

AIR RESOURCES BOARD

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September 12, 1989

To: All Air Pollution Control Districts
ATTN: Toxics Emission Inventory Personnel

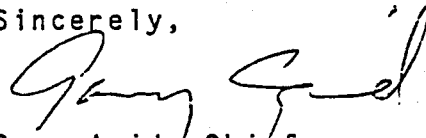
Interpretation of the Emission Inventory
Criteria and Guidelines Regulations Requirements

As you know, the Air Toxics "Hot Spots" Information and Assessment Act ("the Act") requires affected facilities to submit emission inventory plans to their local air pollution control districts by August 1 of this year. During the last few months, the ARB staff has received a number of questions from both facilities and the districts concerning the interpretation of the Emission Inventory Criteria and Guidelines Regulations, which were developed by the ARB as required by the Act. To assist districts with interpreting the requirements in the regulations, we have enclosed the following four Attachments:

- o Interpretation of Specific Issues Concerning the Emission Inventory Criteria and Guidelines Regulations (Attachment I).
- o Explanation of the Definition of Motor Vehicle (Attachment II).
- o Issues Concerning Combustion of Natural Gas and Other Fuel Types (Attachment III).
- o Replacement to Page 279 in the Wood-Fired Boilers Emission Estimation Technique in the Technical Guidance Document to the Regulations (to account for the units of the steam rate in the dioxin calculation method) (Attachment IV).

If you have comments or questions on the issues discussed in these Attachments, please call Marcelle Surovik at (916) 324-1842. Specific questions concerning Attachment III should be addressed to Muriel Strand at (916) 324-9661. Other regulations questions should be addressed to Beth Schwehr at (916) 322-3807.

Sincerely,


Gary Agid, Chief
Emission Inventory Branch

Attachments

Attachment I

Interpretation of Specific Issues Concerning the Emission Inventory Criteria and Guidelines Regulations

Below is a list of the most frequently asked questions received by ARB staff over the past few months concerning the interpretation of the Emission Inventory Criteria and Guidelines Regulations. We are sending this list of questions and ARB responses based on our interpretation of the Act and the regulations in order to assist districts with addressing these issues if they arise.

1. How is "motor vehicle" defined for purposes of these regulations? What types of mobile source emissions are subject to these regulations?

Section 415 of the Vehicle Code defines a "motor vehicle" as a vehicle which is self-propelled; "vehicle", in turn, is defined in Section 670 of the Vehicle Code as a device by which any person or property may be propelled, moved, or drawn upon a highway, excepting a device moved exclusively by human power or used exclusively upon stationary rails or tracks. Some examples of motor vehicles are automobiles, trucks, buses, road graders, earth movers, tractors, golf carts, motorcycles, self-propelled harvesters, forklifts, and sweepers; further explanation of what defines a motor vehicle is provided in Attachment II. Under the guidelines regulations, tail pipe emissions and other emissions emanating directly from the motor vehicles are not included in the facility's reporting requirements. However, dust emissions produced from motor vehicle activities at a facility must be reported, and the districts may require activity data regarding the usage of such vehicles at the facility.

Other mobile sources (those not meeting the definition of motor vehicles such as ships, aircraft, trains, auxiliary generators, cranes, etc.) which operate within the facility are subject to inventory requirements. Emissions from such non-motor vehicle mobile sources which stay within the facility property (such as cranes and generators) must be reported. Districts may further require the reporting of site-specific activity data regarding the usage of non-motor vehicle mobile sources that are periodically located within

the facility property (such as aircraft and trains), in order to support area and mobile source estimates required to be developed by the ARB.

2. Are emissions from vehicle refueling and from storage of fuel used for refueling subject to reporting requirements?

Yes, vehicle refueling and fuel tanks are subject. The use of products for the purposes of maintaining motor vehicles operated at most types of facilities is exempt under the use exemptions section in the regulations. However, vehicle refueling and storage of fuel for refueling purposes are not considered maintenance use; these are considered to be points of emission and are, therefore, subject to reporting requirements.

3. According to the Act, facilities which release or have the potential to release 25 tons per year or greater of one of the four criteria pollutants are subject to the Act. How is "potential release" defined? How does this affect which facilities are subject to the guidelines regulations?

"Potential release" includes emissions from predictable upsets and releases such as fugitive emissions and emissions from routine maintenance and repair. "Potential release" also refers to the routine variability in an operation due, for example, to year-to-year fluctuations in economic and other factors affecting the operation. If a district has a reasonable basis to believe that a facility will emit the specified tonnage per year of one of the criteria pollutants for a given year, then that facility will be subject to the regulations according to the timetable set forth in the Act and the regulations.

4. How do facilities report emissions of a substance which is emitted in amounts much less than the specified degree of accuracy?

For processes for which source testing is not required, if facility-wide emissions of a substance listed in Appendix A-1 are less than the specified degree of accuracy, then the use, production, or other presence of that substance is to be reported on the use/production form (S-UP) with a note indicating the emissions are below the applicable degree of accuracy level, and therefore need not be quantified.

5. Must substances from Appendix A-II, (i.e. those substances for which the use, production, or other presence must be reported), be included in the plan?

Yes, substances listed in Appendix A-II must be included in the plan because the Act specifies (in Health and Safety Code Section 44340(c)(2)) that the plan must provide a comprehensive characterization of all listed substances that are released, or that may be released, to the surrounding air from the facility.

6. How should devices and stacks be numbered in the plans and reports?

The Stack ID and Device ID numbers generally should be simple sequential numbers consisting of from 1 to 5 digits. The Stack ID and Device ID numbers that the districts are currently using for the criteria pollutant emission inventory for the specific facility should also be used for the air toxics emission inventory. For many operations at many facilities, these ID numbers can be obtained by referring to the Turnaround Documents (TAD's) for the criteria pollutant emission inventory. If the districts need assistance with obtaining these numbers, they should contact the ARB. If new ID numbers are needed, they should be created to be consistent with the existing number convention.

7. Must emissions from equipment that is only temporarily located at a facility site be reported?

If the facility is subject to the Act, the emissions from such temporary equipment must be reported if the operations are routine and predictable. The facility operator should estimate the amount of time the equipment is used at the site during the reporting year.

8. Must emissions from stand-by equipment and stand-by fuel combustion, which may be present at the facility but not routinely used, be reported?

If the facility is subject to the Act, the emissions from such equipment and combustion must be reported if they are routine and predictable processes at the facility. A district may require source testing for stand-by generators and stand-by fuel combustion if the district believes these processes may result in significant emissions. If a district does not require source testing, the facility operator should estimate the amount of time these processes are used and estimate the emissions of listed substances.

9. Are cogeneration facilities or facilities that are owned or part-owned by an electric utility company subject to the source test requirement for natural gas combustion in Appendix D of the regulations?

The source test requirement for natural gas combustion applies only to facilities that are identified as electric utility companies by their industrial classification. The requirement applies to operations whose primary purpose is to generate electricity for the utility grid.

10. Should AP-42 emission factors for particulate matter less than 10 microns (PM10) be used to calculate fugitive dust emissions?

It is the intent of the Act that all emissions of listed substances be characterized regardless of particle size. Although PM10 is of health concern because of its ability to enter the respiratory tract, particulate matter greater than 10 microns can contain listed substances and can be emitted from a facility and travel beyond the property line. These toxic substances emitted into the air could ultimately reach receptors in various forms that could pose a public health risk. Therefore, total particulate matter (PM) or total suspended particulate (TSP) values should be used when calculating fugitive dust emissions.

11. Are cotton ginneries and other agriculture-related facilities subject to these regulations? What source test requirements apply? Is a facility required to report emissions of naturally occurring substances?

Cotton ginneries, almond hullers, feedlots and other agriculture-related facilities are subject to these regulations. The "Hot Spots" Act does not provide any exemptions for such facilities except to the extent economic poisons are being employed in their pesticidal use as specified in Health and Safety Code (HSC) Section 44324. This section specifies that emissions of economic poisons employed in their pesticidal use are subject to AB2588 reporting requirements if the facility was subject to district permit requirements on or before August 1, 1987. There are also no exemptions in the Act for natural occurrences of listed toxic substances. Appendix D of the regulations requires a lab analysis for metals of the dust which is representative of the fugitive dust emitted at these types of facilities. Other source testing requirements may apply to combustion processes at the facility. Emissions of naturally occurring substances such as crystalline silica and other metals that may be found in the fugitive dust must be quantified and reported. Unless exempted under HSC Section 44324, fumigation processes may be another possible source of emissions that may be present at agriculture-related facilities.

12. "Oil fields" are uniquely defined under the New Source Review rules for Kern and Fresno districts. How has the definition of facility in the guidelines regulations been modified to encompass this treatment of oil fields?

A modification to the regulations makes the definition of "facility" with respect to oil fields consistent with the NSR definitions in these two counties.

13. How are compounds and mixtures which contain a listed substance reported? How are compounds of metals to be quantified?

Except for gasoline vapors and coke oven emissions, the regulations require emissions of each listed substance

contained in any mixture to be individually reported to within the specified degree of accuracy. Composition data must be provided when reporting listed substances which are themselves chemical groups (e.g. glycol ethers). All listed metals include all compounds containing the listed metal. If a compound of a listed metal is not specifically listed in Appendix A it shall be reported as the metal equivalent. For example, if nickel subsulfide is the emitted substance from a process, the emissions should be expressed as the listed substance "nickel subsulfide." However, if the nickel emissions are composed of various nickel compounds as for example from a combustion stack, or consist of unspecified nickel-containing compounds, the elemental nickel equivalent of all nickel-containing compounds must be reported as "nickel."

14. Glycol ethers, which are listed in Appendix A-I, cover a wide range of substances. Only certain types of glycol ethers were required to be reported under SARA. What types of glycol ethers must be reported under the guidelines regulations?

The primary reference used to list glycol ethers as a toxic substance is the AB 1807 list of substances. Glycol ethers as referenced on the AB 1807 list is an all-inclusive category. All substances which are included in this chemical category must be reported.

15. Is environmental tobacco smoke required to be quantified?

Environmental tobacco smoke is on the list of substances which must be quantified. However, the regulations do provide a use exemption for personal use of tobacco products at a facility.

16. What is a structural component of a facility as referenced in the use exemption section of the guidelines regulations? Are emissions from building air conditioners exempt?

The use exemption for a structural component of a facility includes the use of a listed substance in building materials, such as asbestos in the walls and ceiling. If the emissions from air conditioners themselves at a facility (such as freon) are significant, these emissions must be

reported. Emissions originating from processes occurring within the building but emanating through the ventilation system are subject to reporting requirements and should be reported in association with the particular emitting process occurring within the building.

17. When is source testing required? When may other (i.e. non-required) source testing be appropriate or inappropriate?

Appendix D of the regulations summarizes the required source testing for processes and substances and includes alternatives such as small business exemptions. These source testing requirements apply only to ducted processes. The applicable ARB-adopted source test method must be used to perform these required tests.

The districts have the authority, under Health and Safety Code 44365(b) to require additional source testing. Furthermore, facilities may propose additional testing as the most appropriate quantification method in other cases. Source testing is most appropriate when the emission stream is ducted and the volume flow can be measured. Certain source testing proposals may not be appropriate in cases where the emissions are highly dispersed and the detection limit may not be sufficient to provide a representative measure of the overall emissions. For certain of such dispersed sources, material balances or other methods may provide more accurate emission values.

18. To whom at the ARB should districts address proposals for pooled source testing and for alternatives to required source testing that are included in a facility's plan pursuant to Section 93337(b) and 93338(b), respectively, of the criteria and guidelines regulations?

The districts should address these types of proposals to :

Linda C. Murchison, Manager
Toxics Emission Inventory Section
Air Resources Board
1131 S Street
Sacramento, Ca. 95814

The following has been extracted from a September 11, 1985 letter from the Executive Officer of the ARB to Norm Covell, then President of the California Air Pollution Control Officers Association.

"Health and Safety Code Sections 39002 and 39500 provide that the ARB has the responsibility for control of emissions from motor vehicles. The definition of motor vehicle may be found in Health and Safety Code Section 39039, which references the Vehicle Code. "Motor vehicle" is defined in Vehicle Code Section 415; "vehicle" is defined in Vehicle Code Section 670. These two definitions provide the criteria to determine whether a source is a motor vehicle and thus under the jurisdiction of the ARB. The definitions are:

Vehicle Code 670. A "vehicle" is a device by which any person or property may be propelled, moved, or drawn upon a highway, excepting a device moved exclusively by human power or used exclusively upon stationary rails or tracks.

Vehicle Code 415. A "motor vehicle" is a vehicle which is self-propelled.

Examination of these definitions reveals several criteria which must be met before a source is considered a motor vehicle. First, the source must be able to propel, move or draw person or property. Second, it must be able to do so upon a highway. Finally, it must be self-propelled. With respect to the criterion of "upon a highway", the courts have ruled that the device need not be registered or legal to operate upon a highway to be considered a motor vehicle. Thus the courts found, for instance, that forklifts and bulldozers are motor vehicles."

"The definition of "vehicle" specifically excludes devices used on rails, e.g. locomotives and streetcars. The courts have also ruled that airplanes are not vehicles. Likewise pleasure craft are not able to propel or move people or property upon the highway, nor can lawn mowers (with the exception of the riding type). Other sources which are not able to propel, move or draw property or person upon the highways include leaf blowers, chain saws, refrigeration units, and auxiliary generators."

Attachment

Categorization of Sources of Air Pollution *

Motor Vehicles

Automobiles
Trucks
Buses
Road graders
Earth movers
Tractors
Golf Carts
Motorcycles
Self-propelled harvesters
Forklifts
Sweepers

Non-Motor Vehicles

Locomotives^{2/}
Airplanes^{3/}
Lawn mowers (non-riding)
Leaf blowers
Refrigeration units
Chainsaws
Auxiliary generators
Welding machines
Pleasure craft
Cranes

1/ The ARB may not regulate implements of husbandry until after December 31, 1988. Health and Safety Code Section 43001.

2/ See Health and Safety Code Section 40702.

3/ Preempted by the Clean Air Act.

* Categorization and corresponding footnotes included in the Attachment to the September 11, 1985 letter from the Executive Officer of the ARB to Norm Covell, then President of the California Air Pollution Control Officers Association.