



COMPREHENSIVE EMISSION INVENTORY GUIDELINES

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COMPREHENSIVE EMISSION INVENTORY GUIDELINES FOR THE MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT

PURPOSE

This guideline establishes a uniform method for preparing and submitting a Comprehensive Emission Inventory Plan (CEIP) and Comprehensive Emission Inventory Report (CEIR) for all existing, new, or modified stationary sources of air pollution within the Mojave Desert Air Quality Management District (District). The CEIP and CEIR, which are prepared pursuant to these guidelines, should be able to satisfy all of the Federal, State, and District requirements for air emission inventories.

FEDERAL AND STATE REQUIREMENTS

Several sections of the Federal Clean Air Act (FCAA) require the maintenance and use of emission inventory data for a variety of purposes. To improve and simplify emission reporting the USEPA has established requirements for the reporting of point, area and mobile sources emissions which is found in the Consolidated Emissions Reporting Rule, 40 CFR 51, Subpart A (67 FR 39611, 6/10/2002).

The California Clean Air Act (CCAA) (Health & Safety Code §§39000 et seq.) requires the collection and maintenance of several different emissions inventories, including a criteria emission inventory (Health & Safety Code §39607) and a toxic emission inventory (Health & Safety Code §44340). In addition, specific sources of air pollutants are required to submit a Toxic Emission Inventory Plan (TEIP) and Toxic Emission Inventory Report (TEIR) (Health & Safety Code §§44341 - 44342).

APPLICABILITY

All existing stationary sources of air pollutants are required to periodically prepare and submit a CEIP and CEIR on a schedule prescribed by the District. All proposed new stationary sources of air pollutants are required to submit a CEIP and CEIR for the proposed new emission unit(s) in conjunction with their application for permit(s) pursuant to the provisions of the District's Permit and New Source Review Rules and Regulations. Existing stationary facilities or sources of air pollutants are required to submit a CEIP and CEIR for proposed new emission unit(s) and update their current CEIP and CEIR for modifications to existing emission unit(s) pursuant to the provisions of the District's Permit and New Source Review Rules and Regulations.

DEFINITIONS

For purposes of these Guidelines, the definitions contained in District Rules 1401 and 1301 control unless otherwise defined herein.

Existing Stationary Source - Any Facility or Emissions Unit which:

- (a) Is required to have a Permit to Operate (PTO) pursuant to the provisions of District Rules and Regulations
- (b) Is an Emissions Unit or process type which is listed in Appendix "E" of *Emission Inventory Criteria and Guidelines for the Air Toxics 'Hot spots' Program* as adopted by reference in 17 California Code of Regulations §93300.5
- (c) Is subject to an Airborne Toxic Control Measure (ATCM)
- (d) Is subject to a New Source Performance Standard (NSPS) [*See 42 U.S.C. §7411 & 40 CFR 60*]
- (e) Is subject to a National Emission Standard for Hazardous Air Pollutant (NESHAP) Standard [*See 42 U.S.C. §7412 & 40 CFR 61*]
- (f) Is subject to a Maximum Achievable Control Technology (MACT) Standard [*See 42 U.S.C. §7412 & 40 CFR 63*]

PROCEDURE

General Requirements

The comprehensive emission inventory includes the release of all substances (criteria pollutants, their precursors, and toxic substances) emitted into the ambient air. Sources of emissions are anthropogenic and non-anthropogenic sources. Anthropogenic (man-made) sources include stationary sources (point area, volume, pit, etc.), consumer activities, fugitive dust from disturbed land areas, prescribed burns, structural fires, etc. Non-anthropogenic (natural occurrences) sources include wind blown dust, volcanoes, earthquakes, fires, etc.

The CEIP and CEIR are to include all permitted sources (equipment) and their fugitive emissions (except for air pollution control equipment that is attached to other permitted sources) and all unpermitted sources and their fugitive emissions. Fugitive sources include, but are not limited to, equipment leaks, roadways (paved and unpaved), stockpiles, wind erosion of exposed area, quarry activities (drilling, blasting, material handling, storage, etc.), etc.

Existing stationary sources that emit more than ten (10) tons per year of a criteria pollutant or their precursors are required to prepare and submit (or update) a CEIP and CEIR annually for criteria pollutant emissions, and every three (3) years for toxic substances. If the emissions from a stationary facility have not changed by more than ten (10) percent from the original CEIR they can request that the District rollover the CEIR for the second and third year by submitting the form entitled "UDS". Sources that emit less than ten (10) tons per year of a criteria pollutant or their precursors are required to prepare and submit a CEIP and CEIR every three (3) years. Please refer to the Third Year Cycle section to view the date a facility has to submit their inventory.

Criteria Pollutants

The following criteria pollutants are to be included in the CEIP and CEIR:

- Ammonia – NH₄
- Carbon Monoxide – CO
- Lead and Lead Compounds – Pb
- Nitrogen Oxides – NO_x
- Particulate Matter less than 10 microns – PM₁₀
- Particulate Matter less than 2.5 microns – PM_{2.5}
- Reactive Organic Gases – ROG
- Sulfur Oxides – SO_x
- Total Organic Gases – TOG
- Total Suspended Particulates – TSP
- Volatile Organic Compounds – VOC

Please note that the Federal Clean Air Fine Particulate Implementation Rule (40 CFR 51 §1008) requires states to submit to USEPA statewide emission inventories for direct PM_{2.5} emissions and emissions of PM_{2.5} precursors.

Direct PM_{2.5} 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 PM_{2.5} 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) (40 CFR 51 §1000).

In order to estimate direct PM_{2.5} emissions, the PM, PM₁₀, and/or PM_{2.5} emissions reported to CARB should include both solid particles (non-condensable) and condensable particles. Use the current pollutant codes 11101, 85101, and 88101 to report total (non-condensable + condensable) PM, PM₁₀, and/or PM_{2.5}. Use the following three new pollutant codes to report **non-condensable** emissions only;

- 11105:** PM (non-condensable only)
- 85105:** PM₁₀ (non-condensable only)
- 88105:** PM_{2.5} (non-condensable only)

Toxic Substances

The toxic substances which are to be included in the CEIP and CEIR are listed in the following:

- (a) Appendix A, *Emission Inventory Criteria and Guidelines for the Air Toxics 'Hot spots' Program* (CARB); consisting of;
 1. Appendix A-I Substances for which emissions must be quantified,
 2. Appendix A-II Substances for which production, use or otherwise present must be reported,

3. Appendix A-III Substances for which emissions must be quantified if manufactured by the facility, and

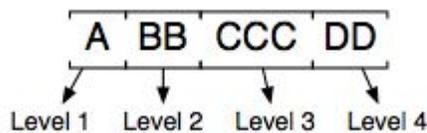
- (b) 42 U.S.C. §7412(b) “List of Pollutants (Federal Clean Air Act §112(b) “List of Pollutants”).

Copies of these lists are available at the CARB and/or USEPA websites (See “References”) or upon request from the District.

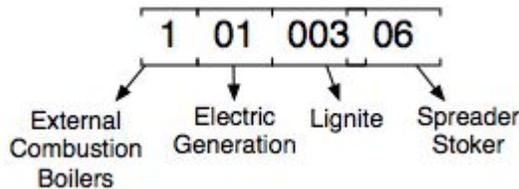
Source Classification Code (SCC)

District, State, and Federal emission inventory programs use SCCs to classify different types of anthropogenic emission activities. SCCs have 8 digits for point sources.

The code structure for the 8-digit point-source codes is:



An example point-source activity and corresponding SCC is given below: “External Combustion Boilers; Electric Generation; Lignite; Spreader Stoker” is represented by 10100306. Below we have mapped the levels of this description with the levels of the SCC:



Historically, the District has allowed the use of an SCC with all 9’s, i.e. “99999999” to classify a process that did not specifically fit into all Levels 1 through 4. The District will no longer allow this method of classification and instead encourages the preparer of CEIP/CEIR to classify the facility operation to the highest level possible.

Preparing the Comprehensive Emission Inventory Plan (CEIP)

The CEIP is a plan on how the CEIR will be prepared. The CEIP must be on District forms (‘CER’, ‘SIC’, ‘LOC’, ‘DFD’, and ‘EQM’) or forms approved by the District. Preparation of the CEIP shall be performed pursuant to the procedure found in the most recent *Emission Inventory Criteria and Guidelines for the Air Toxics ‘Hot Spots’ Program* as adopted by CARB. All forms, worksheets, and lists are available electronically, in Excel format, from the District upon request. Copies of the CARB documents are available at the CARB website (See “References”) or from the District upon request. For forms or documents please contact Chris Anderson @ 760 245-1661 x1846 or by email; canderson@mdaqmd.ca.gov.

Preparing the Comprehensive Emission Inventory Report (CEIR)

The CEIR shall be prepared in accordance with the procedures found in the following:

- (a) *Emission Inventory Procedural Manual Volume I – Inventory Development Process;*
and,
- (b) *Emission Inventory Criteria and Guidelines for the Air Toxics ‘Hot Spots’ Program.*

The CEIR shall be in a format that can be “Imported” into the HARP computer program. District forms ‘CER’ and ‘LOC-ES’ must be included with each CEIR submittal. Copies of the above referenced documents and the HARP program may be obtained at the CARB website (See “References”) or from the District upon request.

SCHEDULE

General

All existing stationary sources of air pollutants are required to submit CEIP and CEIR upon a schedule established by the District. This schedule is determined by the facility type based on the applicable SIC code and is set forth in the Third Year Cycle provisions below. Please note that a new or updated CEIP and CEIR will be required for new or modified Facilities or Emission Units in conjunction with the application for construction or modification (See the requirements of District Rule 1302). Such new or updated CEIP/CEIR will not exempt a Facility from submitting its next regularly scheduled submission under the Three Year Cycle. Please note that beginning in calendar year 2012, the annual time table for submissions will be accelerated 3 months to accommodate the requirements of the USEPA Air Emissions Reporting Requirement (AERR) Rule 40 CFR 51, Subpart A (73 FR 76552).

Application CEIP/CEIR Submissions

New or modified Facilities or Emissions Unit(s) are required to submit a CEIP and CEIR with the application for construction or modification. For existing Facilities with a current CEIP and CEIR, which has been approved by, and is on file with, the District, the application submission may be in the form of an update. An update shall be prepared in the same manner, using the same CEIP and only needs to include the emissions (or proposed emissions) from any new or modified Emission Unit(s). The CEIR will also need to indicate which, if any, existing Emissions Unit(s) have or will be removed from service or which have modified emissions. The District reserves the right, upon written notice to the applicant, to require a complete CEIP and CEIR submission with any application.

Please note, new or modified Facilities or Emissions Unit(s) may be required to submit an additional CEIP and CEIR in a time period of less than three (3) years from the date of their application if they belong to a source category which is required to submit a CEIP and CEIR in a particular year. For example: a wood coater submits an application for a modification that includes a CEIP and CEIR in 2014. Consequently, such a wood coater would be required to submit a revised CEIP for emission year 2014 by March 31, 2015 and a CEIR by April 30, 2015. Consequently, when updating the CEIP and CEIR for emission year 2016, the CEIP would be due by March 31, 2017 and an updated CEIR by April 30, 2017 and every three years thereafter.

Third Year Cycle for CEIP & CEIR

GROUP	FACILITY TYPE	SIC	EMISSION YEAR	CEIP/CEIR Due
A	Metal Mining	10xx	2012, 2015, 2018, etc.	2013, 2016, 2019, etc.
	Nonmetallic Mining	14xx		
	Cement Plants	3241		
	Transportation, Mfg	37xx		
	Railroads	4013		
	Transportation Facilities	42xx		
	Airports	45xx		
	Landfills	9511		
	Dry Cleaners (IW)	721x		

GROUP	FACILITY TYPE	SIC	EMISSION YEAR	CEIP/CEIR Due
B	Wood Coaters	24xx & 25xx	2013, 2016, 2019, etc.	2014, 2017, 2020, etc.
	Printers (IW)	27xx		
	Chemical Plants	28xx		
	Asphalt Plants	2951		
	Composite Fibers	30xx & 3732		
	Glass Plants	3211 & 32xx		
	Concrete Plants	327x & 1771		
	Mineral Plants	3295		
	Machinery Mfg	35XX		
	Governmental	91xx & 95xx & 96xx		
	Prisons	92xx		
	National Security	9711		
	Degreasers	All		
	Auto Body Shops (IW)	55xx & 75xx, etc.		
C	Agriculture	01xx & 35xx	2014, 2017, 2020, etc.	2015, 2018, 2021, etc.
	Asbestos Abatement	1742		
	Metal Processing	33xx		
	Metal Fabricators	344x		
	Electrical Equip	36xx		
	Miscellaneous Mfg	39xx		
	Pipelines	46xx & 492x & 4941		
	Tele Communications	48xx		
	Power Plants	491xx & 4339		
	Waste Water Treatment	4952 & 9511		
	Irrigation Systems	4971		
	Petroleum Distribution	5171		
	Crematories	7261		
	Hospitals	80xx		
	Schools	82xx		
	Fuel Dispensing (IW)	5541		
Others	all Other			

Annual Time Table for Submissions

The following is the standard schedule for submission of CEIP and CEIR documents to the District. However, the District reserves the right to require submission of CEIP and CEIR documents on a different time schedule to meet the needs of the District. Facilities will be notified in writing if an alternative time schedule for submissions will be used.

February 1	District mails “CEIP & CEIR Packet”
March 1	Update Survey due to the District
March 31	“CEIP” due to the District
April 30	“CEIR” due to the District
August 4	“CEIR” due to CARB

Previous Inventory Data

The District has copies of the previously submitted emissions inventory data for many facilities in HARP format. Such data is available in electronic format for ‘Importing’ into HARP or printout (hardcopy) format from the District upon request.

REFERENCES

Many of the documents referenced in these Guidelines may be found on the Internet. The following listed documents may be downloaded or read at the following locations:

Proposed Consolidated Emissions Reporting Rule (65 FR 33268, 5/23/200)

www.epa.gov/ttn/atw/cerr/cerrpg.html

California Clean Air Act (Health & Safety Code §§39000 et seq.)

www.arb.ca.gov/bluebook/bluebook.htm

MDAQMD Rule & Regulations

<http://www.mdaqmd.ca.gov/index.aspx?page=138>

California Air Toxics Program

<http://www.arb.ca.gov/toxics/toxics.htm>

<http://www.arb.ca.gov/toxics/id/taclist.htm>

<http://www.arb.ca.gov/ab2588/ab2588.htm>

Emission Inventory Criteria and Guidelines for the Air Toxics “Hot Spots” Program

www.arb.ca.gov/ab2588/2588guid.htm

ATCM Standards

<http://www.arb.ca.gov/toxics/atcm/atcm.htm>

MACT Standards

www.epa.gov/ttn/atw/eparules.html

MACT & NESHAPS

<http://www.epa.gov/ttn/atw/mactfnlalph.html>

Implementation/Compliance Assistance Tools

<http://www.epa.gov/ttn/atw/area/arearules.html>

List of Pollutants under 42 U.S.C. §7412

www.epa.gov/ttn/atw/188polls.html

www.gpoaccess.gov/uscode/index.html

HARP

<http://www.arb.ca.gov/toxics/harp/harp.htm>

Emission Inventory Methods

<http://www.arb.ca.gov/ei/ei.htm>
www.epa.gov/ttn/chief/
www.epa.gov/ttn/chief/eiip/

Technical Documents <http://www.epa.gov/ttn/chief/eiip/techreport/index.html>
Point Sources <http://www.epa.gov/ttn/chief/eiip/techreport/volume02/index.html>
PM_{2.5} Inventory <http://www.epa.gov/ttn/chief/eiip/pm25inventory/>

Emission Inventory Training

<http://www.epa.gov/ttn/chief/eidocs/training.html>

Emission Factors

CHIEF <http://www.epa.gov/ttn/chief/index.html>
AP-42 www.epa.gov/ttn/chief/ap42/index.html
California Air Toxic Emission Factors (CATEF) <http://www.arb.ca.gov/ei/catef/catef.htm>
San Diego APCD <http://www.sdapcd.org/toxics/emissions/emissions.html>
Ventura Co. APCD <http://www.vcapcd.org/pubs/Engineering/AirToxics/combem.pdf>
South Coast AQMD <http://www.aqmd.gov/aer/aer.html>

Standard Industrial Classification (SIC)

<http://www.osha.gov/oshstats/sicser.html>

North American Industry Classification System (NAICS)

<http://www.census.gov/epcd/naics02/>

Source Classification Code (SCC)

<http://www.epa.gov/ttn/chief/eiinformation.html>

Universal Transverse Mercator (UTM)

Definition <http://erg.usgs.gov/isb/pubs/factsheets/fs07701.html>

Maps <http://www.usgs.gov>
<http://store.usgs.gov/>

Maps/Photos <http://earth.google.com/> (Free Version)

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