



P I N A L ♦ C O U N T Y

wide open opportunity

Emission Inventory Compliance Assistance Conference Call



Pinal County Air Quality

March 3, 2015

Hanna Valenzuela

Introduction

- The annual emission inventory long forms are required to be submitted by facilities per their Pinal County Air Quality Permit requirements and needs to include all processes emitting reportable air pollutants and provide details about each process
- Accurate and detailed reports submissions allows us to quickly review and notate reported emissions for various purposes including:
 - Determining a source's compliance with its air quality permit conditions
 - Identifying processes that may need new or additional controls
 - Providing a means of assessing progress in achieving reductions from existing controls and or equipment
 - Providing the basis for determining annual emission fees for the Title V sources
 - Using the data as an input for air quality modeling to determine/demonstrate compliance with the National Ambient Air Quality Standards (NAAQS)

Presentation Topics

- In this presentation, we will be going through a sample emission inventory form, section by section, to show a completed form as well as explain some common errors
- Process:
 1. Verify which sections are needed for your business
 2. Complete the applicable sections
 3. Make a copy of your complete emission inventory report
 4. Make sure the certification section is signed by a Responsible Official (this must be the CEO, President, or other equivalent Officer of the company)
 5. Return the original, signed copy of your annual emission inventory report to Pinal County Air Quality, P.O. Box 987, Florence AZ 85132

Emission Inventory Form Section 1

- Include current permit number
- Verify the person preparing the emission inventory is the person who knows most about the data in the report and that all contact information is current
- The person who should receive the Annual Emission Inventory Survey Packet next year should be someone who is directly employed by the business

 **PINAL COUNTY**
Pinal County, Arizona

Permit # C12345
Year of Emissions Inventory: 2014

SECTION 1 *Facility Identification and Mailing Information*

1. Company Name: ABC Industries

2. Facility Name: ABC Plant

3. Facility Street Address (Physical Location): 31 N Pinal Street, Building F

4. City: Florence 5. Zip Code: 85132

6. SIC Code: Primary: 1234 Secondary:

7. NAICS Code: Primary: 123456 Secondary:

8. Who prepared this Emissions Inventory?
Name: Hanna Valenzuela
Title: Emission Inventory Engineer
Company Affiliation: PCAQCD
Telephone: 5208666806 Email Address: hanna.valenzuela@pinalcountyz.gov

9. Who should receive the Annual Emissions Inventory Survey Packet next year?
Name: Hanna Valenzuela Title: Emission Inventory Engineer Company Affiliation: PCAQCD
Address: P.O. Box 987 City: Florence State: AZ Zip Code: 85132
Telephone: 5208666806 Fax: 5208666967

Emission Inventory Form Section 2

- Include Year and Company/Facility name on each section and page
- Total emissions should be reported in tons per year
- Verify total emissions include all reported processes
- Title V sources need to list all billable emissions
- If choosing yes on the Confidentiality Statement, the permittee must additionally supply a written request providing a valid justification as detailed in PCAQCD Code §3-1-120
- Make sure that the form is signed by a Responsible Official



Pinal County Air Quality Control District Emissions Inventory

Year: 2014

Company/Facility: ABC Plant

SECTION 2 Data Certification [For all sources to complete unless otherwise noted]

For EACH pollutant listed, total up all emissions recorded on your Section 6, Pollutant Information and enter the numbers below (IN TONS PER YEAR):

CO	HAPs	NOx	Pb	PM ₁₀	SO _x	PM _{2.5}	VOC	NH ₃
2.05	0.12	5.09	0.00	0.80	0.08	0.80	0.26	0.00

BILLABLE EMISSIONS in accordance to §3-7-690.C.4

For Title V Sources ONLY

HAPs	NOx	Pb	PM10	SOx	VOC
0.12	5.09	0.00	0.80	0.08	0.26

Confidentiality Statement

This annual emissions report contains requests to keep some data confidential.

YES

NO

If you check "YES", you must submit document and meet certain requirements before your data can be deemed confidential. See instructions for further details.

I certify that based on information and belief formed after reasonable inquiry, the statements and information in this emissions inventory form and on its attachments are true, accurate, and complete. I am aware that there are substantial penalties for submitting false information, including the possibility of fines and imprisonment (A.R.S. §13-2704).

RESPONSIBLE OFFICIAL (PLEASE PRINT)

TITLE

SIGNATURE

DATE

Emission Inventory Form Section 5

- A process is a business activity at the site that emits one or more pollutants and has only one material type as input and one operating schedule
- Each process at the site must be assigned a unique Process ID
- For each Process ID indicate an Equipment ID listed in Section 4
- Provide the current SCC code
- Include the annual throughput and throughput units
- Must provide a unit conversion factor if the emission factor provided is not in the same unit of measure as the annual throughput



Pinal County Air Quality Control District Emissions Inventory

Year: 2014

Company/Facility: ABC Plant

SECTION 5 Process Identification Information

1. PROCESS ID:	1	4. Is this process information confidential?	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>
2. Equipment ID:	1	5. Process Name:	Electric Generation	
3. Stack ID:	1	6. Process Description:	CTA	

7. SCC Code: 20100201 (8 digit number)

8. Process Material: Natural Gas

9. Check One: Processed (input) Produced (output) Existing (e.g. VMT, acres)

10. Normal Operating Schedule: Hrs/Day 24 Days/Wk 7 Hrs/Yr 80

11. Seasonal Throughput Percent: Dec-Feb 25 % Mar-May 25 %
Jun-Aug 25 % Sep-Nov 25 %

12. Annual Throughput: 238,529

13. Throughput Units:
 Feet Board feet 1000 cubic feet Vehicular miles traveled Other (specify) MMBTU
 Tons Pounds Gallons square ft Hours of operation

14. Unit Conversion Factor (if needed to convert Throughput Units to correlate with Emission Factor Units)

Emission Inventory Form Section 6

- Provide Emission Factors and Units for each Pollutant
- Verify that the emissions factors used from the source test results are from the most current source test
- Include Emissions Method for each pollutant
- Provide Efficiency method if using control equipment
- PCAQCD staff must be able to verify Estimated Actual Emissions



Pinal County Air Quality Control District Emissions Inventory

Year:
2014

Company/Facility:
ABC Plant

SECTION 6 Pollutant Information										
1	2	3	4	5	6	7	8	9	10	11
Process ID	Pollutant CAS#	Pollutant Name	Emission Factor	Units	Control ID	Control Efficiency	Estimated Actual Emissions	Units (tpy or lb/yr)	Emissions Method	Efficiency Method
1	10102440	NO2	0.0416	lb/mmbtu			4.96	tpy	1	
1	630080	CO	0.0169	lb/mmbtu			2.02	tpy	1	
1	AZ0023	VOC	.0021	lb/mmbtu			0.25	tpy	4	
1	AZ0019	PM10	.0066	lb/mmbtu			0.79	tpy	4	
1	7446095	SO2	.0006	lb/mmbtu			0.07	tpy	1	
1	AZ0020	PM2.5	.0066	lb/mmbtu			0.79	tpy	4	
1	Various	HAPS	1.03E-03	lb/mmbtu			245.68	lb/yr	4	

Emissions Method

- 1 - CEM
- 2 - Source Test
- 3 - Material Balance/engineering judgment
- 4 - AP-42 factor
- 5 - Control Officer approved emission factor
- 6 - Other

Efficiency Method

- 1 - Tested/EPA reference method
- 2 - Tested/Other method
- 3 - Design value from manufacturer
- 4 - Best guess/engineering estimate
- 5 - Calculated based on mass balance
- 6 - Estimated, based on published value
- 7 - Computer-generated default value
- 8 - Other

Emission Inventory Form Section 7

- Show sample calculations used to obtain the pollutant emissions
- This allows PCAQCD staff to verify if emissions were calculated correctly



Pinal County Air Quality Control District Emissions Inventory

Year: 2014

Company/Facility: ABC Plant

Section 7

Sample Calculations

Equipment ID: 1

Process ID: 1

Pollutant: PM10

Emissions Estimate

$$\begin{aligned} \text{PM10} &= .0066\text{lb/mmBtu} \times 238,529 \text{ mmBTU/year} \\ &= 1574.29 \text{ lb/year} / 2000 \text{ lb/ton} \\ &= 0.79 \text{ ton/year} \end{aligned}$$

Preventing Common Errors

- Verify that total emissions provided in Section 2 equal the process emissions provided in Section 6
- PM2.5 emissions cannot be larger than PM10 emissions
- Provide current SCC Code for all processes and the source of all emission factors (ex CEM, Source Test, AP-42)
- Provide units of measure for all emission factors and annual throughputs
- Use the most current source test emission factors

Important Things to Remember

- Emission Inventory Forms are normally due by April 30th of each year
- Fill out completely and accurately
- Include all information for emission processes such as annual throughputs and emission factors
- Verify all emission totals are reproducible based on information provided in order for staff to double check emissions
- Provide correct and up to date contact information for the person completing the emission inventory forms
- Show sample calculations in Section 7 for the emissions listed in Section 6

Questions? Contact Us

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