>	Unified Business Identifier (UBI): <span style="float: right;">6</span>																																					
Standard Industrial Classification (SIC) <span style="float: right;">7</span>	North American Industry Classification System (NAICS) <span style="float: right;">8</span>																																					
Geographical Coordinates: Latitude: _____ Longitude: _____ <span style="float: right;">9</span>	UTM Coordinates: Horizontal: _____ Vertical: _____ Zone: _____																																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Emissions for Last Year (2007)</th> <th style="text-align: center;">Emissions for This Year (2008)</th> </tr> <tr> <th></th> <th style="text-align: center;">Tons per Year</th> <th style="text-align: center;">Tons per Year</th> </tr> </thead> <tbody> <tr> <td>Particulate Matter (PM):</td> <td style="text-align: center;">10</td> <td style="text-align: center;">11</td> </tr> <tr> <td>Particulate Matter (PM<sub>10</sub>):</td> <td></td> <td></td> </tr> <tr> <td>Particulate Matter (PM<sub>2.5</sub>):</td> <td></td> <td></td> </tr> <tr> <td>Volatile Organic Compounds (VOC):</td> <td></td> <td></td> </tr> <tr> <td>Sulfur Dioxide (SO<sub>2</sub>):</td> <td></td> <td></td> </tr> <tr> <td>Nitrogen Oxides (NO<sub>x</sub>):</td> <td></td> <td></td> </tr> <tr> <td>Carbon Monoxide (CO):</td> <td></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">Pounds per Year</td> <td style="text-align: center;">Pounds per Year</td> </tr> <tr> <td>Hazardous Air Pollutants (HAP):</td> <td></td> <td></td> </tr> <tr> <td>Toxic Air Pollutants (TAP):</td> <td></td> <td></td> </tr> </tbody> </table>			Emissions for Last Year (2007)	Emissions for This Year (2008)		Tons per Year	Tons per Year	Particulate Matter (PM):	10	11	Particulate Matter (PM <sub>10</sub> ):			Particulate Matter (PM <sub>2.5</sub> ):			Volatile Organic Compounds (VOC):			Sulfur Dioxide (SO <sub>2</sub> ):			Nitrogen Oxides (NO <sub>x</sub> ):			Carbon Monoxide (CO):				Pounds per Year	Pounds per Year	Hazardous Air Pollutants (HAP):			Toxic Air Pollutants (TAP):			<p><b>CERTIFICATION OF DATA ACCURACY</b> Consistent with SWCAA 400-1002 (c), I certify as the owner, operator, or designated representative, that the data presented here and in the accompanying forms is accurate to the best of my knowledge. <span style="float: right;">12</span></p> <p>Signature _____</p> <p>Printed Name and Title _____</p> <p>Date _____</p>
	Emissions for Last Year (2007)	Emissions for This Year (2008)																																				
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Each page of each form contains a confidentiality clause at the top. Check the "yes" box only if the information you provided meets the confidentiality criteria of 40 CFR 2 Subpart B. You should provide any supporting documentation for the basis for your determination that the information should be treated as confidential. If you have any questions on how to document the data, please call SWCAA.

## Form A – Emission Point Information

**2008 Emission Inventory**  
**Southwest Clean Air Agency**  
 11815 NE 99th Street, Suite 1294, Vancouver, WA 98682-2322  
 Voice: (360) 574-3058 Fax: (360) 576-0925

FORM A: Page 1 of 1

**Emission Point Information**

Emission Point #	Point Description	Height of Emission Point, if no stack (ft)	Stack Parameters						Boiler Design (MMBtu/h)	Latitude Longitude	Operational Schedule			
			Temp (°F)	H2O (%)	Oxygen (%)	Height (ft)	Diameter (ft)	Flow (acfm)			Hr/Dy	Dy/Wk	Wk/Yr	Start Time
1	2	3	4	5	6	7	8	9	10	11				

This form identifies each of the stacks or emission points at your facility.

- 1 Emission Point # is a generic identifier for the stack or emission point. Note that this number may differ from the identification number in your permit.
- 2 Point Description is a short description of the stack or emission point.
- 3 Height of Emission Point (if no stack): If the emission point is not a stack – a fugitive emission point, for example – the height of the emission point is listed here. The stack height and diameter would not generally apply.
- 4 Temp (°F) is the temperature of the stack. If the stack is at ambient temperature, enter 68°F.
- 5 H2O (%) is the water content of the exhaust stream of the stack. This information is often obtained during a stack test.
- 6 Oxygen (%) is the oxygen content of the exhaust stream of the stack. This information is often obtained during a stack test. If the stack only vents under ambient conditions, such as a building exhaust, enter 20.9%.
- 7 Height (ft) is the height of the stack, measured from ground level to the exhaust point of the stack.
- 8 Diameter (ft) is the diameter of the stack. If the stack is rectangular, use the following:  

$$D = \sqrt{\frac{4 \times L \times W}{3.1416}}$$
 , where L is length (ft), W is width (ft), and D is circular diameter equivalent (ft).
- 9 Flow (acfm) is the flow through the stack in actual cubic feet per minute (acfm). If you have flow in standard cubic feet per minute (scfm), you will need to convert the flow to acfm.
- 10 Boiler Design: If the stack or emission point is associated with a boiler or heating unit, enter the design rating of the unit in million British thermal units per hour (MMBtu/h).
- 11 Latitude/Longitude is the latitude and longitude of the stack or emission point. If you do not have the specific location of the unit, you can enter the facility's latitude and longitude.
- 12 Operational Schedule: Enter the hours per day (hr/dy), days per week (dy/wk), and weeks per year (wk/yr) that each stack or emission point operates. The start time is the time that the unit is started each day; if the unit is operated continuously, enter 7:00 AM.

## Form B – Emission Point Control Equipment

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**Emission Point Control Equipment**

Emission Point #	Point Description	Particulate Matter		Volatile Organic Compounds		Nitrogen Oxides		Carbon Monoxide		Sulfur Dioxide		
		Primary/Secondary Control Code & Description	% Ctrl	Primary/Secondary Control Code & Description	% Ctrl	Primary/Secondary Control Code & Description	% Ctrl	Primary/Secondary Control Code & Description	% Ctrl	Primary/Secondary Control Code & Description	% Ctrl	
		Prim:		Sec:		Prim:		Sec:		Prim:		Sec:
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>								

The control of equipment and efficiencies for certain control equipment are for each emission point per pollutant in the inventory.

- 1 Emission Point # is the same as in previous forms.
- 2 Point Description is the same as in previous forms.
- 3 Primary and Secondary Control Code. For each stack or emission point, you may enter up to two emission controls. Use **Table 1** for the control code and description. If you have more than two controls, note the control code and type of control on a separate sheet.
- 4 Primary and Secondary Control Code Description. Each control code has a brief description. Verify that the code and the description are the same as that shown in **Table 1**.
- 5 % Ctrl is the overall control efficiency for each pollutant when using all emission controls.

## Form C – Process Data

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**Process Data**

Emission Point # and Process #	Process Description	Percent of Operation by Season				Annual Quantity		Maximum Hourly Quantity		SCC Code & Units for Operating Rate	Fuel Information (as applicable)				
		% Jan-Mar	% Apr-Jun	% Jul-Sep	% Oct-Dec	2007	2008	2007	2008		% Sulfur 2007	% Sulfur 2008	% Ash 2007	% Ash 2008	Heat Value 2008
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>		<b>9</b>	<b>10</b>			

**11** Does ANY information on this page meet the confidentiality criteria of 40 CFR Part 2?  Yes  No

The process data form is the basic measure used to determine the emissions for each process. These data are requested by and submitted to the EPA. The EPA uses this information along with emission unit annual emission information and source classification category (SCC) codes. These codes are used as a primary identifying data element in EPA’s AIRS Facility Subsystem (AFS), National Emission Trends database (NET), and Factor Information and Retrieval database (FIRE).

- 1 Emission Point # is the same as in previous forms.
- 2 Process #: In addition to the point number, a second number, the process number, is listed. The process number corresponds to each process for which different emissions result from the same stack or emission point. For example, a boiler could burn different fuels, and each fuel would have different emissions; therefore, each fuel would be considered a separate process.

- 3 Process Description is a short description of the stack or emission process. This description should be similar to the emission point description, but is more specific. Instead of "Boiler #1", the process description may read "Boiler #1, natural gas usage." Verify that this is an accurate description.
- 4 Percent of Operation by Season is the percent of time that each process is operating for each quarter in the year. The total of the four entries should equal 100%.
- 5 Annual Quantity is a value representing a production quantity, consumption quantity, usage quantity, or other quantity related to the emissions of air pollution. The units for the Annual Quantity are listed under "SCC Code and Quantity Units." The gray column is that data entered from last year.
- 6 Maximum Hourly Quantity: The value of the maximum hourly rate, in the units listed under "SCC Code and Quantity Units." This value can be calculated by taking the annual quantity and dividing by the hours of operation. The gray column is that data entered from last year.
- 7 SCC Code and Quantity Units: Each operation should have an associated SCC code and associated units. A listing of the codes can be obtained from the EPA website at <http://www.epa.gov/ttn/chieff/codes>. For example, SCC code 10200602 is for a 10-100 MMBtu/h natural gas boiler and the units are in million cubic feet (MMcf) of gas burned. A single emission unit may have two or more SCC codes if it uses more than one type of raw material or burns more than one type of fuel.
- 8 % Sulfur is the percent sulfur in the liquid, semi-solid, or solid fuel being burned in the emission unit. It applies only to combustion units. The gray column is that data entered from last year.
- 9 % Ash is the percent ash in the liquid, semi-solid, or solid fuel being burned in the emission unit. It applies only to combustion units. The gray column is that data entered from last year.
- 10 Heat Value: If a gaseous, liquid, semi-solid, or solid fuel is being burned, provide the heat content for the fuel in the appropriate units, Btu/scf, Btu/gal, and Btu/lb, respectively. Do not use therms.
- 11 Data Confidentiality. If this form has an entry for production data that would be considered confidential as provided in 40 CFR 2 Subpart B, check the "Yes" box here. In most cases, process information or the directly related emission estimation method cannot be considered confidential. If you believe that some of the information under the emission inventory request should be treated as confidential, you should review carefully the requirements under 40 CFR 2 Subpart B. You will need to provide an explanation and a demonstration that the confidential data meets with requirements of 40 CFR 2 Subpart B. SWCAA will make the final determination for any data identified as confidential.

### Form D – Criteria Pollutant Emissions

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**FORM D: Page 1 of 1**

**Criteria Air Pollutant Emissions**

Emission Point # and Process #	Process Description	PM (TSP)		PM10		PM2.5		Volatile Organic Compounds		Nitrogen Oxides		Carbon Monoxide		Sulfur Dioxide			
		2007		2008		2007		2008		2007		2008		2007		2008	
		EC	TPY	EC	TPY	EC	TPY	EC	TPY	EC	TPY	EC	TPY	EC	TPY	EC	TPY
1	2	3															

- 1 Emission Point # is the same as in previous forms.
- 2 Process # is the same as in previous forms.
- 3 Process Description is the same as in previous forms.
- 4 Estimation Code (EC): For each emission Point/Process and each pollutant, provide the estimation code (EC); the estimation codes are listed in **Table 2**. If you have questions about the code, please call SWCAA.
- 5 Tons per Year (TPY): For each emission Point/Process and each pollutant, enter the amount of the pollutant emitted in tons per year (TPY). **Table 3** includes a short table generated using EPA's Particulate Matter Calculator (Version 2.0) that has partitioning of PM into PM<sub>10</sub> or PM<sub>2.5</sub> based on the SCC code.

## Form E – Toxic and Hazardous Air Pollutants

<b>2008 Emission Inventory</b> <b>Southwest Clean Air Agency</b> 11815 NE 99th Street, Suite 1294, Vancouver, WA 98682-2322 Voice: (360) 574-3058 Fax: (360) 576-0925										FORM E: Page 1 of 1	
<b>Toxic Air Pollutant Emissions</b>											
Emission Point # and Process #	Process Description	Toxic Air Pollutant			HAP	Primary/Secondary Control Code & Description	% Ctrl	Annual Quantity 2008	SCC Code & Quantity Units	Toxic Air Pollutant Emissions	
		CAS #	Name/Classification							2007	2008
1	2	3	4	5	6	7	8	9	10	11	12

This form provides a more detailed accounting of the TAPs and HAPs emitted by your facility.

- 1 **Emission Point #** is the same as in previous forms.
- 2 **Process #** is the same as in previous forms.
- 3 **Process Description** is the same as in previous forms.
- 4 **Chemical Abstract Service (CAS) #**: For each emission Point/Process, enter the CAS number for the toxic air pollutant (TAP) emitted. The CAS number can be found in **Table 4**, which is arranged alphabetically. A list of pollutants can be found at <http://www.swcleanair.org/forms.html>.
- 5 **Name/Classification**: Enter the name of the pollutant. Names of pollutant and the SCC associated CAS number can be found in **Table 4**.
- 6 **Hazardous Air Pollutant (HAP)** is shown either as a "Y" for those pollutants listed as HAPs, or "N" for pollutants listed as toxic air pollutants (TAPs). This information is available in **Table 4**.
- 7 **Primary and Secondary Control Code**. For each stack or emission point, you may enter up to two emission controls. Use **Table 1** for the control code and description. If you have more than two controls, note the control code and type of control on a separate sheet.
- 8 **Primary and Secondary Control Code Description**. Each control code has a brief description. Verify that the code and the description are the same as that shown in **Table 1**.
- 9 **% Ctrl** is the overall control efficiency for each pollutant when using all emission controls. Note that this number may be different depending upon the type of pollutant being controlled. For example, a VOC would not be controlled by a particulate filter.
- 10 **Annual Quantity** should be the same value as that listed in Form C for the emission point and process number combination.
- 11 **SCC Code and Quantity Units**: Each operation should have an associated SCC and units. The code and units should be the same value as that listed in Form C for the emission point and process number combination.
- 12 **Estimation Code (EC)**: For each emission Point/Process and each pollutant, provide the estimation code; the estimation codes are listed in **Table 2**. If you have questions about which code to use, please contact your inspector at SWCAA.
- 13 **Pounds Per Year (lb/yr)**: For each emission Point/Process and each pollutant, enter the amount of the pollutant emitted in pounds per year (lb/yr). Note that these are different units from the reporting requirements for criteria pollutants.

### Additional Information

When submitting the forms to SWCAA, it is recommended that the facility include any calculations you have made and include a description of any assumptions made when determining your emissions. SWCAA staff can then understand how the emissions were calculated. If you have any questions about how to fill out these emission forms, or how emission information should be determined, please contact your facility's SWCAA representative at (360) 574-3058.