

2011 Emission Inventory Guidelines For Air Districts

California Air Resources Board
Planning and Technical Support Division
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What's New?

- **Starting with the 2011 inventory year, the timeline for reporting emissions data to ARB is shortened from 11 months to 8 months.** ARB must report 2011 emissions to the U.S. EPA no later than Dec 31, 2012 as required by the Air Emission Reporting Requirements (AERR) Rule*. **Therefore, 2011 emission inventory updates from districts should be reported to ARB by August 3, 2012.**
- **Reporting of lead (Pb) is required** – In order to comply with the U.S. EPA AERR Rule*, lead and lead compound emissions of 5 tons or more per year must now be reported to ARB (see page 2).
- **Reporting of Condensable Particulate is required** - The Federal Clean Air Fine Particle Implementation Rule (40CFR, Part 51.1008) requires States to submit to U.S. EPA statewide emission inventories for direct PM_{2.5} (non-condensable and condensable) emissions and emissions of PM_{2.5} precursors (see page 3).

*The complete text of the Air Emission Reporting Requirements (AERR) Rule is available from U.S. EPA's website at: <http://www.epa.gov/ttn/chief/aerr/>

What data needs to be reported to ARB?

The Air Resources Board (ARB) is responsible for developing annual statewide emission inventories based on data submitted by the air pollution control districts or generated by ARB staff. Local air districts are responsible for reporting emissions from all point sources and those area source categories considered as district categories. A list of area source categories, along with a designation as to who is responsible for the data submittal, is available on the web at: <http://www.arb.ca.gov/ei/areasrc/lstareasccats809.pdf>

ARB estimates emissions from on-road mobile and biogenic (non-anthropogenic) sources and works cooperatively with you in developing emission estimates for aggregated point sources, area-wide sources, and off-road mobile sources. Recently, we have also developed statewide emission estimates for locomotives, ships, harbor craft, and stationary and portable agricultural engines. With the exception of on-road mobile sources, you have

the option of reporting emissions for these source categories instead of using the default emissions estimates we develop.

When should my district report emissions inventory data to ARB?

We are requesting that you report emissions data for your district within 8 months of the end of the inventory year, by **August 3**. The deadline for ARB to submit 2011 data to U.S. EPA has been moved to December 31, 2012 by the Air Emission Reporting Requirements (AERR) Rule. **Therefore, the deadline for submitting your district's 2011 inventory year data to ARB is August 3, 2012.** We will publish your point source data on our website by January 2013. We will also submit your data to U.S. EPA for the National Emission Inventory (NEI) by December 2012 as required by the AERR Rule.

What is the timeline for inventory reporting?

The table below lists the most important inventory milestones for the 2011 reporting year. District deadlines are shown in bold.

Due Date	Task	Responsibility
April 6, 2012	Create 2011 CEIDARS database.	ARB
August 3, 2012	Submit 2011 point source updates and corrections to the ARB.	District
August 3, 2012	Submit area source updates grown and controlled to 2011 to the ARB.	District
October 1, 2012	Complete update of 2011 CEIDARS for submittals received as of August 3, 2011.	ARB
October 1 – December 1, 2012	Review and QA period for the 2011 inventory	ARB/District
December 31, 2012	Submit 2011 inventory (all sources) to U.S. EPA for the National Emission Inventory (NEI).	ARB

What are the reporting requirements and thresholds?

A. Point Sources

Pollutants: You must report emissions of criteria pollutants (CO, NO_x, SO_x, PM, and TOG) as well as Pb and NH₃. CO, NO_x, SO_x, PM, and TOG emissions should be reported in tons per year, however **NH₃ and Pb emissions must be reported in pounds per year.** You must also report emissions in pounds per year of all toxic pollutants listed in Appendix A of the AB2588 Air Toxics “Hot Spots” Program Emission Inventory Criteria and Guidelines.

Note: You have the option of also reporting ROG, VOC, PM10, and PM2.5. If you do not provide emissions for these four pollutants, we will speciate them based upon your TOG and PM data.

If you report a facility's criteria and toxics data as a merged transaction, please report NH3 and Pb emissions only once. If you report criteria and toxics data separately, please include NH3 and Pb in both reports. If the facility does not currently report toxics, please report NH3 and Pb (5 tons or more per year only) with criteria pollutants.

Direct Particulate Emissions: The Federal Clean Air Fine Particle Implementation Rule (40CFR, Part 51.1008) requires states to submit to U.S. EPA statewide emission inventories for direct PM2.5 emissions and emissions of PM2.5 precursors.

Direct PM2.5 emissions are defined as solid particles emitted directly from an air emissions source or activity, or gaseous emissions or liquid droplets from an air emissions source or activity which condense to form particulate matter at ambient temperatures (i.e., "condensable"). Direct PM2.5 emissions include elemental carbon, directly emitted organic carbon, directly emitted sulfate, directly emitted nitrate, and other inorganic particles (including but not limited to crustal material, metals, and sea salt) (40CFR, Part 51.1000).

In order to estimate direct PM2.5 emissions, the PM, PM10, and/or PM2.5 emissions reported to ARB should include both solid particles (non-condensable, also known as filterable) and condensable particles.

Non-condensable versus Condensable PM: Non-condensable or filterable PM are particles that are directly emitted as a solid or liquid at stack or release conditions and captured on the filter of a stack test train. Non-condensable PM may be PM10 or PM2.5. Condensable PM is material that is in the vapor phase at stack conditions but condenses and/or reacts upon cooling and dilution in the ambient air to form a solid or a liquid particulate immediately after discharge from the stack. Condensable PM is almost always PM2.5 or less.

Combustion sources typically emit both non-condensable and condensable emissions. Examples include boilers, furnaces and kilns, and both reciprocating internal combustion engines and turbines. Fugitive dust sources emit non-condensable emissions only. Examples of fugitive dust sources include storage piles and unpaved roads at industrial sites.

Use the current pollutant codes 11101, 85101, and 88101 to report total (non-condensable + condensable) PM, PM10, and/or PM2.5. Use the following three new pollutant codes to report **non-condensable** emissions only:

- 11105:** PM (non-condensable only)
- 85105:** PM10 (non-condensable only)
- 88105:** PM2.5 (non-condensable only)

Reporting Thresholds and Frequency: Every year, you should report criteria pollutant emissions for all point sources in your district that emit 10 or more tons/year of any of the pollutants listed above. However, please note that Pb has a reporting threshold of 5 tons/year.

Every three years, you should report criteria pollutant emissions for facilities that emit less than 10 tons per year. The reporting schedule and thresholds for point sources are provided below:

Source Type	Reporting Year				
	2011	2012	2013	2014	2015
Point Sources = or > 10 tons/year*	X	X	X	X	X
Point Sources < 10 tons/year	X			X	

*
Reporting
threshold
for

lead (Pb) is 5 tons/year

In addition, you should annually report the toxic emissions from the following:

- High-risk facilities – those with a risk of 10 in a million or emitting 10 tons per year of any single hazardous air pollutants (HAP) or 25 tons per year of any combination of HAPs.
- Facilities required to report under the AB2588 Air Toxics “Hot Spots” Program.

Reporting Format: To facilitate updating of the CEIDARS database, you should report emissions using the CEIDARS 2.5 transaction format as defined on the ARB Emission Inventory District Assistance website (<https://secure.arb.ca.gov/sslapp/emsinv/dist/>). For point sources, you should submit all tables included in the transaction format file. For facilities reporting both criteria and toxic pollutants, you should provide emissions in one merged submittal. If a facility is not in the toxic program, you do not need to report toxic emissions. Likewise, if a facility’s only reason for reporting is to meet toxics reporting requirements, you do not need to report criteria emissions.

B. Area Sources

Pollutants: You must report emissions of criteria pollutants (CO, NOx, SOx, PM, and TOG) as well NH3. We will estimate the toxics emissions for your area source categories by speciating your criteria emissions data. **Please report NH3 in pounds per year.**

Note: You have the option of also reporting ROG, VOC, PM10, and PM2.5. If you do not provide emissions for these four pollutants, we will speciate them based upon your TOG and PM data.

Reporting Thresholds and Frequency: You should update your area sources at least every three years (see schedule above for point sources emitting less than 10 tons/year), or update one third of your categories annually.

Reporting Format: To facilitate updating of the CEIDARS database, you should report emissions using the CEIDARS 2.5 transaction format available on the ARB Emission Inventory District Assistance website. For area sources, you need to submit only the “Process” and “Emission” tables included in the transaction format file.

C. Control Data

Control Factors: You should develop and report control factors for each rule that has been adopted by your district. This information is used by ARB in developing emission projections that are published in the annual *California Almanac of Emissions and Air Quality*, as well as on the ARB website.

Reporting Frequency: To ensure that our emission projections properly reflect the benefits of your rules, we encourage you to provide control factors as soon as a rule is adopted or at least once a year as part of your CEIDARS submittal. If we do not receive control factors from your district, our projections assume no emission reductions for those categories.

Reporting Format: To facilitate updating of the California Emission Forecasting System (CEFS), please use the Excel template for reporting of control factor data to ARB. To obtain a copy of the reporting template, please contact Martin Johnson at (916) 324-5783 or mjohnson@arb.ca.gov.

D. Growth Data

Growth Factors: ARB is continuously developing and updating a default set of growth factors for each source category in the emission inventory. This information is used by the ARB CEFS program to develop emission projections for your district that are published in the annual *California Almanac of Emissions and Air Quality* as well as on the ARB website. At a minimum, you should review the projected emission estimates for your district’s major source categories as found in the *Almanac* as well as the growth assumptions described in the *Almanac* and the *Area-Wide Source Methodologies*. You have the option of developing and providing your own set of growth factors for all district responsibility source categories. If you have any questions regarding the default growth factors applied to your district’s emissions or would like to provide your own, please contact your CEIDARS Emission Inventory Liaison.

Reporting Frequency: We recommend that you review your growth data whenever you update a source category and provide the growth assumption updates as part of your annual CEIDARS submittal.

Reporting Format: To facilitate updating of CEFS, please use the Excel template for reporting of growth data to ARB. To obtain a copy of the reporting template, please contact Martin Johnson at (916) 324-5783 or mjohnson@arb.ca.gov.

How should my district report data to ARB?

We encourage you to report emission inventory data to us electronically using the CEIDARS 2.5 transaction format as it will facilitate updating of the CEIDARS database.

If your district is using the Hot Spots Analysis and Reporting Program (HARP), you can generate an output file in CEIDARS transaction format. The most recent version of HARP can be downloaded from the ARB website at: <http://www.arb.ca.gov/toxics/harp/harp.htm> or a CD can be obtained by calling your CEIDARS Emission Inventory Liaison (see the ARB District Resources website at: <http://www.arb.ca.gov/ei/drei/maintain/districtliaisons.htm> for a list of the liaisons and their contact information or see the table at the end of these guidelines).

If your district is using an emission inventory database other than HARP, you should convert your data into CEIDARS 2.5 transaction format and FTP the file to the ARB. Please contact your CEIDARS Emission Inventory Liaison if you need assistance with this type of submittal.

What kind of QA process does ARB have to ensure my district's data are correct?

ARB has a number of computerized quality assurance (QA) checks that are run to ensure the data you submit are accurate and reasonable. Following your data submittal in August, we will run these QA tests to ensure your data are valid. The QA tests are also available for district staff to use through the ARB District Resources website at: <https://secure.arb.ca.gov/sslapp/emsinv/dist/>

Why do I need to submit data?

State and federal legal mandates require us to compile the statewide emission inventory. These mandates include:

- State Health and Safety Code
- California Clean Air Act (CCAA) of 1988
- State Air Toxics "Hot Spots" Information and Assessment Act (AB2588) of 1988
- State Atmospheric Acidity Protection Program (AB2930) of 1988
- Federal Clean Air Act Amendments (CAAA) of 1990
- Federal Air Emissions Reporting Requirements (AERR) Rule of 2008

A more complete description of these mandates is available on the ARB District Resources website at: <http://www.arb.ca.gov/ei/drei/maintain/legalrequirements.pdf>.

Emission inventory data will be reported on our website, in the *California Almanac of Emissions and Air Quality*, and to the U.S. EPA as being year 2011 or earlier vintage. We encourage you to provide us with timely and complete data submittals.

What tools and assistance are available from ARB to help my district prepare and report emissions data?

We have developed a suite of publications, software packages, and training programs to assist your district in developing and submitting emissions inventory data to us. These documents and tools are available through the District Resources for Emissions Inventory website at <http://www.arb.ca.gov/ei/drei/drei.htm>.

The HARP software program, which includes the CEIDARS-Lite emission inventory module, can be downloaded from ARB website at: <http://www.arb.ca.gov/toxics/harp/harp.htm>. A CD containing the program can be obtained by calling your CEIDARS Emission Inventory Liaison.

How will the emissions data submitted by my district be used?

We will use your emission inventory data for many different programs, including:

- Developing air quality management plans
- Determining reasonable further progress (RFP)
- Developing potential control measures
- Analyzing new source impacts
- Determining control program effectiveness
- Predicting future air quality through modeling analyses
- Determining compliance of emissions sources
- Supporting environmental justice and neighborhood level assessments
- Publication in the annual Almanac of Emissions and Air Quality
- Performing neighborhood-level health risk assessments

In addition, we will be submitting your emissions data on an annual basis to the U.S. EPA for the National Emission Inventory (NEI) as required by the AERR Rule. We will also make your data available to the public through our website and tools such as the Community Health Air Pollution Information System (CHAPIS).

Who is my inventory liaison?

The table listed below identifies the ARB emission inventory liaison for your district. If you have comments or questions about these guidelines or the emission inventory process please give them a call.

AGENCY	ARB CONTACT	TELEPHONE	E-MAIL
Amador	Andy Delao	(916) 324-7169	adelao@arb.ca.gov
Antelope Valley	Chris Nguyen	(916) 322-7141	tnguyen@arb.ca.gov
Bay Area	Vincent Agusiegbe	(916) 322-7078	vagusieg@arb.ca.gov
Butte	Anna Komorniczak	(916) 327-8170	akomorni@arb.ca.gov
Calaveras	Andy Delao	(916) 324-7169	adelao@arb.ca.gov
Colusa	Anna Komorniczak	(916) 327-8170	akomorni@arb.ca.gov
El Dorado	Anna Komorniczak	(916) 327-8170	akomorni@arb.ca.gov
Feather River	Anna Komorniczak	(916) 327-8170	akomorni@arb.ca.gov
Glenn	Anna Komorniczak	(916) 327-8170	akomorni@arb.ca.gov
Great Basin Unified	Andy Delao	(916) 324-7169	adelao@arb.ca.gov
Imperial	Chris Nguyen	(916) 322-7141	tnguyen@arb.ca.gov
Kern	Vivian Lerch	(916) 324-4478	vlersch@arb.ca.gov
Lake	Vincent Agusiegbe	(916) 322-7078	vagusieg@arb.ca.gov
Lassen	Vincent Agusiegbe	(916) 322-7078	vagusieg@arb.ca.gov
Mariposa	Andy Delao	(916) 324-7169	adelao@arb.ca.gov
Mendocino	Vincent Agusiegbe	(916) 322-7078	vagusieg@arb.ca.gov
Modoc	Vincent Agusiegbe	(916) 322-7078	vagusieg@arb.ca.gov
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Monterey Bay Unified	Vivian Lerch	(916) 324-4478	vlersch@arb.ca.gov
North Coast Unified	Vincent Agusiegbe	(916) 322-7078	vagusieg@arb.ca.gov
Northern Sierra	Anna Komorniczak	(916) 327-8170	akomorni@arb.ca.gov
Northern Sonoma	Vincent Agusiegbe	(916) 322-7078	vagusieg@arb.ca.gov

Placer	Anna Komorniczak	(916) 327-8170	akomorni@arb.ca.gov
Sacramento Metro	Anna Komorniczak	(916) 327-8170	akomorni@arb.ca.gov
San Diego	Jim Dai	(916) 324-1558	jdai@arb.ca.gov
San Joaquin Valley	Vivian Lerch	(916) 324-4478	vlerch@arb.ca.gov
San Luis Obispo	Vivian Lerch	(916) 324-4478	vlerch@arb.ca.gov
Santa Barbara	Andy Delao	(916) 324-7169	adelao@arb.ca.gov
Shasta	Vincent Agusiegbe	(916) 322-7078	vagusieg@arb.ca.gov
Siskiyou	Vincent Agusiegbe	(916) 322-7078	vagusieg@arb.ca.gov
South Coast	Vijay Bhargava	(916) 322-7148	vbhargav@arb.ca.gov
Tehama	Anna Komorniczak	(916) 327-8170	akomorni@arb.ca.gov
Tuolumne	Andy Delao	(916) 324-7169	adelao@arb.ca.gov
Ventura	Vijay Bhargava	(916) 322-7148	vbhargav@arb.ca.gov
Yolo-Solano	Anna Komorniczak	(916) 327-8170	akomorni@arb.ca.gov
U.S. EPA	Chris Nguyen	(916) 322-7141	tnguyen@arb.ca.gov