State of California
AIR RESOURCES BOARD
Technical Support Division

# Staff Report: Initial Statement of Reasons for Proposed Rulemaking

## Proposed Amendments to the Emission Inventory Criteria and Guidelines Regulation for the Administration of the Air Toxics "Hot Spots" Information and Assessment Act of 1987

April 1993

State of California
AIR RESOURCES BOARD
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# Proposed Amendments to the Emission Inventory Criteria and Guidelines Regulation for the Administration of the Air Toxics "Hot Spots" Information and Assessment Act of 1987

Prepared By:

Technical Support Division
With the Participation of the
Technical Advisory Committee
for the Air Toxics "Hot Spots" Emission Inventory Guidelines

This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

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# I.

## SUMMARY AND RECOMMENDATION

### A. PURPOSE OF THE REPORT

The purpose of this report is to summarize and present the bases for the Air Resources Board (ARB or Board) staff's recommended amendments to the Emission Inventory Criteria and Guidelines Regulation for the Air Toxics Hot Spots program. The Regulation sets the criteria for facilities reporting air toxics emissions data. The objective of the proposed amendments is to focus emission update reporting requirements on the most significant facilities and to streamline the emission reporting requirements for all other less significant facilities. The effect will be to substantially reduce costs and burdens to most facilities subject to the program while targeting update and district review activities on those facilities whose emissions would most likely result in a public health risk. These amendments will increase the effectiveness and efficiency of the program to identify and track those high priority facilities of most concern.

The proposals were developed with the assistance of the Technical Advisory Committee for the Air Toxics Hot Spots Emission Inventory Regulation and the generous input of the general public, industry, and representatives of the air pollution control and air quality management districts ("districts").

### B. EXISTING AND PROPOSED REGULATION

The Air Toxics Hot Spots Program was created by the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (the Act; AB 2588; Stats. 1987, ch. 1252; Health and Safety Code Sections 44300 through 44384). The Act established a program to inventory routine emissions of toxic substances into the air and to assess the public health risk to those who are exposed. The Act required the ARB to adopt a criteria and guidelines regulation for the preparation of site-specific emission inventory plans and reports by specified facilities (Health and Safety Codes Section 44342*). The Act set forth the minimum components of these criteria and guidelines and identified the classes of facilities for which inventories must be prepared. The Act required inventories to be updated every two years and the ARB to develop procedures for preparing these biennial updates. It also required the ARB to identify classes of facilities that

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* All statutory references are to the Health and Safety Code unless otherwise noted.

emit less than 10 tons per year of criteria pollutants (less-than-10-tons-per-year facilities) that must comply with emission inventory requirements. A copy of the Act is included as Attachment II to this report.

1. Existing regulation

The Emission Inventory Criteria and Guidelines Regulation was approved by the Office of Administrative Law (OAL) on October 30, 1989. Amendments to the regulation were adopted by the Board in June 1990 to include procedures for preparing biennial updates to the emission inventories and reporting requirements for specific classes of less-than-10-tons-per-year facilities. Specific sections of the regulation were amended again in September 1990 and June 1991 to reflect additions to the list of substances that must be inventoried. The existing regulation, as set forth in Title 17, California Code of Regulations (CCR) Sections 93330 through 93354**, specifies:

- types of facilities which must report emissions of air toxics;
- classes of facilities emitting less than 10 tons per year of criteria pollutants that are subject to the Hot Spots program, and their emission inventory reporting requirements;
- the information a facility operator must include in a facility's air toxics emission inventory plan and inventory report;
- the information a facility operator must include in a facility's emission inventory biennial update;
- the schedule for submitting inventory plans and reports;
- source testing requirements for emission estimation, other acceptable emission estimation methods, and the reporting forms to be used; and
- two groups of the substances to be inventoried, one for which emissions must be quantified and a second for which only information on production, use, or other presence of toxic substances must be reported.

2. Proposed amendments to the regulation

The staff recommends amendments that will streamline the reporting process and reduce the costs and burden on affected facilities and districts. If adopted by the Board at its June hearing, the amendments will affect the biennial update requirements for all facilities. The changes will focus the inventory efforts on the most significant risk facilities and should improve the effectiveness of the Hot Spots program. The staff has received and considered many comments and suggestions in developing the proposed amendments.

** All CCR references are to Title 17 of the California Code of Regulations.

The staff recommends amending the Emission Inventory Criteria and Guidelines Regulation in the following ways:

- Biennial Updates: Modify the procedures for the biennial updates of the emission inventories to substantially reduce requirements for all facilities, especially those determined under this program to not be of significant risk to public health. Substantially reduce the number of reporting forms that must be submitted. Create a Biennial Summary Form to streamline update reporting. Modify requirements to focus updates on significant emission points (devices) within the facility. Delete requirements to base reported emissions on the highest emissions of the previous two years for each process, and add requirements to base all emissions on only the most recent calendar year. Modify the schedule for submitting biennial update information which postpones the submittal of information by either six months or one year depending on each facility's reporting requirements.

- Applicability: Add provisions for allowing a facility that no longer meets the definition of applicability as specified in the regulation to be removed from the program if it is not of significant risk to public health.

- Limit of Detection: Provide a mechanism to report non-detects ("ND") for source tests where results for all test runs are below the analytical limit of detection (LOD) for the method used.

- Source Testing Requirements: Revise the source test requirements (Appendix D to the regulation) to eliminate certain requirements for Publicly Owned Treatment Works (POTWs) and emergency diesel equipment for which testing has been determined to be infeasible or impractical.

- List of Substances: Restructure the list of substances (Appendix A to the regulation) to consolidate substance information previously located in several different areas of this regulation and in the Air Toxics Hot Spots Fee Regulation. Changes include: citing provisions in the Act in which sources are listed; including emittent identification numbers established by the ARB staff for substances for which Chemical Abstract Services (CAS) numbers do not exist; and adding reporting instructions for specific substances. Several minor corrections are also proposed.

- Reporting Forms: Make minor revisions to the core reporting forms (Appendix B to the regulation). Reorganize and clarify instructions for the forms. Add new reporting codes to facilitate emission reporting. Delete supplemental forms. Create a new form, the Biennial Summary Form, with instructions.

- o Other Clarifications: Make minor revisions to sections regarding the requirements of the plan and the report that clarify the intent of the regulation.

3. Development of the amendments

The ARB staff developed the proposed amendments with the assistance of the Technical Advisory Committee. The Committee consisted of representatives of the air pollution control and air quality management districts and the Office of Environmental Health Hazard Assessment. The Committee met in August, October, and December 1992 and held teleconferences in August and September 1992 and in February, March, and April 1993. The staff met with the California Air Pollution Control Officers Association (CAPCOA) three times in March and April 1993 to discuss proposed amendments. Industry representatives also attended the CAPCOA meetings.

The staff also held two sets of public consultation meetings to discuss and receive public input on the proposed amendments to the regulation. Approximately 6,000 facility operators and members of the public were notified of the consultation meetings. Copies of the announcement of the public consultation meetings are contained in Attachment III to this report. In addition, the staff held meetings with specific industry and environmental groups during the development of the amendments.

4. Evaluation of options

Government Code Sections 11346.7(b)(4) and 11346.14 require, in part, that the agency determine whether or not there are alternatives to the proposed amended regulation that would be more effective or less burdensome to those private persons affected by the adopted regulation. The staff did not find any alternatives which would be more effective or less burdensome in carrying out the purposes for which the regulation was proposed, which is to collect air toxics information and assess potential "Hot Spots" of risk. As noted earlier, the regulation, including the requirements for biennial update procedures, is mandated by the Act. The purpose for the proposed amendments is to streamline the emission inventory provisions in the Act. The proposed amendments were designed to reduce to the greatest extent possible the burden associated with preparing and reviewing biennial updates on affected private persons and the districts, yet collect enough information to continue to identify potential air toxic "Hot Spots".

The existing regulation provides alternatives to some requirements such as required source testing, including provisions for pooled source testing and alternative measurement methods for small businesses, that would reduce costs to affected facilities yet support comprehensive characterization of emissions as required by the Act. These provisions are maintained in the proposed amended regulation.

5. Other streamlining activities

The proposed amendments are intended to work in concert with other streamlining activities the ARB staff is working on. These include:

a) developing the capability to allow facilities to electronically submit (via floppy disk or other media) air toxics emission data; and,

b) developing air toxics emission factors on the basis of the source test data collected under this program.

These additional streamlining efforts will also improve the efficiency of the emission inventory process. Many facilities maintain their emission data on electronic media. Providing these facilities with the capability for submitting data electronically to the districts will reduce costs to facilities while reducing both data entry errors and the time required for data entry. Also, data will be available for district and ARB use in much shorter time frames.

The ARB also has a research contract to develop air toxics emission factors from source test data collected under this program. When complete, these emission factors will be available to all facilities reporting and should reduce the need for further source testing considerably. The emission factors will also improve the quality and consistency of reported emissions data.

C. RECOMMENDATION

The staff recommends that the Board adopt the proposed amendments to the Emission Inventory Criteria and Guidelines Regulation described in this report. These proposed amendments are summarized in Chapter II and are contained in Attachment I to this report.

II.

## DISCUSSION OF RECOMMENDED AMENDMENTS

This chapter gives a brief discussion of the staff's recommended amendments. Actual language changes and their bases are described in Chapter IV and are shown in regulation format in Attachment I.

### A. BIENNIAL UPDATES

The staff proposes that the Board streamline the biennial update reporting requirements for the majority of affected facilities. The requirements are most stringent for significant risk facilities (those required to notify the public that it is being exposed to significant risk associated with the emissions from the facility). The stringency of the proposed reporting requirements would decrease for facilities of lower risk. The proposed requirements are outlined in Figure 1.

**Significant Risk Facilities**: The staff proposes that significant risk facilities continue to prepare biennial update plans and reports. However, the staff is proposing three specific changes to the biennial updates for these facilities:

1) facility operators will need to report only changes since the previous report;

2) ~~facility operators would be allowed to elect to report changes to~~ only those emission points (devices) within the facility that account for 80 percent of the risk or, all risk down to one cancer in a million and a noncancer hazard index of less than one, which ever is more stringent; and

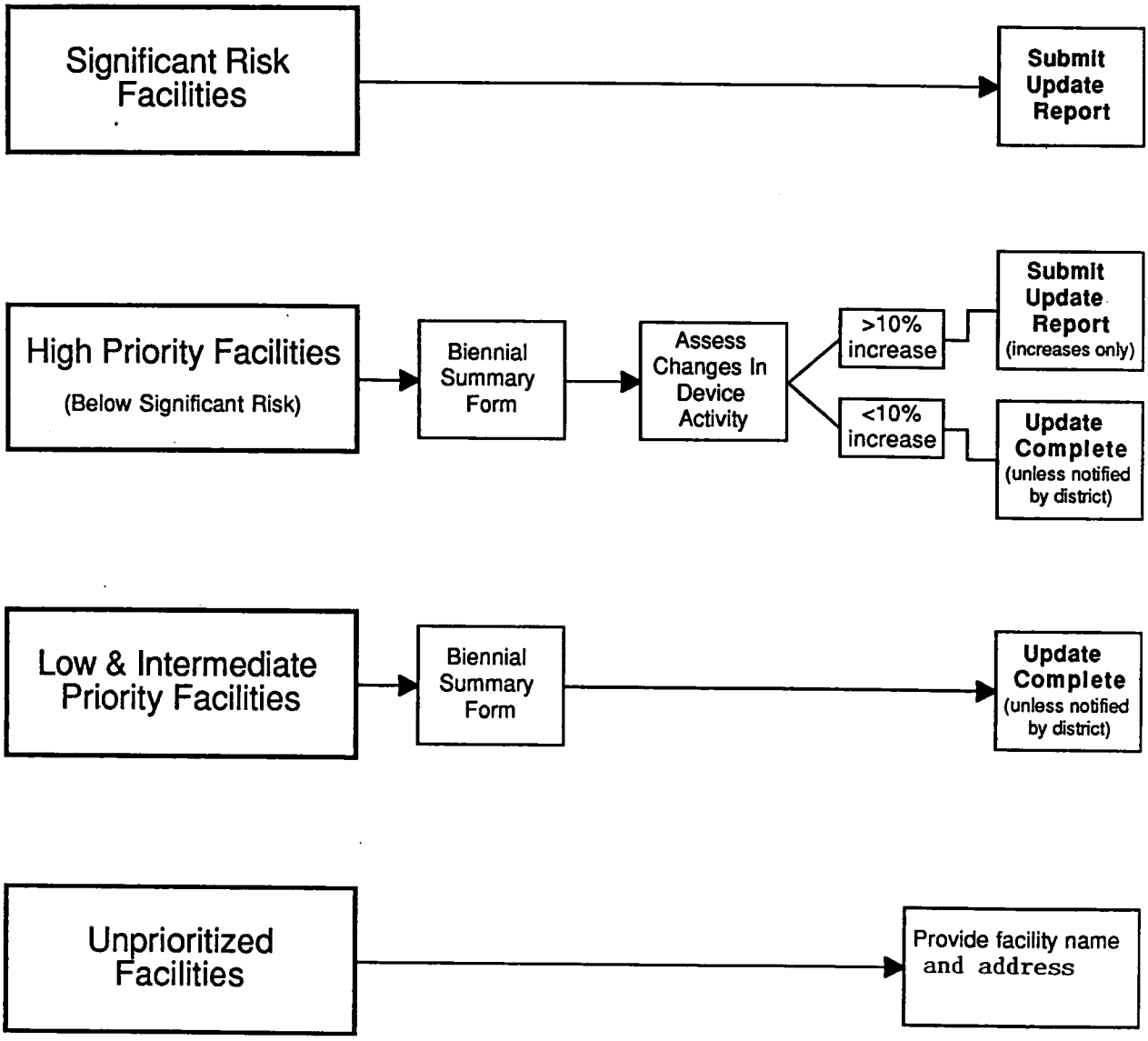
3) facility operators will be required to report emissions for only the most recent calendar year instead of the emissions from the higher of the previous two years.

Based on available information, the staff estimates that 5 percent of affected facilities will be significant risk facilities. This accounts for approximately 200 facilities in the first phase of the program.

**Other High Priority Facilities**: For those facilities designated by the district as high priority but not significant risk, the staff is proposing that the operators be permitted to complete a new form, the "Biennial Summary Form" (see Chapter IV, Section E, for details of this form). This form will meet the biennial update reporting requirements unless significant increases in device activity, that would increase air toxics emissions, have occurred at the facility. Device activity is measured in terms of throughput, fuel usage or type, process rates, and feed rates. It is assumed that if no significant changes in activity occur, risks and emissions will not change significantly.

# FIGURE 1

## Proposed
## Air Toxics Hot Spots
## Biennial Update Requirements



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The staff defines significant increase in device activity to be a 10 percent or greater increase. The facility operators have two options for determining whether significant increases in device activity have occurred:

1) The facility operator may choose to examine activity at each device to determine whether there has been a 10 percent or greater change in the activity at any device. If a significant increase occurred, the facility operator would have to update emissions for those devices which show such an increase. For a small facility with few devices this first option may be the most appropriate choice.

2) The facility operator may choose to work with the district to identify significant devices, that is, those devices that contribute to at least 80 percent of the facility's total risk and evaluate whether there have been significant increases in activity at those devices. In addition to this, the facility operator must ensure, in cooperation with the district, that the remaining unidentified devices do not exceed either a one cancer in a million risk, or a noncancer hazard index of one. If the facility has experienced a substantial increase in device activity for these devices, then the facility must do a more comprehensive update of emissions for the significant devices that showed an increase. This second option may be of more use to larger facilities with numerous devices. The facility operator must be prepared to provide the district with adequate documentation of the devices which are the significant contributors to the risk at the facility.

~~The staff estimates that 12 percent of the affected facilities~~ (approximately 500 facilities in the first phase) will fall into this reporting category.

Low and Intermediate Priority Facilities: The staff proposes that facilities designated as low and intermediate priority by the district complete only the Biennial Summary Form to satisfy the update requirements. The staff estimates that 83 percent of the affected facilities (approximately 3400 facilities in the first phase) will fall into this reporting category.

In all cases discussed above, the districts may require updates and additional information if they deem it necessary to evaluate a facility's status.

B. SCHEDULE FOR BIENNIAL UPDATES

The staff proposes that the Board modify the schedule for submitting biennial updates to postpone the submittal of information (from the current update schedule) by either six months or one year depending on each facility's emission inventory requirements.

The current regulation requires all facilities to submit an update plan by August 1 of a given year. The proposed amendments would allow facilities which are required to submit Biennial Summary Forms to submit

their forms by February 1 of the following year. This modification postpones their reporting requirements by six months. If the information on the form indicates that the facility operator must prepare an update plan, that plan would be due August 1 of the same year the Form was due which postpones the operator's submittal of an update plan by one year.

For significant risk facilities (those required to submit update plans and reports) the submittal of their update plans would be postponed by one year from the year their update plan is currently due. Consequently, significant risk facilities would be on the same schedule as the facilities whose summary forms indicated they must submit an update plan.

C. APPLICABILITY

The staff proposes that the Board amend the regulation to allow facilities to be removed from the program which, because of changes in operations, no longer meet applicability criteria specified in the regulation. The current regulation identifies facilities subject to reporting requirements but does not include provisions for removing a facility once it is no longer subject. Many facilities have changed operations such that they no longer meet the conditions that originally made them subject to the program. To comply with the Act, facilities must demonstrate to the district that they do not pose a significant health risk before they can be removed.

The staff proposes providing language to remove facilities in three specific instances as long as those facilities do not meet other applicability requirements. A facility may be removed from this program if it:

1) permanently reduced its emissions of criteria pollutants to below 10 tons per year;

2) was removed from a district's toxics inventory list or survey; or

3) is a less-than-10-tons-per-year facility and discontinued the processes listed in Appendix E-I to the regulation (the criteria for originally bringing these facilities into the program).

D. LIMIT OF DETECTION FOR SOURCE TESTS

The staff proposes that the Board add instructions in Appendix B to the regulation explaining how to report emissions based on source test results in which runs are less than the limit of detection (LOD) for the test method used. In the past, the staff has provided non-regulatory guidance on how to report emissions for such test results.

For source test runs in which all values are below the LOD, facilities would be allowed to report "ND" (for non-detect) for the emissions of these substances. However, the source test results, including the LODs for the test runs, must be included in the emission inventory report. This differs from the present guidance which requires that emissions be reported using

one-half of the LOD values. The staff is proposing a change to this policy because source test data already compiled under this program can be used to determine whether emissions of substances that were not detected (below LOD) were actually present or not. Source test results from similar processes will be evaluated to determine whether emissions of substances that were reported below the LOD were ever detected in other results.

In cases where only some of the source test results are below the LOD, the staff proposes that one-half of the LOD be averaged with the test results above the LOD to calculate emissions. This is consistent with the present guidance.

E. SOURCE TESTING REQUIREMENTS

The staff proposes that the Board make two changes to the source test requirements in Appendix D: eliminate source test requirements for the headworks and the chlorine discharge at Publicly Owned Treatment Works (POTWs), and exempt from source test requirements emergency and stand-by equipment that primarily burn diesel or distillate fuel.

Based on comments from the districts and the POTWs, the staff finds that test requirements are impractical for the headworks because of the variation of material entering the POTWs. Source test data from one month or one year may not necessarily represent emissions for the next month or year. Also, the chlorine discharges at POTWs are rarely ducted, rendering stack testing infeasible.

The exemption of emergency and standby equipment which burn diesel or distillate fuel from source test requirements is proposed based on district findings that it often takes more time to conduct a source test than the time the equipment is normally operated.

F. LIST OF SUBSTANCES

The staff proposes that the Board restructure and annotate the list of substances (Appendix A to the regulation) that must be inventoried under this program in order to consolidate information pertaining to the substances that occur in several places in the current regulation as well as in the Air Toxics Hot Spots Fee Regulation. The staff also proposes minor, nonsubstantive corrections such as correction of Chemical Abstract Services (CAS) numbers and spelling. No new substances are being added to the list.

It is proposed that information regarding listed substances which is currently contained in Table B-II of Appendix B to the regulation be moved into Appendix A. Table B-II contains emittent identification numbers established by the ARB staff for substances for which there are no CAS numbers. The table also contains notes that provide reporting instructions for specific substances, mainly for listed substances that are themselves mixtures or group headers for a class of substances.

Each substance in Appendix A was added to the list based on citations from the Act. It is proposed that these citations would also be included in Appendix A. The references are currently identified in the Air Toxics Hot Spots Fee Regulation which also contains the same list of substances, but groups the substances differently than in the Emission Inventory Regulation. The staff intends to propose in a separate rulemaking that the substance list be deleted from the Fee Regulation, which will make Appendix A to the Emission Inventory Regulation the only list of substances for this program.

G. REPORTING FORMS

The staff proposes that the Board revise Appendix B to the regulation to improve and clarify the reporting forms and instructions and to eliminate unnecessary information. The staff also proposes to add the new Biennial Summary Form and instructions to this appendix.

The proposed changes would slightly modify the format of some of the forms, add three new fields, and add new reporting codes to facilitate emission reporting and review. The form instructions would be modified to reflect these modifications. The staff proposes the deletion of the four supplemental process parameter forms because this information has already been collected once and updates to it are not needed.

As discussed earlier in Section D of this chapter, the staff proposes that the Board add instructions to Appendix B for reporting source test results that are below the LOD.

H. OTHER CLARIFICATIONS

Other changes to the regulation that the staff proposes in order to clarify and improve the reporting process include:

1) Delete duplicate information in CCR Section 93334 (degree of accuracy section) that is already contained in Appendix A. The degree of accuracy value for each substance is currently identified in both places in the regulation;

2) Modify CCR Section 93335 to include additional instructions for reporting listed mixtures or substance group headers. This information is currently contained in Table B-II which is being eliminated from Appendix B, as was discussed above; and

3) Modify the source test procedures to identify other methods that are better suited for analyzing certain fuel or material samples, and to clarify what information should be included in the source test protocol and source test report.

# III.

## REGULATORY BACKGROUND AND REQUIREMENTS

### A. AIR TOXICS HOT SPOTS PROGRAM OVERVIEW

The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (the "Act") requires affected facilities in the state to prepare emission inventory reports and submit these data to the districts for review and approval. The districts must review these data and prioritize facilities based on their potential public health risks. Facilities designated as "high priority" must prepare health risk assessments. If, upon review of the health risk assessment, the district determines that there is a significant health risk associated with emissions from a facility, the facility operator must notify all exposed persons of the risk assessment results.

The information collected under this program is also used to support the Air Resources Board's Toxic Air Contaminant Identification and Control Program, commonly referred to as the AB 1807 process (Health and Safety Code Section 39650 et seq.).

### B. EMISSION INVENTORY REQUIREMENTS

The Act requires operators of specified facilities to submit comprehensive, site-specific emission inventory plans to the appropriate air pollution control district by specified dates. Each plan must specify how the facility operator will inventory the facility's emissions of all toxic substances on the list of substances subject to the Act. This list of substances was approved by the Board in July 1988 and updated in September 1989, September 1990, and June 1991.

Each facility operator is required to submit an emission inventory report which contains the required emissions data that are compiled according to the plan. Subsequently, facilities designated by the districts as high priority must prepare health risk assessments. Facilities determined by the districts to be of significant health risk must notify the public of their health risk assessment results.

Upon receiving an emission inventory plan, a district must approve, modify, or return it to the facility operator for revision within 120 days (Section 44340(b)). After a district approves a plan, the facility operator must implement the plan by submitting an emission inventory report to the district within 180 days (Section 44341). The report must contain the emission data, a facility diagram, and other required information. Within 90 days of receipt of the report, the district must review the report and obtain any necessary corrections from the facility. The district must transmit data contained in the approved report to the Air Resources Board (Section 44341).

The emission inventory information must be updated biennially (every two years) (Section 44344).

C. EMISSION INVENTORY CRITERIA AND GUIDELINES REGULATION

The emission inventory plans and reports must be prepared and approved according to the Emission Inventory Criteria and Guidelines Regulation. The Act specifies that the criteria and guidelines must include at least all of the items listed in subsections (a) through (i) of Section 44342 and must ensure that, to the extent technologically feasible, actual measurements be utilized whenever necessary to verify the accuracy of emission estimates. The updates to the emission inventories collected under this program must be prepared according to procedures specified in the regulation.

The list of over 700 substances required to be inventoried under this program (Appendix A to the regulation) is separated into two groups for emission inventory reporting purposes. These two groups include substances whose emissions must be quantified and substances whose production, use, or other presence must be reported. The two groups are discussed in Chapter IV of this staff report. The Act provides that the ARB is responsible for compiling and maintaining the list of substances (Section 44321).

D. APPLICABILITY

The Act requires that facilities submit their initial plans and inventories in three phases depending on the facilities' emissions of criteria pollutants. The Act then requires that all facilities submit updates two years following their initial submittal.

In the first phase of the program, initial inventory plans were due by August 1, 1989, for any facility which: (1) manufactured, formulated, used, or released any listed substance, or any other substance which reacted to form a listed substance, and which released 25 tons per year or more of any of the following criteria pollutants: total organic gases (TOG), particulate matter (PM), nitrogen oxides (NOx), or sulfur oxides (SOx), or (2) was listed in any current toxics use or toxics air emission survey, inventory, or report released or compiled by a district. It is estimated that over 4,100 such facilities in California are in this size range. The first biennial update plans for these facilities were required by August 1, 1991. Inventories from these facilities will again be subject to update requirements in 1993.

In the second phase of the program, inventory plans were due by August 1, 1990, for any facility which released between 10 and 25 tons per year of any of the four criteria pollutants named above and which manufactured, formulated, used, or released a listed substance or precursor. It is estimated that approximately 1500 additional facilities are in this size range. The first biennial update plans for these facilities were required by August 1, 1992.

In the third phase of the program, emission inventory information was required to be submitted by August 1, 1991, for specific classes of less-than-10-tons-per-year facilities identified by the ARB. These classes are listed in Appendix E to the regulation. The districts must prepare industrywide emission inventories for those classes of facilities identified in Appendix E that meet criteria specified in the Act (Section 44323). It is estimated that over 17,000 less-than-10-tons-per-year facilities are affected by this regulation. Information collected from these facilities are subject to update requirements late in 1993.

E. IMPLEMENTATION TIMETABLE

The implementation schedule shown in Table 1 identifies key milestones related to the emission inventory and other requirements under the current regulation; the schedule is based on the time allotted for completion of specified activities in Sections 44340, 44341, and 44343.

F. OTHER EMISSION INVENTORY REQUIREMENTS

In addition to requiring the ARB to adopt an emission inventory regulation, the Act also required the ARB to develop an air toxics emission inventory for mobile, natural, and area sources not subject to district permit requirements. A report containing these data was made available in May 1990.

The Act also required the ARB to prepare a report to the Legislature ~~to identify those classes of facilities emitting less than 10 tons per year~~ of criteria pollutants to be included in the program and to set a schedule for their inclusion. This report was submitted to the Legislature in June 1990.

The Act also required the ARB to develop a data base to maintain the air toxics emission inventory data collected under the Hot Spots program and make the data available to the public. The ARB has developed this data base, referred to as the Air Toxics Emission Data System, which currently contains most of the data from facilities subject to the first and second phases of the program.

**Table 1**

**Key Dates Pertaining to Implementation of the Air Toxics Hot Spots Requirement[1]**

| Action | First Phase[2] | Second Phase[3] | Third Phase[4] |
|---|---|---|---|
| Facilities submit plans to district | **Aug. 1, 1989** | **Aug. 1, 1990** | **Aug. 1, 1991** |
| Districts approve plans **(120 days)** | ~ Dec. 1, 1989 | ~ Dec. 1, 1990 | ~ Dec. 1, 1991 |
| Facilities implement plans & submit inventory reports to district **(180 days)** | ~ June 1, 1990 | ~ June 1, 1991 | ~ June 1, 1992 |
| Districts review reports and data **(90 days)** | ~ Sept. 1, 1990 | ~ Sept. 1, 1991 | ~ Sept. 1, 1992 |
| Districts forward data to ARB (90 days) | ~ Dec. 1, 1990 | ~ Dec. 1, 1991 | ~ Dec. 1, 1992 |
| Districts prioritize facilities for risk assessment | **Dec. 1, 1990** | **Dec. 1, 1991** | **Dec. 1, 1992** |
| Facilities submit update plan to district | Aug. 1, 1991 | Aug. 1, 1992 | Aug. 1, 1993 |

[1]Dates and time periods shown in bold are specified by the Air Toxics "Hot Spots" Act. Other dates are approximate, based on the applicable time periods.

[2]First Phase: includes facilities that emit greater than 25 tons/year of criteria pollutants; also includes facilities listed on district toxics inventories.

[3]Second Phase: includes facilities that emit 10-25 tons/year of criteria pollutants.

[4]Third Phase: includes facilities that emit less than 10 tons/year of criteria pollutants and are included in specified classes identified for inclusion in the Hot Spots program.

## G. STATUS OF THE AIR TOXICS HOT SPOTS PROGRAM

To date, approximately 5600 facilities have submitted emission inventories for the first two phases of the program. These facilities represent those emitting greater than 25 tons per year (tpy) of criteria pollutants (Phase I) and those emitting between 10 and 25 tpy (Phase II). Approximately 17,000 facilities emitting less than 10 tpy (Phase III) may be required to do some reporting, although only 2400 of these facilities are expected to submit inventory plans and reports.

The districts prioritized Phase I facilities based on emissions data submitted by those facilities. Approximately 20 percent of those facilities are high priority and the remainder are low and intermediate priority facilities. High priority facilities are required to perform risk assessments. (Some districts also required intermediate priority facilities to do risk assessments). Based on the results of the risk assessments, approximately 30 percent of high priority Phase I facilities are expected to present a significant health risk due to their emissions. These significant risk facilities represent approximately five percent of total Phase I facilities. Most districts are prioritizing Phase II facilities now so their results should be available soon.

The amendments the staff is proposing will focus district and ARB efforts on those significant risk facilities and other high priority facilities that are most likely to present a significant risk should they increase their emissions substantially, or change the nature of their emissions such that more potent substances are emitted. Now that these facilities are identified (and additional facilities become identified as ~~Phase II and III facilities are prioritized), our commitment will be to~~ track emissions and associated risk from significant facilities and to track emission reductions that are required under the Facility Toxic Air Contaminant Risk Reduction Audit and Plan Act (SB 1731; Stats. 1992, ch. 1162; HSC Section 44360, Section 44380.5, and Section 44390-44394). The emission data collected under this program will also be used in the Toxic Air Contaminant Identification and Control Program to help prioritize the development of air toxic control measures.

The staff is already aware of numerous examples of affected facilities making voluntary changes to their processes to reduce emissions of substances subject to this program. The emission inventory part of the program has allowed facilities to determine which substances dominate their facility risk and many have responded by changing processes or substituting new substances to lower that risk. Based on available data, the staff estimates that California facilities have voluntarily reduced emissions of toxic substances by over 1.9 million pounds per year. This voluntary reduction has occurred for a broad spectrum of facility types and sizes. Now that facility operators are more knowledgeable of the toxicity of substances that are used at their facilities, the staff expects that facilities will continue to make strides to voluntarily reduce emissions of air toxics.

IV.

## DISCUSSION OF RECOMMENDED AMENDMENTS AND BASIS FOR CHANGES

This chapter discusses specific amendments to the Air Toxics Hot Spots Emission Inventory Criteria and Guidelines Regulation proposed by the staff and the basis for the proposed amendments. The discussion follows the order of the regulation.

### A. DEFINITIONS

The regulation includes definitions of specific terms for clarification. A definition of "facility" is included in CCR Section 93301(g). Currently, for oil production operations in Kern or Fresno counties, a facility of this type is defined as having the same meaning as "stationary source" as defined in Kern and Fresno County district rules.

- Proposed Change: Replace the citations for "stationary source" from Kern and Fresno County rules with the new citation from the San Joaquin Valley Unified District rule.

  Reason: Fresno county and portions of Kern county are now part of the consolidated San Joaquin Valley Unified Air Pollution Control District. The sections and rule numbers currently referenced for defining "stationary source," as they pertain to oil production operations, are out of date.

### B. APPLICABILITY PROVISIONS

#### 1. Removing Facilities from the Program that no Longer Meet Applicability

As required by the Act, the existing regulation applies to facilities that meet specific criteria which include: facilities emitting more than 10 tons per year of criteria pollutants; facilities on a district toxics inventory list; and facilities emitting less than 10 tons per year of each criteria pollutant and that fall within the classes of facilities specified in Appendix E to the regulation. Some facilities will experience changes in operations or processes such that they no longer meet the criteria that make them subject to the Act. The current regulation does not include language on how a facility's applicability would be affected in these situations, nor does it specifically allow facilities to be removed from the Hot Spots program. In response to industry and district requests, we are proposing language to allow facilities to be removed from the program for three specific cases.

##### a. Facilities Decreasing Emissions to Below 10 tpy

- Proposed Change: Add language (CCR Section 93305.5) to allow a facility to be removed from the program if it permanently decreases emissions of criteria pollutants to below 10 tons per year, and demonstrates to the district and the ARB concurs that it does not pose significant risk to public health, and does not meet any other

applicability criteria as specified in the regulation (i.e., not included in one of the facility classes in Appendix E and not on a district toxics inventory list). A facility would once again be subject to reporting requirements if these conditions are no longer satisfied (for example, if criteria pollutants increase to more than 10 tons per year).

b. Facilities Removed from District Surveys

- Proposed Change: Add language (CCR Section 93306.5) to allow a facility to be removed from the program if the district removes it from the districts toxics inventory list, and the facility demonstrates to the district and the ARB concurs that it does not pose significant risk to the public, and does not meet any other applicability criteria as specified in the regulation (i.e., criteria pollutant emissions are not greater than 10 tons per year and facility is not one of those classes in Appendix E). A facility would once again be subject to reporting requirements if these conditions for removal should no longer be met (for example, if criteria pollutants increase to more than 10 tons per year).

c. Facilities Discontinuing Processes Listed In Appendix E-I

- Proposed Change: Add language (CCR Section 93309) to allow a facility to be removed that was originally subject to the regulation because it had a process listed in Appendix E (for example, a facility using a certain amount of ethylene oxide per year for sterilization must submit an emission inventory report) if the facility discontinues that process, and demonstrates to the district and the ARB concurs that it does not pose significant risk to the public, and does not meet any other applicability criteria as specified in the regulation (i.e., is not also included in any other class in Appendix E). A facility would once again be subject to reporting requirements if these conditions are no longer satisfied.

Reason: Once a facility is subject to the regulation, the Act allows a facility to be removed only if it no longer emits a listed substance. Because that is very difficult for any facility to demonstrate, the new sections are proposed to account for situations where facilities change processes or operations such that they no longer meet any definition of applicability but still emit a listed substance. These facilities would then essentially be similar to other facilities that are currently not subject to the regulation.

To maintain the intent of the program, facilities that meet the above described conditions for removal and that wished to be removed from the program would first have to demonstrate to the district that they did not pose significant risk to the public. To avoid confusion, the facility must receive the district's concurrence that all criteria have been met and that the facility is no longer subject to the regulation.

2. Clarifying Applicability Provisions for Facilities Emitting Less Than 10 Tons Per Year of Criteria Pollutants

The Act requires the ARB to (1) identify classes of less-than-10-tons-per-year facilities that are to be subject to the program, and (2) to specify a timetable for their inclusion. CCR Section 93308 establishes applicability provisions and reporting requirements for these classes of facilities. The specific facility classes are listed in two tables in Appendix E to the regulation. The classes of facilities are identified by their Standard Industrial Classification (SIC) codes and are separated into two tables for reporting purposes. Facilities whose SIC codes are listed in Appendix E-I must prepare emission inventory plans and reports similar to the larger, affected facilities. Appendix E-I also lists specific processes that would make a facility subject to the regulation if the process occurred at the facility. These processes were specifically included because their associated air toxics emissions were considered to be of significant concern to public health. Facilities whose SIC codes are listed in Appendix E-II must prepare one-time survey reports of the use, production, or other presence of listed substances. Districts are required to prepare industry-wide emission inventories for classes of less-than-10-tons-per-year facilities that are subject to the regulation if the facilities meet criteria specified in the Act.

- Proposed Change: Clarify that any facility included in either table in Appendix E is subject to reporting requirements. Clarify that facilities in Appendix E-I must prepare individual facility emission inventories unless they are notified by the district that they will be included as part of a district's industry-wide emission inventory. Clarify that facilities in Appendix E-II are not subject to update requirements by explicitly stating that such surveys must be submitted one-time only.

  Reason: Based on districts' comments, the existing language is unclear regarding applicability for facilities included in district industry-wide emission inventories. The new language will clarify the original intent that any facility meeting the class descriptions contained in Appendix E-I is subject to emission inventory requirements and may be either included in a district industry-wide inventory or prepare an individual facility emission inventory. Explicitly stating that the surveys prepared by facilities in Appendix E-II are for one-time only will clarify the original intent that updates are not required for them. This was stated in the staff report to the June 1990 amendments, but not in the regulation itself.

## C. REQUIREMENTS FOR THE COMPONENTS OF THE EMISSION INVENTORY REPORT

The existing regulation requires that specific information be submitted as part of the initial emission inventory report. The report must include a facility diagram, a plot plan if required by the district, results of all source tests and other measurements that were performed to estimate emissions, and completed reporting forms. The staff proposes that the Board make minor changes to the inventory report requirements to eliminate the submittal of data that no longer needs to be collected under this program and to facilitate the data review and approval process.

- Proposed Change: Eliminate requirements for the submittal of supplemental process parameter forms (CCR Section 93322) and language referencing these forms (CCR Section 93320).

  Reason: The staff is proposing to remove the requirements for submitting these forms, and the forms themselves from Appendix B, because the supplemental information requested has been submitted once, and updates are not needed.

- Proposed Change: Modify CCR Section 93321(b) to reflect proposed changes to the core reporting forms. Specifically, delete references to specific data fields on the reporting forms, including the "office use" sections on each form, and replace with references to whole reporting forms.

  Reason: As will be discussed later in this report, the staff is proposing to eliminate the "for office use only" labeling on the core forms and require facilities to supply the information requested in these areas. The "office use" sections are specifically referenced in CCR Section 93321. Therefore, the section has been modified to address the proposed change, and to avoid adding long lists of data fields contained in these areas which are more easily and clearly referenced as the entire form instead.

## D. OTHER REQUIREMENTS FOR THE PLAN AND REPORT

### 1. Degree of Accuracy Values

~~The existing regulation specifies the degree of accuracy to which~~ emissions must be quantified and reported when using emission estimation methods other than source testing. Emissions calculated from source test results must be reported to within the limit of detection (LOD) of the source test method that was used. Emissions calculated from all other estimation methods must be reported to within a specified degree of accuracy expressed in pounds per year. Each substance in Appendix A-I (substances for which the emissions must be quantified) has been assigned a degree of accuracy value, which is based on the relative potency of the substance.

- Proposed Change: Delete language in CCR Section 93334 to eliminate duplicate information that is already in Appendix A-I. Modify language to reference the degree of accuracy values listed in Appendix A-I.

  Reason: Appendix A-I identifies the degree of accuracy value for each substance in the appendix. This information is also included in portions of CCR Section 93334. The degree of accuracy values need be referenced only once in the regulation.

2. Reporting Mixtures and Trade Name Products

The existing regulation includes specific instructions for reporting emissions of listed mixtures (for example, gasoline engine exhaust) or group headers (for example, polycyclic aromatic hydrocarbons [PAHs]). The instructions were designed so emissions of these substances could be reported in a manner that would best characterize their potential health effects.

- Proposed Change: Move information currently contained in the notes to Table B-II into CCR Section 93335. Specifically, move instructions for the following cases:

  a) **Mixtures without emittent identification numbers:** For listed mixtures or group headers that do not have an emittent identification number in Appendix A-I (for example, for "residual (heavy) fuel oils"), the total aggregated emissions shall not be reported but rather emissions of the constituents that are listed substances shall be reported;

  b) **Mixtures with emittent identification numbers:** For listed mixtures or group headers that have an emittent identification number in Appendix A-I, their emissions shall be reported in one of two ways depending on whether or not individual substances are indented and listed directly below the mixture or group header name. 1) If no such substances are included under the mixture or group heading (such as for "creosotes"), then total aggregated emissions shall be reported. 2) If such substances are included under the mixture or group header (such as those under the group "chlorobenzenes"), then their emissions shall be reported separately as total pounds of the substances using their individual emittent identification numbers. All other constituents of the mixture or group header that are not individually listed must be summed and reported under the emittent identification number for the mixture or group header.

  c) **Metal compounds:** For specifically listed metal compounds (for example, "zinc oxide"), their emissions shall be reported as total emissions of the compound using the emittent identification number for the compound. For metal compounds that are not specifically listed but which fall within a metal compound group header that is on the list (such as "beryllium compounds"), their emissions shall be reported as the amount of the atom equivalent of the listed metal (in this case, "beryllium"), using the emittent identification number for the metal itself. Emissions of unspecified metal compounds that contain more than one listed metal (such as "zinc chromate") shall be reported as the amounts of each of the component metal atom equivalents using the applicable emittent identification number for each metal.

d) **Diesel and gasoline engine exhaust:** Emissions of diesel engine exhaust and gasoline engine exhaust must be reported as emissions of total particulate matter and total organic gas. Emissions of individually listed substances from diesel and gasoline combustion shall also be reported.

e) **Gasoline vapors:** Emissions of the individual constituents of gasoline vapors that are listed substances must be reported along with the total aggregated emissions of gasoline vapors.

Reason: The reporting instructions described above, with two exceptions, are already included in the notes to Table B-II in Appendix B. As will be discussed later in this report, the staff is proposing that the Board eliminate this table and merge the information, including these reporting instructions, into Appendix A. For consistency, the instructions would be included in CCR Section 93335 of the regulation as well. All of these reporting instructions are necessary to properly characterize the emissions and health effects of these substances and groups, based on the available health effects data.

One of the instructions described above which is not currently included in Table B-II, relates to the reporting of metal compounds that are not individually listed but which fall within more than one listed metal compound group header. For example, zinc chromate is not specifically listed but contains two listed metals, zinc and hexavalent chromium. Emissions of this compound must be reported because it would fall under the group headers "zinc compounds" and "hexavalent chromium compounds" ~~which are listed. If this compound is emitted, the facility operator~~ must report the zinc portion of the compound and the hexavalent chromium portion of the compound separately under the appropriate emittent identification numbers for zinc and hexavalent chromium, respectively. This instruction is being added because the potency values for listed metals vary greatly. Consequently, the metal atom equivalent for each component metal must be reported to best characterize the potential health effects from emissions of unspecified metal compounds.

The other instruction described above which is not currently included in Table B-II relates to the reporting of gasoline vapor emissions. Specific reporting instructions are being added for this mixture to address the fact that the composition of gasoline is changing. Reporting only the emissions of total gasoline vapors is not adequate to characterize the health effects, based on available health effects data. Consequently, the staff is proposing that the emissions of individually listed constituents be reported as well.

3. Source Test and Measurement Procedures

The existing regulation specifies processes and substances for which source testing is required for quantifying emissions. These processes and substances are identified in Appendix D to the regulation. ARB-adopted source test methods must be used to fulfill the source test requirements, except for specified types of analyses. The regulation also specifies the procedures that must be followed when conducting a required source test.

If source testing is required, the facility operator must submit a source test protocol with the emission inventory plan. The protocol must identify the anticipated operating conditions for when the source test is conducted. The district must review these protocols to ensure that the source tests will be conducted correctly. The facility operator must follow the approved source test protocol when conducting the source test. The source test results must be submitted with the emission inventory report to support the reported emissions data.

- Proposed Change: Modify CCR Section 93336 to identify other test methods that are better suited for analyzing chlorine and sulfur content of certain fuel or material samples when fuel analysis is required.

- Reason: This section specifies which method should be used when fuel analysis is required. Based on district suggestions, analytic methods other than those already listed in this section are better suited for certain types of fuels. This change would identify methods to be used by fuel type. The staff is not proposing additional testing requirements, but is proposing better test methods to use for current fuel analysis requirements.

- Proposed Change: Add the term "source test report" to the title and text of CCR Section 93339. The actual source test results that must accompany the emission inventory report would be referred to as the "source test report."

  Reason: The term "source test report" is commonly used and understood and can be considered as an individual component of the emission inventory report. This change does not affect the reporting requirements.

- Proposed Change: Revise CCR Section 93339 to add a new subsection, (w), to the source test protocol. This subsection requires facilities to submit the estimated limit of detection, proposed number of test runs and any other pretest calculations for the source test method used not specified in subsection (a) through (v).

  Reason: Subsection (w) is being added to ensure the districts have all the information needed to properly review and approve the test protocols before the test is performed. Some information, like pretest calculations for determining testing time, are not specifically required to be submitted in (a) through (v) but should be reviewed and approved before the source test is performed.

- Proposed Change: Add language to CCR Section 93339 to make it clear that facilities participating in pooled tests need not submit a pooled source test report if they ensure the district already possesses a copy of the report.

  Reason: Facilities should not have to submit multiple copies of the same source test report if the district already possesses a copy of it.

4. Format for Reports

The existing regulation specifies the items that must be included in the emission inventory report.

- Proposed Change: Eliminate reference to supplemental process parameter reporting forms in CCR Section 93346 and Section 93347, include the term "source test report" in CCR Section 93346, and eliminate reference to "office use "sections on the reporting forms in CCR Section 93347.

  Reason: As previously discussed, the supplemental process parameter reporting forms are being eliminated since they provide information that is no longer necessary. This change will make reporting requirements less burdensome. Also as previously discussed, the "office use" labeling on the reporting forms is being removed from the reporting forms, and the actual source test results that must accompany the emission inventory report are now being referred to as the "source test report."

## E. BIENNIAL UPDATES

The Act requires that emissions inventories be updated biennially (Section 44344). The current regulation specifies that biennial update plans and reports shall include updated information for any changes which affect the nature or quantity of facility emissions (CCR Section 93350). For their biennial updates, facility operators are also currently required to estimate emissions for the previous two years and report emissions for the year in which the emissions were greater (CCR Section 93352).

As discussed in Chapter II, the proposed amendments to the regulation would streamline the biennial update reporting requirements by focusing on significant risk facilities, that is, those that were required to notify the public of their risk under this program. For most other facilities, the Biennial Summary Form may satisfy the facility biennial update requirements. Streamlining the biennial update requirements would be accomplished by:

1) the addition of CCR Section 93348 to the regulation to alter biennial update requirements and applicability;

2) the addition of CCR Section 93349 to establish the Biennial Summary Form;

3) changes to CCR Section 93350 to describe the new update plan and report requirements;

4) the replacement of CCR Section 93352 to require that updates be based only upon the most recent year's emissions;

5) the revision of CCR Section 93353 regarding the update reporting schedule;

6) the addition of CCR Section 93354 to address the Biennial Summary Form review schedule; and,

7) the renumbering of CCR Section 93355.

The following subsections specifically discuss each proposed change to the biennial update procedures and reasons for the proposed changes.

## 1. Significant Risk Facilities

o Proposed Change: Proposed CCR Section 93348(b) would require operators of significant risk facilities to identify and update all changes in emissions of those devices ("device" is defined in CCR Section 93301(c)) which constitute, at a minimum, the upper 80 percent of the facility's risk, such that the aggregated risk of devices not identified does not exceed either one cancer in a million or a noncancer hazard index of one, in the judgement of the district. Alternatively, facility operators subject to this part may, at their option, submit update plans and reports which show all changes to all processes at the facility. Significant risk facilities are those facilities determined to be of significant risk pursuant to Section 43362(b) of the Act.

Reason: Through the proposed update mechanism, every facility operator who is required to notify the public of the facility's risk would report the level and types of toxic emissions from the facility on a consistent basis, thereby keeping the public informed of their potential exposure.

Also, significant risk facilities must comply with the requirements of the Facility Toxic Air Contaminant Risk Reduction Audit and Plan Act. Emissions reductions required by this legislation are tracked via the Hot Spots Act's biennial update inventory process (Section 44391(h)).

The proposed requirement that operators of significant risk facilities update the devices which pose at least 80 percent of the facility's risk was selected to be health protective. The need for the restriction that the devices below the 80 percent cut-point not exceed one in a million cancer risk is illustrated by the following example. Assume a facility has a risk of 200-in-a-million. The upper 80 percent of devices pose a 160-in-a-million risk, however, the remaining 20 percent still pose a 40-in-a-million risk (which is four times the level of significance several districts are using for triggering when public notification is required). In this case, additional devices (beginning with the most significant) must be included with the significant risk devices until the remaining devices pose a cancer risk which is less than one in a million. Similar rationale applies to the threshold for the noncancer hazard index.

## 2. High Priority, Not Significant Risk Facilities

- Proposed Change: Proposed new CCR Section 93348(c) would require operators of all high priority facilities that are below significant risk to submit Biennial Summary Forms and to determine their increases in device activity. This section provides two options (specified in Sections 93348(c)(1)(i) and (c)(1)(ii)) for facility operators to identify devices with significant increases in activity. Any substantial increases in device activity would be required to be submitted in a biennial update plan and report.

  Reason: The Biennial Summary Form is used as a screening tool to identify whether there are activity increases at the facility which could cause the facility's risk to increase. Facility operators, working with the district as needed, would identify those devices, if any, that have increased substantially and warrant the submittal of updated emissions. The following sections discuss the identification of significant device activity increases, the identification of significant devices, and reporting requirements for these facilities.

- Proposed Change: Proposed new CCR Section 93348(c)(1)(i) and modified CCR Section 93350 provides the option for operators of high priority facilities to identify and update those devices at the facility whose activities have increased by 10 percent or more during the previous calendar year compared to the most recently submitted emissions inventory report. If there are no devices with significant increases at the facility, then the Biennial Summary Form would satisfy the facility's biennial update requirements. Districts would, however, have the authority to request additional information if a more complete update is warranted.

  Reason: This is one of two approaches facility operators may use to meet their biennial update reporting requirements. Using this approach, facility operators address increases in device activity (if any), regardless of the risk a device poses. The other approach, described in the next item, allows facility operators to address the increases in devices which contribute most to facility risk.

  Identification of increases in any devices may be most applicable to operators of smaller facilities with relatively few devices. For these devices, increases in throughput, fuel usage, process rates, feed rates, or other parameters, may be used as surrogates to easily determine increases in facility device level activity. The proposed threshold of a 10 percent increase in device activity as being "significant" was selected in consultation with industry, the general public, and the districts, to be protective of public health and to simplify reporting requirements. Rather than identify different thresholds for different substances based upon their potencies (making the reporting process very complex), a fixed, health conservative value was selected which allows facility operators to easily identify those devices whose emissions must be updated in biennial update plans and reports.

- Proposed Change: Proposed CCR Section 93348(c)(1)(ii) would allow facility operators the option to identify those devices or processes at the facility that are the greatest contributors to the facility's risk. If the facility operator demonstrates that there has not been an increase in activity in the devices which are the greatest contributors to the facility's risk, and, the facility is not a significant risk facility, the Biennial Summary Form would satisfy the facility's biennial update requirements. Individual districts would, however, have the authority to request additional information if a more complete update is warranted.

  If there are increases in the activity of the devices which contribute most to the facility's risk, proposed CCR Sections 93348(c)(1)(ii) and 93350 would require that their emissions be updated via a biennial update plan and report. Increases would be defined as a 10 percent increase in device or device category activity (as measured by increases in throughput, fuel usage or type, feed rates, emissions, or process rates), or increases in risk or prioritization scores, or other criteria agreed to by the district.

  Devices which are the greatest contributors to a facility's risk are those devices which constitute, at a minimum, the upper 80 percent of the facility's risk, such that the aggregated risk of devices not identified does not exceed either one cancer in a million or a noncancer hazard index of one, in the judgement of the district.

  Reason: This option would be most useful to operators of large, complex facilities. Because operators of high priority facilities were required to perform risk assessments, they know which devices contribute to the facility risk. By allowing operators to look at only increases (if any) of these devices specifically, workload will be reduced and districts will receive updated data for the most important devices.

  Facility operators choosing to report under this option will be required to work with the district to identify those devices which contribute most to facility risk, and to determine which activity increases are important. This allows facility operators and the districts to use the available risk, prioritization, and activity data at their disposal to identify significant devices. Substance potencies, process rates, receptor proximity, and other factors may be used in this process.

- Proposed Change: Proposed CCR Section 93348(c)(2) would allow facility operators to consolidate similar devices for the purpose of determining increases in device activity when reporting on the Biennial Summary Form. All devices so consolidated must be within the same Source Classification Code (SCC). Increases would be in comparison to the activity for comparable devices as reported in the facility's most recently submitted and approved emission inventory report. When the sum of the changes in activity for all consolidated devices within an SCC exceeded a 10 percent increase, an updated Process and Emittents (PRO) Form would be submitted by the facility operator for any individual device or grouped devices (reported on the same PRO Form) whose activity increased by 10 percent or more.

Reason: For those operators of high priority facilities which have many devices, it could require significant resources to determine the level of increase for individual devices. By allowing similar devices to be grouped, the amount of work will be decreased and the pertinent facility activity information will still be gathered.

Note that the consolidation of similar devices is provided as a screening tool. If the activity for the consolidated devices does not exceed 10 percent, then the emissions from the group of devices is not required to be updated as part of the facility's biennial update report. However, if the activity for any consolidated group of devices does exceed 10 percent, then the facility operator is required to update, individually, any devices or groups of devices (reported on the same PRO form) whose activity has increased by 10 percent or more.

### 3. Low and Intermediate Priority Facilities

- Proposed Change: The proposed CCR Section 93348(d) would require operators of low and intermediate priority facilities to submit parts A and B of the Biennial Summary Form. Operators of these facilities would only submit update plans and reports if required by the district (CCR Sections 93348(d) and 93350).

Reason: In most cases, the Biennial Summary Form would satisfy a facility's biennial update requirements. However, a district could require an update plan and report if information on the form indicates that changes at the facility could meaningfully increase facility risk.

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The low and intermediate priority facilities are required to complete Parts A and B of the Form only. Part C (which high priority, not-significant risk facilities must complete) requires a facility operator to indicate where there has been a significant increase in device activity. Because it is less likely (than high priority facilities) that device activities at low and intermediate facilities will increase to a level which places them in the significant risk category, it is not necessary to track increases in individual devices from all of these facilities. However, the facilities are required to report significant changes in their operations on the Form (such as new equipment, and modifications to permits), which the district then uses to make a determination as to if updated emissions inventory data are required.

### 4. Update Plans and Update Reports

- Proposed Change: Modify CCR Section 93350 to clarify that only changes must be reported when submitting an updated emission inventory. If there are no changes at a facility that have affected facility

emissions of any listed substance since the last inventory update, then a letter certifying this to be true would be sufficient for the update report.

Reason: Previously it was unclear that only changes needed to be reported when submitting updated emissions reports. This change clarifies our intent that updated inventory plans and reports only need to be submitted if changes occur to the facility emissions.

5. Addition of the Biennial Summary Form

- Proposed Change: Proposed CCR Section 93349 would add a Biennial Summary Form to the regulation. All facility operators would be required to complete the form every two years (except for the significant risk facilities, which have different reporting requirements). Although the requirements differ somewhat for the high versus the low and intermediate priority facilities, generally the Biennial Summary Form would be sufficient to meet a facility's biennial update requirements if information on the form indicates that there have not been substantial changes in facility processes or emissions.

  Reason: The Biennial Summary Form has been added to simplify biennial update reporting for most facilities by acting as a screening mechanism. Information provided on the form will be, in most cases, sufficient for districts to identify changes at the facility which could warrant the submittal of a biennial updated plan and report. In the cases when there are not substantial changes at the facility, the biennial summary form will meet the facilities biennial update requirements.

- Proposed Change: Proposed CCR Sections 93348 and 93354 would require districts to review the Biennial Summary Form to judge whether facilities have substantially changed their operations in a way which may increase a facility's impact on public health.

  Reason: Allowing districts the opportunity to review the Biennial Summary Forms allows maximum flexibility for districts and facilities in reducing unnecessary reporting. The district is the most qualified agency to impartially assess whether changes at the facility could increase the potential facility risk, and to determine whether a biennial update plan and report is warranted to protect public health.

6. Unprioritized Facilities and Voluntary Updates

- Proposed Change: Proposed CCR Section 93348(e) would provide minimal biennial update requirements for operators of facilities that are not yet prioritized. Facilities in this group would be required to submit only Part A of the Biennial Summary Form. Part A consists of the facility name and address, a contact person and phone number.

Reason: Until a facility is prioritized, there is no estimate of the relative health impact of the facility's emissions. Once a facility is prioritized, its inventory update requirements are identical to those for all other prioritized facilities and are based on its priority ranking. This part principally addresses the less-than-10-tons-per-year (tpy) facilities, but includes any unprioritized facilities regardless of size.

- Proposed Change: Proposed CCR Section 93348(f) allows facility operators the option to submit complete biennial update plans and reports even if the facility is not required to do so. If a facility chooses to submit a voluntary update, it shall be at the normally scheduled update time unless another time is approved by the district.

  Reason: There are cases, especially when facility emissions are reduced, when facility operators may choose to update their emissions report. The option of voluntary updates is provided to allow for this. A facility operator must get approval of the submittal schedule from the district prior to the submittal of any non-scheduled update.

7. Reporting Schedule and Reporting Year

- Proposed Change: Proposed CCR Section 93352 replaces the existing wording with entirely new text so that facility emission inventory updates, when required, will be based upon only a single year's emissions.

  Reason: The current regulation wording could be interpreted such that facilities are required to determine process emissions for two consecutive years, and then report the highest emissions between the two years. This resulted in facilities estimating emissions twice and possibly reporting different year's emissions for different devices. This was not the intent of the reporting requirements, therefore they have been clarified.

- Proposed Change: Proposed CCR Sections 93353 and 93354 address changes in the reporting schedule. The changes would require facility operators to submit Biennial Summary Forms by February 1 of the year specified in CCR Section 93353. Briefly, operators of facilities emitting over 25 tons-per-year (tpy) of criteria pollutants would submit Biennial Summary Forms in 1994, as would facilities subject to the less-than-10 tpy reporting requirements. The 10-25 tpy facilities would submit in 1995. For significant risk facilities, the revised schedule would postpone the submittal of the required biennial update plan by one year.

  The proposed schedule provides 90 days (until May 1) for districts to review submitted Biennial Summary Forms and inform the facility if an update plan and report is required. For those facility operators required to update their emission inventories, the schedule would allow 90 days for the completion of the biennial update plan (until August 1).

Reason: February 1 was selected as the Biennial Summary Form submittal date so that activity for a complete calendar year could easily be reported. The use of the February 1 date and the other scheduling elements provides a slight temporary adjustment to the reporting schedule which gives facility operators (for one time only) an extra six months or year to meet their reporting requirements. Ninety days for district review and plan submittal is based upon district and facility assessments of the reasonable time required to perform these tasks.

### 8. Revising Data for Prioritization or Risk Assessment

- Proposed Change: Proposed CCR Section 93348(g) requires facility operators who use updated or refined data for the purpose of prioritization or risk assessment (which differs from the submitted emission inventory data) to update their emissions report to reflect these changes, and it requires that the changes be forwarded to the districts and the ARB.

  Reason: Through this update mechanism, facility operators are more accountable for justifying their changes in emissions, and the emission inventories for these facilities can be updated to more accurately reflect their emissions.

### 9. Use of Previously Submitted Source Test Data

- Proposed Change: CCR Section 93351(c) would be modified to refine text regarding the use of previously submitted source test data for the purpose of an inventory update. The changes include providing districts greater discretion in allowing previous source test data to be used, removal of ambiguous language, and the addition of text which (conditionally) requires retesting for invalid or inadequate source tests.

  Reason: By providing the districts greater discretion, unnecessary source tests can be avoided. Districts may determine that the data derived from additional testing (even to correct an invalid test) is not required because the additional testing would not provide significant improvement in the assessment of facility emissions.

  The requirement to retest if major improvements in a source test method occur was removed because improvements in the methods will not necessarily result in improved inventory data. Factors such as the type of method improvement, the substance tested and its potency, the quantity of the substance present, and other criteria could all play a role in determining whether retesting is useful. Therefore it was determined, in consultation with districts and the public, that mandating retesting because of improvements in methods would not be appropriate.

## F. APPENDIX A (SUBSTANCES TO BE INVENTORIED)

Appendix A to the regulation contains the list of substances that must be reported under this program. The list has been divided into two groups for emission inventory reporting purposes. Appendix A-I includes substances for which emissions must be quantified. Appendix A-II includes substances for which only the production, use, or other presence must be reported. Substances in Appendix A-I are those whose suspected emissions from emitting processes in California are believed to pose the greatest potential health risks. Substances in Appendix A-II are those substances for which inadequate data are available to substantiate the presence of the substances in California or their significance to population exposure associated with industrial operations occurring in the state.

- Proposed Change: Move information that is currently in Table B-II in Appendix B into Appendix A. Specifically, consolidate all emittent identification codes for all substances into Appendix A. Rename the "Chemical Abstract Service (CAS) Number" column to the "Emittent ID" column in Appendix A. Add a new notes section at the end of Appendix A, insert the notes that are currently at the bottom of Table B-II into the new notes section, renumber the notes, and modify some of them. Add a new column, the "Other Notes(s)" column to Appendix A.

  Reason: The existing Table B-II provides emittent ID codes and instructions for how to report the emissions of specific substances, primarily listed mixtures and group headers for a class of substances. The ARB staff had to develop these codes and instructions to ensure emissions would be reported in such as way as to best correlate with available health effects data.

  The ARB staff established four digit emittent identification codes for the mixtures and group headers in Table B-II to distinguish them from listed substances that do have Chemical Abstract Service (CAS) numbers, which are never four digits. To facilitate the reporting process, staff proposes to merge the emittent ID codes in Table B-II with the CAS numbers in Appendix A and place them in a new column, the "Emittent ID" column, which will replace the "Chemical Abstract Service (CAS) Number" column.

  The only emittent ID code from Table B-II that staff is not proposing to add to Appendix A is the code for Polycyclic Organic Matter (POM). This code was originally created unnecessarily for the group header, "POM", because total emissions of POM are not required to be reported but rather the emissions of its individually listed constituents must be reported.

  For ease of reference, staff also proposes to move the notes from Table B-II (the specific reporting instructions), modify some of them for clarification, renumber them and add them in the new notes section at the end of Appendix A, and reference them for specific substances in a new column in Appendix A labelled "Other Note(s)".

- Proposed Change: Change the meaning for one symbol ("*") that is currently used as a footnote in the CAS column. Delete the footnote for this symbol and delete the symbol in the emittent ID field where it no longer applies. Add new symbols ("--", "#") to the emittent ID field for some substances. Add a note for the proposed newly labelled "Emittent ID" column explaining the meaning of all symbols that are used in the column.

  Reason: The symbol "*" is currently used in the CAS field as a footnote explaining that a single CAS number does not apply to the particular substance. This symbol currently refers the user to Table B-II to determine the correct emittent ID number and reporting instructions for the substance. Because the information in Table B-II in being added to Appendix A, this footnote is no longer relevant and is being deleted. Staff proposes that this symbol be used in the emittent ID field for metal compound group headers only, with a note explaining how these metal compounds should be reported.

  Generally, the substances for which the new symbols ("--", "#") are being proposed are currently listed in Table B-II. Staff proposes to add the new symbols in the emittent ID field to further clarify the original intent that total emissions of these substances should not be reported but rather that their emissions be reported according to the instructions for each symbol in order to best characterize their potential health risk.

  The symbol "-" is currently used in the CAS column for cross-reference purposes and will continue to be used in the emittent ID field for the same substances and the same reason as will be explained in the new note for the Emittent ID column.

- Proposed Change: Add a note and a corresponding reference number in the "Other Notes" column for gasoline vapors to require the emissions of individual constituents that are listed substances to be reported in addition to the total gasoline vapors emissions.

  Reason: Because the composition of gasoline vapors is changing, its current health effects data will not be applicable in the future. Consequently, the emissions of its individually listed components should also be reported because health effects data do exist for some of these substances.

- Proposed Change: Add a note and a corresponding reference number in the "Other Notes" column for radionuclides to require the emissions of radionuclides and other radioactive substances to be reported in Curies per year.

  Change: This instruction is already included in Appendix B and is being added here as well for clarification.

- Proposed Change: Add a new column to Appendix A, the "Source List(s)" column, that identifies the references from the Act from which each substance is listed. Add a note to this column header which identifies the source list for each reference number.

Reason: The Air Toxics Hot Spots Fee Regulation (Title 17 California Code of Regulations (CCR), Sections 90700-90705) also contains the list of substances, but groups the substances differently than in the Emission Inventory Criteria and Guidelines Regulation. Under a separate rulemaking, the staff intends to propose that the list be deleted from the Fee Regulation and that Appendix A to the Emission Inventory Regulation be the only list of substances for this program. Consequently, the staff is proposing to add information that is currently included in the Fee Regulation list of substances, for example, information in the "Source" column which also reflects which substances cannot be removed from the list, into Appendix A. Consolidating the two substance lists into one will reduce confusion regarding which list of substances to use for emission reporting purposes.

- Proposed Change: Staff is proposing to add source list reference numbers, add dates, carcinogen designation, and degree of accuracy values for nine entries that are not currently included on the Fee Regulation list of substances. These include diesel engine exhaust, particulate matter; diesel engine exhaust, total organic gas; gasoline engine exhaust, particulate matter; gasoline engine exhaust, total organic gas; PAHs, total, w/o individ. components reported; PAHs, total, with individ. components also reported; dioxins, total, w/o individ. isomer reported; dioxins, total, with individ. isomers also reported; and dibenzofurans.

  Reason: These nine substance entries are from Table B-II of the Emission Inventory Regulation. These are not additional substances ~~which are found on the source lists, but are entries that were~~ developed for reporting purposes for specific listed substances. For example, two emittent identification codes were developed for reporting emissions of gasoline engine exhaust (which is a listed substance): one for reporting total organic gases emissions from gasoline engine exhaust and one for reporting particulate matter emissions from gasoline engine exhaust. The nine entries were created at the time their corresponding listed substances were added to the list and thus should have the same source reference numbers, add date, carcinogen designation, and degree of accuracy values as the specifically listed substances from the source lists.

- Proposed Change: Reorder the substance name, add date, and carcinogen designation columns in Appendix A and add an explanatory note for each column; change the column headers "See Note I" to "Carcinogen", and "See Note II" to "Add Date."

  Reason: These changes are being proposed to improve and clarify Appendix A.

- Proposed Change: Move the footnotes that are currently at the bottom of each page and at the end of Appendix A-I and A-II to the new notes section at the end of the Appendix and delete four footnotes that are no longer needed.

Reason: These changes are being proposed to improve and clarify Appendix A. The current footnotes that are preceded with a "*", "**", and "(+)" are being deleted from the revised Appendix A because they no longer apply. The footnote regarding how to report substance group headers is being deleted because it's meaning is addressed in the new note for the substance name column.

- Proposed Change: Make minor non-substantive corrections such as correcting the CAS numbers for two substances, removing commas and spaces in substance names, correcting spelling for some substance names, realphabetizing substances, eliminating duplication, adding a cross reference for the substance lead chromate, and clarifying the header name for mineral fibers.

  Reason: These changes correct minor oversights in the existing regulation and improve the Appendix.

- Proposed Change: Remove the degree of accuracy value for group headers or mixtures on the list that do not have emittent identification numbers but which do have a "--" or a "#" symbol in their emittent identification field.

  Reason: A degree of accuracy value is not necessary or appropriate for these groups or mixtures because the group itself is not quantified. The degree of accuracy values for these group headers and mixtures are being deleted to emphasize that their constituent emissions shall be reported according to the instructions for each symbol.

- Proposed Change: Correct the add date for 3-(N-Nitrosomethylamino)propionitrile and 4-(N-Nitrosomethylamino)-1-(3-pyridyl)-1-butanone.

  Reason: An add date is the date the Board approved addition of the substance to the original list. These substances are currently listed with a "09/89" add date. However, synonyms for these substances, which have since been deleted, were included in the original list which was approved by the Board in July 1988. Consequently, the add date for these substance should be left blank which indicates that the substances were part of the original list.

- Proposed Change: Remove lead acetate, lead subacetate, and the phrase "including but not limited to", from under the "Lead Compounds (other than inorganic)" group header. Add these two compounds under the "Lead Compounds (inorganic)" group header. Add an explanatory note to the end of the Appendix and a corresponding reference number in the "other notes" column.

  Reason: This listing change will clarify the reporting of these two lead compounds. This change is necessary to assure that lead acetate and lead subacetate, when speciated quantification is unavailable, are correctly reported (quantified) along with the inorganic lead compounds to allow the proper use of health values when assessing health risk.

Removing the phrase "including but not limited to", is needed to properly organize the list since no substances will remain under the group listing of "Lead Compounds (other than inorganic)". Addition of the explanatory note is necessary to clarify why these two organic lead compounds will now be listed under "Lead Compounds (inorganic)".

## G. APPENDIX B (REPORTING FORMS AND INSTRUCTIONS)

Section 93322 of the regulation requires that facilities submit reporting forms as part of their emission inventory reporting requirements. Appendix B of the regulation contains the reporting forms, instructions for completing the forms, and tables of codes used to assist in reporting data.

Based upon comments received from the public, air pollution control districts, and industry, we are proposing to make amendments to Appendix B to facilitate the submittal, review, and approval of data. To this end, we are adding the Biennial Summary Form to streamline biennial update reporting, providing clarifications to the instructions, deleting unnecessary reporting forms, adding a new table of reference data, modifying the reporting forms slightly, and making other changes described below.

### 1. Changes to Tables

- Proposed Change: Delete Table B-II (which contains Emittent ID Codes for Listed Substances Lacking CAS Numbers) from Appendix B and move its contents to Appendix A (the list of substances). Renumber the existing Table B-I to Table B-II and create a new Table B-I that contains a ~~table of county, air basin and district codes.~~

  Reason: Table B-II tabulates emittent ID numbers (created by the ARB) for substances which did not have CAS (Chemical Abstracts Services) numbers and are required to be reported under the Hot Spots inventory requirements. Information in Table B-II (which also included some substance reporting instructions) has now been consolidated into Appendix A for ease of reference.

  The addition of the new Table B-I, which includes county, air basin, and district codes, is provided to assist facilities in filling out the reporting forms (as is explained below).

- Proposed Change: Add additional Process Unit Codes and Descriptions to the newly renumbered Table B-II. Add additional Emission Estimation Method Codes to the existing Table B-III.

  Reason: Some additional Process Units were added to assist with reporting certain processes. Additional Emission Estimation Method Codes were added to address the reporting of emissions derived from source test data which had test runs below the test method limit of detection.

## 2. Reporting Forms

- Proposed Change: Delete four of the five supplemental process parameter forms and their associated instructions. Forms to be deleted include the Stationary Combustion Form (S-CMB), the Cooling Tower Form (S-CT), the Metal Plating Form (S-MP), and the Sterilization Form (S-ETO).

  Reason: The listed supplemental forms request detailed data. Most facilities have already reported this detailed data once and there is no reason to collect it any further. The Substances Used, Produced, or Otherwise Present Form (S-UP) is retained for reporting substances listed in Appendix A-I whose emissions are below the degree of accuracy, for reporting substances listed in Appendix A-II, and it is used for the reporting requirements for the less-than-10-tons-per-year facilities listed in Appendix E-II.

- Proposed Change: Add the Biennial Summary Form and its instructions.

  Reason: By adding the Biennial Summary Form, the biennial update requirements would be streamlined for most facility operators. The Form is designed as a screening tool used to assist districts in identifying changes at facilities which could affect the public health. For most facilities without significant changes, the form will meet their biennial update requirements. Refer to Part E, Item 5 of this section for additional information about the Biennial Summary Form.

- Proposed Change: On each of the reporting forms change the term "Emissions Year" to "Inventory Year" on the top left of each form.

  Reason: This clarification is to make the report labeling more consistent with actual information on the report. This does not affect the reporting requirements in any way.

- Proposed Change: Remove the designation of "Office Use Only" from all of the reporting forms. Remove the applicable grey shading. Require facility operators to complete all required fields within the previously designated "Office Use Only" areas. The primary fields affected are the Facility ID, County ID, Air Basin, District, Action Codes, Source Classification Codes (SCCs), and Universal Transverse Mercator (UTM) coordinates.

  Reason: These fields may be most efficiently filled in by facility operators at the time they are filling in other required information on the reporting forms. This will facilitate the review, approval, and transmittal of inventory data to the ARB. The data required to be entered may be easily derived from the proposed newly added Table B-I or from previously submitted emissions reports in which districts initially completed the "Office Use Only" fields.

- Proposed Change: Add Stack ID, a space for Substance Names, and Year of Estimate to the Process and Emittents (PRO) Data Form.

  Reason: The Stack ID field was added to the PRO Form to provide for reporting process configurations in which a single device exhausts through more than one stack. Primarily this situation arises when devices use multiple fuels and the control equipment used varies based upon the fuel used.

  A space was added to write in substance names to assist in reporting and verifying emissions data. Currently, emissions are identified by only a seven digit numeric code.

  Year of Estimate fields were added to both the Process Data (Section 1) and Emittent Data (Section 2) of the PRO Form. In this way, it is possible to track when process data and/or emissions data of each reported substance were last updated. These extra fields are necessary because for biennial and other updates, only those data that have changed are required to be reported. By using Year of Estimate fields, it is possible to distinguish what data were actually updated and when.

### 3. Reporting Instructions

- Proposed Change: Add instructions for Action Codes and Source Classification Codes (SCCs). Expand instructions for designating data as trade secret.

  Reason: Instructions were previously not included in the regulation for the Action Codes and SCCs because these fields were orginally completed by the districts. However, now that facilities will be required to fill these values in, instructions are provided. Action codes are used to indicate if data have been changed, added, or deleted on the reporting forms. SCC codes are used to designate the type of process being performed (e.g. chemical manufacturing, combustion, etc.).

  Expanded instructions have been added for designating trade secret data in cases when there has been a request for the release of information to the public which has been designated as trade secret by the facility operator.

- Proposed Change: Revise the layout of the Substances Used, Produced, or Otherwise Present Form (S-UP) and include space to write in substance names and action codes. Revise the instructions for the S-UP Form.

  Reason: The S-UP Form layout was modified to remove the reporting instructions from the form itself. The instructions are now on a separate page. A space for substance names was added to assist in reporting and verifying reported data. An action code field was added so facilities can easily indicate if data on the form are being added, deleted, or changed. Instructions for the form were clarified and expanded to assist facilities in filling out the form.

- Proposed Change: Clarify reporting instructions for reporting Emission Factors and mixtures or substance group headers.

Reason: It was found that some facilities did not include the effects of control equipment when reporting emission factors on the Process and Emittents (PRO) Form. The instructions now clearly state that the effects of control equipment must be included when reporting emission factors. Also, to assist facilities in reporting listed mixtures and substance group headers on the PRO Form, more comprehensive instructions have been provided in this area.

- Proposed Change: For reporting emissions, provide instructions for using the degree of accuracy values specified in Section 93334 and Appendix A.

  Reason: There has been confusion in how to apply the degree of accuracy values when reporting emissions. The instructions will assist facilities in reporting their data accurately and consistently. Degree of accuracy values provided in Appendix A-I are used for rounding emissions for reporting purposes and for determining when emissions are small enough to be reported on the Supplemental Use and Production (S-UP) form rather than quantified and reported on the Process and Emittents (PRO) Form.

- Proposed Change: Provide instructions for reporting emissions derived from source test data which had runs that were below the test method limit of detection. For situations when some runs for a source test are below the limit of detection and some are above, use one-half of the limit of detection when reporting emissions. When all source test runs for a source test are below the limit of detection, report "ND" (non-detect) for the emissions.

  Reason: The instructions have been added to provide a uniform convention which ensures that the "below limit of detection" (below LOD) data reported conveys the available information most completely and consistently. For the situation when there is a mix of above and below LOD results for a source test, one-half of the below LOD values are to be averaged together with the above LOD runs for reporting emissions. This approach was adopted because if at least one run in the source test series shows that the substance is present at levels above the LOD, it is a reasonable indicator that the substance is probably present. Therefore, the below LOD results should be included in the emissions calculations to adequately represent emissions.

  When all source test runs for a substance are below the limit of detection, there is no clear indication as to if the substance is present or not. Therefore, in this case, the instructions state that facilities are to report "ND" for the emissions of these substances. This differs from previous non-regulatory guidance which suggested that emissions be reported using the one-half LOD values when all runs were below the LOD. This change was implemented because a majority of the source tests required under this program have already been conducted and reported. Source test results from similar processes will be evaluated to determine whether emissions of substances that were reported below the LOD were ever detected in other results.

Reported data which is below the LOD is specially flagged in the Air Toxics Emission Data System (ATEDS). The data in which ALL runs are below the LOD are not released to the public in standard emissions reports, and are only available at special request. It is the staff's intent that these data not be used as part of the facility total emissions unless there is a reasonable indication that the substances in question are present.

## H. APPENDIX D (REQUIREMENTS FOR MEASUREMENTS AND ALTERNATIVES)

As was mentioned earlier, sources and substances for which source testing is required under this program are identified in Appendix D to the regulation. Based on comments received from industry and the districts, staff is proposing to eliminate source test requirements for specific sources that have been determined to be infeasible or impractical.

- Proposed Change: Exempt source test requirements for emergency or stand-by equipment that primarily burn distillate or diesel fuel.

  Reason: This language clarifies our original intent to test routine and predictable emissions as required in the Act. In most instances, the time it would take to run these processes to source test their emissions would be longer than the time they are normally run.

- Proposed Change: Remove source test requirements for the chlorinator discharge and the headworks at Publicly Owned Treatment Works (POTWs).

  Reason: Based on comments from POTWs, the source test requirements for the chlorinator discharge, or what is more commonly referred to as the chlorine contact tank, are infeasible because the source is normally not ducted.

  The removal of the headworks source test requirements is proposed because liquid sampling, which POTWs are required to collect as part of EPA's National Pollution Discharge Elimination System, provides the potential for less expensive emissions estimation (when used with established emission estimation techniques for POTWs), while generally providing more health conservative emissions than source testing. In addition, valid source test data from a single year may not be representative of the influent during other years, thereby creating the potential for ongoing source testing. The comparative less expensive liquid testing (versus air sampling) provides a reasonable mechanism for POTWs to accurately update their emissions inventories as required by the regulation.

V.

# ECONOMIC AND ENVIRONMENTAL IMPACTS

## A. ECONOMIC IMPACTS

This section discusses the economic impact of the proposed amendments to the emission inventory regulation. The proposed amendments should result in substantial reductions in costs for most facilities subject to the regulation. Cost savings will also be seen for public agencies. The proposed amendments should not result in any additional costs.

### 1. Economic Impact on Facilities

The proposed amendments to the regulation will result in substantial reductions in costs and workload for all facilities subject to the regulation. The major cost savings will occur for those facilities determined not to be a significant risk and for high priority facilities that do not have significant increases in facility activity and emissions. These cost reductions result from major reductions in emission inventory update reporting requirements. The staff expects that approximately 90 percent of facilities will no longer have to prepare and submit biennial update plans and reports. Those facilities need only complete and submit the two-page Biennial Summary Form to satisfy their biennial update requirements.

As discussed earlier in this report, the proposed amendments would require all low, intermediate and non-significant risk high priority facilities to complete and submit a two page Biennial Summary Form. For low and intermediate facilities, submittal of the Biennial Summary Form would satisfy those facilities' biennial update requirements. Based on the information on that summary form, districts may require some of the low and intermediate facilities to update their inventories if substantial changes have taken place in a facility's operations. However, staff expects this to occur infrequently and when the changes indicate that a significant risk could occur. Based on currently reported data, up to 83 percent of facilities are low and intermediate priority.

High priority, non-significant risk, facilities also would have to complete and submit the Biennial Summary Form. If significant increases in device activity have occurred, these facilities would automatically have to update their inventory for those devices showing significant increases. Based upon data the ARB has received, non-significant risk high priority facilities represent approximately 12 percent of the facilities subject to the Act. Even if half of these high priority facilities were required to update emissions due to significant increases in activity, the proposed amendments would allow almost 90 percent of all facilities to satisfy their biennial update requirements through the Biennial Summary Form.

The requirement of preparing the Biennial Summary Form rather than update plans and reports will result in substantial cost savings to affected facilities. Past experience has shown that most facilities have relied on

outside consultants to prepare the inventory plans and reports. This has resulted in high costs for reporting. The Biennial Summary Form requires minimal time and effort and can easily be completed in-house by facility staff or operators. Reporting on the form has been streamlined to asking seven yes or no questions to provide districts with the basic information to determine whether any significant changes occurred in facility operations.

The proposed amendments also reduce the cost of compliance for significant risk and high priority facilities that have to prepare inventory updates. Those facilities are allowed to concentrate their biennial update reporting on those devices that account for 80 percent of a facility's risk as long as the risk from the non-updated devices does not exceed either one cancer in a million or a noncancer hazard index of one. This change should provide additional cost savings for this group since these facilities currently must submit update plans and reports to address all facility changes. Based on current data, approximately ten percent of affected facilities may fall into this category.

2. Economic Impact on Public Agencies

Costs to public agencies should also decrease substantially. Public agencies incur costs as a result of the reporting requirements of the regulation that requires an update of their emission inventory biennially. Public agencies subject to reporting requirements in the regulation, will see the same decrease in costs for complying as other facilities.

The proposed amendments to the regulation will result in fewer plans and reports submitted to local air pollution control districts. Due to the complex and comprehensive nature of the program there is a large backlog of plans and reports for district staff to review. Therefore, these reduced reporting requirements will allow district staff to better review and approve the submitted emissions data without the need for additional resources. The emphasis on reducing the submitted reports from low and intermediate facilities will allow district staff to spend more time on potentially significant risk facilities.

B. ENVIRONMENTAL IMPACTS

The staff is not aware of any significant adverse impacts on the environment resulting from the proposed amendments to the emission inventory criteria and guidelines regulation.

The proposed changes to the regulation are designed to target update reporting requirements on the significant risk facilities and high priority facilities that have been identified under this program. The proposed amendments will allow the ARB to maintain up-to-date information for facilities that adversely impact the environment. As a final measure in this program, these facilities will have to reduce their emissions under the Facility Toxic Air Contaminant Risk Reduction Audit and Plan Act (SB 1731). The emission data from these facilities will continue to be evaluated under the Toxic Air Contaminant Identification and Control Program to help prioritize the development of air toxic control measures.

# ATTACHMENT I

## Proposed Amendments to the Emission Inventory Criteria and Guidelines Regulation

Proposed Amendments to Titles 17 and 26, California Code of Regulations:

PROPOSED AMENDMENTS

SUBCHAPTER 7.6. EMISSION INVENTORY CRITERIA AND GUIDELINES

Article 1. General

**93300. Purpose.**

This subchapter sets forth the criteria and guidelines for preparing emission inventory plans and reports to develop site-specific inventories of air emissions of toxic substances, as required by the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (the "Act": Stats. 1987, ch. 1252; Health and Safety Code Section 44300 et seq.).

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, and 44342, Health and Safety Code.

**93301. Definitions.**

(a) **"Air emission", "emission", "air release", or "release"** has the same meaning as defined in Health and Safety Code Section 44303.

(b) **"ARB-adopted source test method" or "ARB-adopted method"** means a procedure for performing source testing as set forth in Title 17 California Code of Regulations, Section 94100 et seq.

(c) **"Device"** means any article, machine, equipment or other contrivance (whether or not operated under a permit from an air pollution control district or air quality management district) which may cause the emission of a listed substance.

(d) **"Emission inventory plan", "inventory plan", or "plan"** means the emission inventory plan required by Health and Safety Code Sections 44340 and 44342.

(e) **"Emission inventory report", "inventory report", or "report"** means the emission inventory report required by Health and Safety Code Section 44341.

(f) **"Emitting process"** means any fugitive source or any operation within a device that involves the manufacture, formulation, use, or release of one or more of the listed substances, when the substance is present in any capacity whatsoever, including but not limited to an ingredient, product, auxiliary, or catalyst.

(g) **"Facility"** means the same as defined in Health and Safety Code Section 44304. "Facility" shall not include any motor vehicle as defined in Section 415 of the Vehicle Code.

(1) Except for the oil production operations defined in subsection (2) below, for purposes of this regulation, the phrase "every structure, appurtenance, installation" shall mean all equipment, buildings, and other stationary items, or aggregations thereof, (A) which are associated with a source of air emission or potential air emission of a listed substance; (B) which involve activities that belong to the same two-digit Standard Industrial Classification code, or are part of a common operation; (C) which are located on a single site or on contiguous or adjacent sites; and (D) which are under common ownership, operation, or control, or which are owned or operated by entities which are under common ownership, operation, or control.

(2) For oil production operations in the counties of Kern and Fresno, the phrase "every structure, appurtenance, installation" shall mean the same as "stationary source" defined in Section I3.3, "Definitions" in Kern County San Joaquin Valley Unified Air Pollution Control District Rule 2201 0/1 "Standards for an Authority to Construct Permit New and Modified Stationary Source Review Rule" as amended August 22, 1989 December 17, 1992, and Section 2, "Definitions" in Fresno County Rule 210/1 "Standards for Authority to Construct" as amended August 8, 1989, respectively, both of which rule sections are which is incorporated by reference herein.

(h) **"Facility diagram"** means a diagram submitted with the inventory report that shows all points of actual or potential air release of a listed substance, including fugitive emissions.

(i) **"Fugitive emissions"** means those emissions which do not pass through a stack, chimney, vent, or other functionally equivalent opening.

(j) **"List of substances"** means the list of chemical substances which may pose a threat to public health when present in the ambient air as set forth in Appendix A of Title 17 California Code of Regulations, Sections 90700 through 90704, and in Appendices A-I and A-II of this regulation; a "listed substance" is a substance included on this list.

(k) **"Material Safety Data Sheet" ("MSDS")** means printed material concerning a hazardous substance which is prepared by manufacturers and importers in accordance with Section 5194(g) of Title 8, California Code of Regulations, "Hazard Communication".

(l) **"Operator" or "facility operator"** means the same as defined in Health and Safety Code Section 44307.

(m) **"Small business"** means the same as defined in Government Code Section 11342(e).

(n) **"Source" or "point of release"** means the location of a facility activity, device or emitting process, including locations of fugitive emissions, which may be associated with air emissions of a listed substance or other air pollutant; or the location of any substance which may be associated with emissions of a listed substance or other air pollutant.

(o) **"Total organic gases (TOG)"** means all gases consisting of substances containing carbon, except carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

(p) **"Trade secrets"** means the same as defined in Government Code Section 6254.7(d).

(q) **"Update plan"** means an emission inventory plan which is revised and updated biennially as required by Health and Safety Code Section 44344.

(r) **"Update report"** means an emission inventory report which is revised and updated biennially as required by Health and Safety Code Section 44344.

(s) **"Use"** means any application, whether primary or secondary to the main facility operation, which may result in an air release of a listed substance, unless exempted pursuant to Section 93333.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, 44342, and 44344, Health and Safety Code.

## Article 2. Applicability

### 93303. Facilities Covered.

(a) Except for facilities or activities exempted by Health and Safety Code Sections 44324 and 44325, as further defined in subsection (c), below, this regulation shall apply upon its effective date to any facility which:

(1) manufactures, formulates, uses, or releases any listed substance or any other substance which reacts to form a listed substance, and releases 25 tons per year or more of total organic gases, particulate matter, nitrogen oxides, or sulfur oxides; or

(2) is listed in any current toxics use or toxics air emission survey, inventory, or report released or compiled by an air pollution control district or air quality management district (herein referred to as "district") and referenced in Appendix B of Title 17 California Code of Regulations, Sections 90700 through 90704.

(b) Effective July 1, 1989, this regulation shall also apply to any facility which manufactures, formulates, uses, or releases any listed substance or any other substance which reacts to form a listed substance, and releases 10 or more but less than 25 tons per year of total organic gases, particulate matter, nitrogen oxides, or sulfur oxides.

(c) For purposes of this subchapter, the phrase "in compliance with Section 41805.5" as used in Health and Safety Code Section 44325, regarding solid waste disposal facilities, shall refer only to those activities conducted at a solid waste disposal facility which are subject to the Calderon testing program described in Health and Safety Code Section 41805.5 and which have complied with its requirements. All other activities conducted at a solid waste disposal facility are subject to the requirements of this subchapter. A facility is deemed to have complied with the requirements of the Calderon testing program if the facility has performed the required testing or is on schedule, as determined by the district, to do so.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 41805.5, 44320, 44322, 44324, 44325, 44340, 44341, and 44342, Health and Safety Code.

**93304. Plan Submittal.**

(a) Every facility included in subsection 93303(a) shall submit an emission inventory plan to the appropriate district by August 1, 1989, unless the ~~district notifies the facility in writing that the facility's emissions~~ are or will be included in an industrywide emission inventory prepared by the district pursuant to Health and Safety Code Section 44323.

(b) Every facility included in subsection 93303(b) shall submit an emission inventory plan to the appropriate district by August 1, 1990, unless the district notifies the facility in writing that the facility's emissions are or will be included in an industrywide emission inventory prepared by the district.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44322, 44323, 44340, 44341, and 44342, Health and Safety Code.

**93305. New Facilities and Facilities whose Emissions Increase.**

This regulation shall also apply to facilities commencing operation or increasing emissions of total organic gases, particulate matter, nitrogen oxides, or sulfur oxides after June 1, 1989 which meet the conditions specified in Section 93303. The operator of every such facility commencing operation or increasing emissions on or before January 1 of a given year shall submit an emission inventory plan to the appropriate district by the following August 1, unless:

(a) The district notifies the facility in writing that the facility's emissions are or will be included in an industrywide emission inventory prepared by the district; or

(b) The facility is subject to earlier submission of an inventory plan pursuant to district requirements adopted in accordance with Health and Safety Code Sections 44365(b).

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44322, 44323, 44340, 44341, and 44342, Health and Safety Code.

**93305.5 Facilities whose Emissions Decrease Below 10 Tons Per Year of Criteria Pollutants**

(a) This regulation shall cease to apply to any facility whose emissions of total organic gases, particulate matter, nitrogen oxides, or sulfur oxides are reduced to the extent that the facility no longer satisfies the conditions specified in Section 93303(a)(1) and (b), if the facility demonstrates to the district, and the district finds and the state board concurs that the following criteria are satisfied:

(1) the facility does not satisfy the conditions specified in Sections 93303(a)(2) or 93308;

(2) the emission reductions are permanent and enforceable; and

(3) the facility poses no significant risk to public health.

(b) The operator of every facility which satisfies the criteria of subsection (a) and obtains the district's findings thereof and the state board's concurrence thereof on or before January 1 of a given year, shall not be required to comply with biennial update requirements that apply to that or to any subsequent year.

(c) If at any time a facility ceases to satisfy any of the criteria specified in subsection (a), the facility shall automatically become subject to this regulation. A facility must notify the district immediately if it ceases to satisfy the criteria specified in subsection (a).

NOTE: Authority cited: Sections 39600, 39601, 44320, and 44342, Health and Safety Code. Reference: Sections 44322, 44323, 44340, 44341, and 44342, Health and Safety Code.

**93306. Facilities Added to District Surveys.**

This regulation shall also apply to facilities added after July 1, 1988, to a toxics use or toxics air emission survey, inventory, or report released or compiled by a district and subsequently referenced in

Appendix B of Title 17 California Code of Regulations, Sections 90700 through 90704. The operator of any such facility referenced in such Appendix B on or before April 1 of a given year shall submit an emission inventory plan to the appropriate district by the following August 1, unless the district notifies the facility in writing that the facility's emissions are or will be included in an industrywide emission inventory prepared by the district.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44320(b), 44323, 44340, 44341, and 44342, Health and Safety Code, and 17 CCR Sections 90700-90704, Appendix B.

**93306.5 Facilities Removed from District Surveys.**

(a) This regulation ceases to apply to any facility that is removed from a district's toxics use or toxics air emission survey, inventory, or report referenced in Appendix B of Title 17 California Code of Regulations, Section 90700 through 90704, if the facility demonstrates to the district, and the district finds and the state board concurs that the following criteria are satisfied:

(1) the facility does not satisfy the conditions specified in Section 93303 or 93308; and

(2) the facility poses no significant risk to public health.

(b) The operator of every such facility that satisfies the criteria of subsection (a) and is deleted from a reference in Appendix B on or before April 1 of a given year shall not be required to comply with biennial update requirements that apply to that or to any subsequent year.

(c) If at any time a facility ceases to satisfy any of the criteria specified in subsection (a), the facility shall automatically become subject to this regulation. A facility must notify the district immediately if it fails to satisfy the criteria specified in subsection (a).

NOTE: Authority cited: Sections 39600, 39601, 44320, and 44342, Health and Safety Code. Reference: Sections 44320, 44323, 44340, 44341, 44342, Health and Safety Code, and 17 CCR Sections 90700-90704, Appendix B.

**93307. Updates to the List of Substances.**

The operator of any facility which manufactures, formulates, uses, or releases any substance added to the list of substances on or before April 1 of a given year shall include such substance in any emission inventory plan required pursuant to this Article, or in the next biennial update of the emission inventory required pursuant to Health and Safety Code Section 44344 and to Article 6, beginning with

Section 93350, unless the district notifies the facility in writing that the facility's emissions of the substance are or will be included in an industrywide emission inventory prepared by the district.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44321, 44323, 44340, 44342, and 44344, Health and Safety Code, and 17 CCR Sections 90700-90704, Appendix A.

**93308. Facilities Emitting Less Than 10 Tons Per Year of Criteria Pollutants.**

(a) This Section shall apply on its effective date to any facility which manufactures, formulates, uses, or releases any listed substance or any other substance which reacts to form a listed substance; and which releases less than 10 tons per year of each of total organic gases, particulate matter, nitrogen oxides, and sulfur oxides; and which falls in any class listed in Appendix E-I or Appendix E-II.

(b) Each such facility shall comply with subsections (c) and (d) below, unless:

(1) The district notifies the facility in writing that the facility's emissions are or will be included in an industrywide emission inventory prepared by the district pursuant to Health and Safety Code Section 44323; or

(2) The facility is subject to earlier submission of an inventory plan pursuant to Sections 93304, 93305, or 93306 or pursuant to district requirements adopted in accordance with Health and Safety Code Section 44365(b).

(bc) ~~Unless exempted pursuant to subsection (a)(1) or (2)~~ Except as provided in (b), above, the operator of any such facility which falls in any class listed in Appendix E-I shall submit to the appropriate district an inventory plan and inventory report which meet all the requirements of this subchapter. The inventory plan shall be due August 1 of the year following the effective date of this subsection for any such facility in operation at the time of such effective date. For any such facility commencing operation after such effective date, the operator of every such facility commencing operation on or before January 1 of a given year shall submit an inventory plan to the appropriate district by the following August 1, ~~unless exempted pursuant to subsection (a)(1) or (2)~~ except as provided in subsection (b)(1), above. The schedule specified in Health and Safety Code Sections 44340(b), 44341, and 44343, and in Sections 93320 and 93347 herein shall apply to the review, approval, and implementation of the plan and submittal of the report.

(cd) ~~Unless exempted pursuant to subsection (a)(1) or (2)~~ Except as provided in (b), above, the operator of any such facility which does not fall in any class listed in Appendix E-I but falls in any class listed

in Appendix E-II shall submit to the appropriate district, for one time only, in lieu of a plan and a report, a completed copy of the Facility Description Form and a completed copy of Form S-UP which includes all applicable substances listed in both Appendix A-I and Appendix A-II. The operator shall include on Form S-UP or on an attachment a brief description regarding the nature and approximate quantity of the indicated use, production, or other presence of each applicable substance. These completed forms shall be submitted to the district on or before August 1 of the year following the effective date of this subsection for any such facility in operation at the time of such effective date. For any such facility commencing operation after such effective date, the operator of every such facility commencing operation on or before January 1 of a given year shall submit the required forms to the appropriate district by the following August 1, ~~unless exempted pursuant to subsection (a)(1) or (2)~~ except as provided in subsection (b)(1), above. The district shall forward these forms to the ARB within sixty (60) days of receipt.

(de) ~~Unless exempted pursuant to subsection (a)(1) or (2), above,~~ This regulation shall also apply to any such facility which falls in any class which is subsequently added to Appendix E-I or Appendix E-II. The operator of any such facility which falls in a class added to Appendix E-I or E-II on or before April 1 of a given year shall submit the required emission inventory plan or the completed Facility Description Form and Form S-UP, respectively, to the appropriate district by the following August 1, unless:

~~(1) The district notifies the facility in writing that the facility's~~ emissions are or will be included in an industrywide emission inventory prepared by the district pursuant to Health and Safety Code Section 44323; or

(2) The facility is subject to earlier submission of an inventory plan pursuant to Sections 93304, 93305, or 93306 or pursuant to district requirements adopted in accordance with Health and Safety Code Sections 44365(b).

NOTE: Authority cited: Sections 39600, 39601, 44322, and 44342, Health and Safety Code. Reference: Sections 44321, 44322, 44323, 44340, 44341, 44342, 44343, 44344, and 44365, Health and Safety Code, and 17 CCR Sections 90700-90704, Appendix A.

## 93309. Facilities Emitting Less Than 10 Tons Per Year of Criteria Pollutants And No Longer Falling Within an "Any SIC" Class Description Listed in Appendix E-I.

(a) This regulation shall cease to apply to any facility at which a process is discontinued such that the facility no longer falls within an "any SIC" class listed in Appendix E-I, if the facility demonstrates to the district, and the district finds and the state board concurs that the following criteria are satisfied:

(1) the facility does not satisfy the conditions specified in Section 93303 or any other condition specified in Section 93308;

(2) the process is discontinued permanently; and

(3) the facility poses no significant risk to public health.

(b) The operator of every facility which satisfies the criteria of subsection (a) and obtains the district's findings thereof and the state board's concurrence thereof on or before January 1 of a given year, shall not be required to comply with biennial update requirements that apply to that or to any subsequent year.

(c) If at any time a facility ceases to satisfy any of the criteria specified in subsection (a), the facility shall automatically become subject to this regulation. A facility must notify the district immediately if it ceases to satisfy the criteria specified in subsection (a).

NOTE: Authority cited: Sections 39600, 39601, 44320, 44322, 44323, and 44342, Health and Safety Code. Reference: Sections 44321, 44322, 44323, 44340, 44341, 44342, 44343, 44344, and 44365, Health and Safety Code, and 17 CCR Sections 90700-90704, Appendix E-I.

## Article 3. Requirements for Preparing Emission Inventory Plans

### 93310. General.

The emission inventory plan shall provide a comprehensive and detailed description of the methods that will be used to quantify air releases or potential air releases of listed substances from all points of release. The plan shall include quantification methods which shall result in an accurate and comprehensive characterization of releases and shall comply with all other applicable requirements in this regulation.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, and 44342, Health and Safety Code.

### 93311. Flow Diagram.

Each inventory plan shall include a flow diagram consisting of a comprehensive schematic drawing of the process flows which affect the nature or quantity of emissions of listed substances. If necessary, a reference document shall be attached to the drawing to include any information needed to fulfill the flow diagram requirements which cannot be included on the drawing. An existing diagram which meets the requirements of this section may be submitted. The diagram shall indicate the following:

(a) All devices associated with an emitting process within a facility, including but not limited to:

(1) Boilers
(2) IC Engines
(3) Incinerators
(4) Flares
(5) Furnaces
(6) Kilns
(7) Process Heaters
(8) Control Devices (including hoods)
(9) Storage or Process Tanks or Enclosures
(10) Cooling Towers

Each device shall be represented by a block labeled with the name and number of the device it represents.

For purposes of this section, similar small devices which are substantially equivalent may be aggregated and considered for reporting purposes as one device. The number of such devices which are so aggregated shall be reported.

(b) Specific emitting processes, each associated with a device number and numbered sequentially as an emitting process within that device number. Emittents which always occur simultaneously from the same point of release shall be considered to result from a single emitting process. Each fuel burned at a combustion device shall be reported as a separate emitting process. Each air pollution control device and process shall be reported.

For purposes of this section, similar small emitting processes which are substantially equivalent may be aggregated and considered for reporting purposes as one emitting process. The number of such emitting processes which are so aggregated shall be reported.

(c) An estimate of the numbers of valves, vents, flanges, seals, and gaskets associated with each listed substance at the general locations of fugitive emissions. The estimate shall be sufficiently accurate so calculations of emissions based on the estimate meet the degree of accuracy required in Section 93334. The estimate of such components may be indicated as an aggregation at a general location.

(d) All stacks, vents, ducted building exhaust sites, and other sites of exhaust release of a listed substance.

(e) Interconnections showing functional relationships that affect emissions or their reportable characteristics, sufficient to support evaluation of the completeness and representativeness of each required source test protocol and inventory plan, including but not limited to connections between devices, stacks, emitting processes, and control equipment. Interconnections shall be indicated by arrows labeled to identify the

listed substances associated with each discrete emission point or general fugitive location.

(f) All major modifications to existing processes or devices anticipated to result in a significant change in the amount or nature of emissions which are expected to occur during the reporting period.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, and 44342, Health and Safety Code.

**93312. Trade Secrets.**

Information claimed to be a trade secret shall be denoted by use of a "black box" block on the flow diagram which is labeled with the non-proprietary name(s) of the operation(s) therein. All devices and emitting processes within the "black box" shall be identified by name and by number. Fugitive emissions of listed substances located within the black box shall be indicated.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, 44342, and 44346, Health and Safety Code, and Government Code Section 6254.7

**93313. Numbering.**

Numbering of devices and stacks shall be consistent throughout all parts of the plan, report, and reporting forms and with existing device and stack numbers currently used by the district to characterize the facility. For devices and stacks for which the district has not assigned numbers, the facility operator shall number the devices and stacks in a manner compatible with the existing numbering convention. In cases where a facility has one or more substantially identical activities, repetitions may be indicated with an appropriately labeled box or boxes.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, and 44342, Health and Safety Code.

**93314. Specification of Emission Quantification Methods.**

For each emission point on the flow diagram, including the general location of fugitive emissions, the facility operator shall identify the listed substances being emitted and specify in detail the estimation method, source test method or other measurement method that will be used to quantify the air releases of the listed substances as required by

Sections 93336 through 93345, as appropriate. Each method shall result in an accurate and comprehensive characterization of releases.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, and 44342, Health and Safety Code.

**93315. Source Test Protocol and Other Required Information.**

The inventory plan shall include a source test protocol which describes how each source test method will be applied to each emission point where source testing is required pursuant to Section 93336 and Appendix D. The inventory plan shall propose values for the effectiveness of air pollution control equipment in accordance with the requirements of subsection 93345(c) and shall include any other documentation required to be cited pursuant to Article 5, beginning with Section 93330.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, and 44342, Health and Safety Code.

## Article 4. Requirements for Emission Inventory Reports

**93320. General.**

~~The emission inventory report shall be submitted to the district~~ within 180 days after approval of the plan and shall include a facility diagram; the results of all source tests, material analysis and other measurements performed; and completed copies of the necessary multiples of the four core reporting forms and ~~any required supplemental process parameter reporting forms~~ the S-UP Form, or the required information in an alternative format if so required by the district. Any deficiencies or errors noted by the district, or by the ARB where applicable, shall be corrected.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, and 44342, Health and Safety Code.

**93321. Facility Diagram.**

(a) The facility diagram shall include all the information presented in the flow diagram and in the equivalent format and shall also include any specific required information which the facility chooses to designate as trade secret.

(b) Only the necessary data used to calculate emissions which are required in the facility diagram may be designated trade secret. For purposes of this regulation, "necessary data to calculate emissions" shall include process rate, operating schedule, equipment capacity, emission factors,

and feed composition. "Necessary data to calculate emissions" which may be designated trade secret shall not include information previously disclosed or easily discernable, including all information which the district requires any applicant to provide before such applicant builds, alters, replaces, or operates a facility, device, or emitting process; information on the Facility Description Form, the Stack Data Form, and the Device Description and Device-Stack Relations Form (, and all other information regarding stack height, stack diameter, stack gas exhaust parameters, and air pollution control equipment, and information in the various sections of each form on the Process and Emittents Data Form, with the exception of process description, which was not defined earlier as "necessary data to calculate emissions."

(c) Information claimed to be a trade secret shall be included on the facility diagram and reference document with a box around such information, using dashed lines and a bold letter "C" in the upper right corner of the dashed box. The designated information will be protected as a trade secret when it appears in another component of the emission inventory report only if thus denoted on the facility diagram and denoted in such other component in accordance with the provisions of this regulation.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, 44342, and 44346, Health and Safety Code, and Government Code Section 6254.7

**93322. Reporting Forms.**

(a) The operator of each facility subject to the regulation shall complete one **Facility Description Form** , an entry on a **Stack Data Form** for each stack or vent from which a listed substance may be released, an entry on a **Device Description and Device-Stack Relations Form** for each device associated with a release of a listed substance, and a **Process and Emittents Data Form** for each emitting process within each device. A Process and Emittents Data Form and an entry on a Device Description and Device-Stack Relations Form shall be completed for each general location of fugitive emissions.

(b) Supplemental process parameter form(s) shall be completed for each of the following processes:

(1) Stationary combustion fuel analysis (Form S-CMB) for solid or liquid waste fuels or other non-standard fuels or feedstocks;
(2) Cooling towers (Form S-CT);
(3) Metal plating (Form S-MP);
(4) Sterilization of articles using ethylene oxide or other listed substances (Form S-ETO);

(~~b~~b) **Form S-UP** shall be completed for all substances set forth in Appendix A-II which are: 1) used as ingredients in any activity or process at the facility; 2) manufactured or produced as a result of any activity or process at the facility; or 3) otherwise associated with an activity or process, including but not limited to presence in a formulation operation or presence as a by-product or a reaction intermediate which appears temporarily during processing.

(~~c~~c) Information designated as trade secret on the facility diagram shall be identified on the reporting forms according to the instructions set forth in Appendix B.

(~~d~~d) The forms shall be available at the district office and shall be provided to facility operators upon request.

(~~e~~e) **Form S-UP** shall also be completed for all substances set forth in Appendix A-I when required pursuant to Section 93334 (~~e~~e) and for all substances set forth in Appendix A-I and Appendix A-II when required pursuant to Section 93308(c).

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, 44342, and 44345, Health and Safety Code.

**93323. Other Required Data.**

(a) Each inventory report shall include the results of each required source test and source test protocol, each fuel or material analysis, and any other documentation required to be submitted pursuant to Article 5.

(b) The inventory report shall include the results of any source tests performed pursuant to district regulations implementing an ARB airborne toxic control measure which was adopted pursuant to Health and Safety Code Section 39666 for the control of toxic air contaminants, where such source tests have been performed prior to the date of submittal of the inventory report.

(c) If so required by the district, the facility operator shall include with the inventory report a facility-wide emissions summary which lists for each reported substance the total of the annual emissions and the maximum hourly emissions of each listed substance from the facility. The totals for each substance shall match the sums of the annual and maximum hourly emissions, respectively, which have been reported for the substance on the Process and Emittents Data Forms for all applicable emitting processes at the facility. If such a summary is required by the district, the district shall, on request, specify a standardized format for the summary data.

(d) If so required by the district, the facility operator shall include with the inventory report information on the proximity of the source to potential receptors, including but not limited to the distance to the nearest hospital, school, daycare center, worksite, and residence. If such information is required by the district, the district shall, on request, specify a standardized format for the information.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, 44342, and 44360, Health and Safety Code.

**93324. Plot Plan.**

If so required by the district, the inventory report shall include a plot plan which shall show a plan view of the facility site and structure(s). The plot plan shall indicate the direction of north and shall be drawn to scale on one sheet of paper. All stacks shall be shown and referenced by stack number. The height of any buildings greater than two stories shall be noted. General locations of fugitive emissions shall be noted. The devices and operations situated in each separate building shall be designated by the corresponding name or number used on the flow diagram.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, and 44342, Health and Safety Code.

## Article 5. Other Requirements

**93330. Instructions for Record Keeping.**

The facility operator shall retain copies of the following records and documentation for a period of five years from the date of submission of the emission inventory report or the date of each subsequent biennial update required pursuant to Health and Safety Code Section 44344:

(a) Each emission inventory plan.

(b) Each emission inventory report.

(c) All documentation and results of source tests and other measurement procedures.

(d) Purchase records of all listed substances or mixtures containing listed substances used at the facility, if information regarding the purchase of such substances was used to calculate emissions of any listed substance or to determine the production, use, or other presence of any substance reported on Form S-UP.

(e) All Material Safety Data Sheets and Technical Data Sheets used to prepare the emission inventory report.

(f) Receipts and manifests associated with the transfer of each listed substance in waste to off-site locations, if information regarding such transfer was used to calculate emissions of any listed substance.

(g) All other documentation supporting the estimates of emissions, including control equipment efficiency; of amounts present of each listed substance, including information used to evaluate exempted uses and degree of accuracy requirements; and of amounts used for mass balance calculations, including amounts removed or transferred to an off-site location in finished product, by-product, waste, or any other form.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, 44342, 44344, and 44345, Health and Safety Code.

**93331. Specification of Reporting Period and Averaging Intervals for Each Substance.**

(a) The calendar reporting period for which emissions are to be representative shall be from January through December of the specified year, commencing January 1, 1989 for facilities required to submit inventory plans by August 1, 1989 and commencing January 1, 1990 for facilities required to submit inventory plans by August 1, 1990, and in like manner for subsequent submittal of inventory plans.

(b) Emissions of substances listed in Appendix A-I shall be reported both as ~~maximum one hour emissions and as annual average emissions.~~

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, and 44342, Health and Safety Code.

**93332. Specifications for Identifying Emission Points and Substances Emitted.**

(a) The facility operator shall identify and report in the inventory plan and the inventory report as a distinct emitting process or device each occurrence within the facility of the emitting processes and devices set forth in Appendices C-I and C-II (the Facility Guidelines Index, herein referred to as the "Facility Look-up Table"), and shall determine whether any listed substance is present, including but not limited to those indicated in Appendices C-I and C-II.

(b) For the devices, emitting processes, and fugitive sources set forth for all facility classes in Appendix C-I and for the applicable facility class(es) set forth in Appendix C-II, the operator shall report all emissions of substances listed in Appendix A-I and shall report the production, use, or other presence of substances listed in Appendix A-II.

(c) The facility operator shall use and cite available technical guidance as needed to identify the presence of any listed substances and to quantify and report emissions in accordance with the requirements set forth in Section 93334.

(d) Nothing in subsections (a) through (c), above, shall be construed as requiring that source testing be conducted for substances set forth in Appendix C. Further, in cases where a substance set forth in Appendix C is not in fact present at a particular facility, the facility operator shall not attempt to quantify the emissions of such substance, but shall provide adequate documentation to demonstrate to the district that the possible presence of the substance at the facility has been addressed and that there are no emissions of the substance for specified reasons.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, and 44342, Health and Safety Code.

**93333. Exempted Uses.**

The following uses of listed substances shall not be subject to this regulation:

(a) Use as a structural component of the facility.

(b) Personal use by employees or other persons of foods, drugs, cosmetics, tobacco products, and other personal items, including supplies of such products within the facility in an on-site cafeteria, store, or infirmary.

(c) Office and administrative use of products including ink, marking pens, ink pads, correction fluid, correction fluid thinner, and glue.

(d) Use of products for routine janitorial or facility grounds maintenance.

(e) Use of products for structural maintenance and repair, including WD-40 and other lubricants, sealants, touch-up paints, spray paints, and varnishes. Structural maintenance does not include maintenance and repair of process and industrial equipment.

(f) Use of products for minor maintenance and repair of process and industrial equipment, including WD-40 and other lubricants, sealants, touch-up paints, spray paints, and varnishes. Minor maintenance and repair shall not include maintenance and repair which is routinely scheduled or which is due to predictable process upsets.

(g) Use of products for the purpose of maintaining motor vehicles operated by the facility, unless vehicle maintenance is a significant function of the facility, such as in an auto repair facility or in a trucking or other business where a fleet of vehicles is maintained.

(h) Use of process water or non-contact cooling water which is drawn from municipal water supplies or from other local ground or surface water sources but is not drawn from activities at the facility.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, and 44342, Health and Safety Code.

**93334. Emission Quantification and Degree of Accuracy.**

(a) For all substances listed in Appendix A-I, the inventory report shall identify and quantify emissions from the use, manufacture, formulation, and release of the substance at all primary locations of actual or potential release.

(b) For each process for which source testing is required to quantify emissions of a listed substance pursuant to Section 93336 and Appendix D, the measured concentrations shall meet the practical quantification limit in the applicable ARB-adopted source test method. All other parameters needed to calculate emissions shall be reported to within plus or minus 10 per cent of their total values. The emission results of each source test shall be reported to the degree of accuracy consistent with the detection and accuracy limits achievable using the applicable source test method, whether or not such emissions are below the lowest applicable degree of accuracy set forth in subsections ~~(d) and (e)~~ (c) below.

~~The sampling frequency shall provide the best practicable~~ characterization of emissions at the facility representative of the reporting year and shall be specified in the source test protocol submitted with the inventory plan.

In cases where source testing is required to quantify emissions of a listed substance from some but not all emitting processes at the facility, total emissions from the processes for which source testing is not required shall meet the applicable limits set forth in subsections ~~(d) and (e)~~ (c) below.

~~(c) For purposes of this section the facility operator shall treat any substance which is denoted with the letter Y or before the substance name in Appendices A-I and A-II as a human carcinogen or potential human carcinogen.~~

(~~d~~c) For each substance all human carcinogens or potential human carcinogens listed in Appendix A-I, the ~~required degree of accuracy for quantifying~~ total emissions from processes for which source testing is not required shall ~~be as follows:~~

~~(1) For all the polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans, and chromium (hexavalent) and compounds, total emissions of each from the facility shall~~ be reported to within plus or minus 10 per cent of the total emissions of the substance,

or to within plus or minus 0.1 pound per year the applicable degree of accuracy value in Appendix A-I for that substance, whichever is greater.

(2) For cadmium and cadmium compounds, arsenic and arsenic compounds, beryllium and beryllium compounds, nickel and nickel compounds, nickel refinery dust from the pyrometallurgical process, benzo(a)pyrene, chrysene, 7,12-dimethylbenz[a]anthracene, 3-methylcholanthrene, polychlorinated biphenyls, ethylene dibromide, hexachlorobenzene, hexachlorocyclohexane, Lindane, N-nitrosodimethylamine, N-nitrosodiethylamine, N-nitrosodi-n-butylamine, and N-nitrosopyrrolidine, total emissions of each from the facility shall be reported to within plus or minus 10 per cent of the total emissions of the substance, or to within plus or minus one pound per year, whichever is greater.

(3) For benzene, ethylene oxide, chloroform, ethylene dichloride (1,2-dichloroethane), benzoic trichloride, 1,3-butadiene, carbon tetrachloride, bis(chloromethyl)ether, Chlordane, 1,3-dichloropropene, benzidine (and its salts) and benzidine-based dyes, 3,3'-dichlorobenzidine, 3,3'-dimethylbenzidine, beta-propiolactone, 1,1,2,2-tetrachloroethane, o-toluidene, and vinyl bromide, total emissions of each from the facility shall be reported to within plus or minus 10 per cent of the total emissions of the substance, or to within plus or minus 10 pounds per year, whichever is greater.

(4) For all other human carcinogens or potential human carcinogens, except for those listed in subsection (e) (1) due to their significant non-cancer health effects, total emissions of each from the facility shall be reported to within plus or minus 10 per cent of the total emissions of the substance, or to within plus or minus 100 pounds per year, whichever is greater.

(e) For all substances listed in Appendix A-I which are not designated as human carcinogens or potential human carcinogens for purposes of this section, the required degree of accuracy for quantifying total emissions from processes for which source testing is not required shall be as follows:

(1) For lead and lead compounds, mercury and mercury compounds, phosphine, arsine, chlorine, chloropicrin, hydrocyanic acid, hydrogen fluoride, benzyl chloride, acrolein, and toluene diisocyanates, total emissions of each from the facility shall be reported to within plus or minus 10 per cent of the total emissions of the substance, or to within plus or minus 10 pounds per year, whichever is greater.

(2) For all other such substances, total emissions of each from the facility shall be reported to within plus or minus 10 per cent of the total emissions of the substance, or to within plus or minus 100 pounds per year, whichever is greater.

(fd) For all substances listed in Appendix A-II, the facility operator shall identify and report each substance produced, used, or otherwise present at all primary locations of use, manufacture, formulation, or release.

(ge) For all substances listed in Appendix A-I which are manufactured, formulated, used, or released but for which emissions are below the applicable limits for degree of accuracy required by subsections (dc) and listed in Appendix A-I and (e), the facility operator shall complete Form S-UP to indicate the presence of such substances, unless a numeric estimate of such emissions is reported on a Process and Emittents Data Form for the appropriate emitting process.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44321, 44340, 44341, and 44342, Health and Safety Code, and 17 CCR Section 90700-90704, Appendix A.

**93335. Reporting Mixtures and Trade Name Products.**

(a) Except as provided in subsections (b), (c) through (h), and (d) below, the emissions of each listed substance contained in any mixture shall be individually reported to the degree of accuracy required in Section 93334 and Appendix A.

(b) **Mixtures Without Emittent Identification Numbers:** Except as required in subsections (c) through (h) and (d), below, the emissions from any mixture or substance group header listed in Appendix A but for which an emittent identification number is not included shall be reported as emissions of the component listed substances.

(c) **Mixtures With Emittent Identification Numbers:** Except as required in subsections (d) through (h), below, the emissions of any listed mixture or group heading for which an emittent identification number is included in Appendix A-I shall be reported as follows:

(1) Emissions of individual substances listed under the mixture or group heading shall be reported individually. Other, unspecified substances in the mixture or group must be summed and reported under the emittent identification number for the mixture or group heading.

(2) If no individual substances are listed under the mixture or group heading, the emissions of any listed substances which is listed a the mixture or group heading class of substance and for which an emittent identification number is included on Table B/II of Appendix B shall be reported as total emissions of the aggregated substance mixture using the applicable emittent identification number. The listed substance mixture shall not be divided into constituent listed substances for purposes of reporting emissions on the reporting forms in Appendix B. Rather, the facility operator shall provide all reasonably obtainable information on the composition and variability of the

mixture as it pertains to constituents which are listed substances, including at a minimum, each applicable Material Safety Data Sheet, Technical Data Sheet, and other data on batch composition.

(d) **Metal Compounds:** Emissions of individually listed metal compounds shall be reported as total emissions of the compound using the emittent identification number for that compound. Emissions of metal compounds for which an emittent identification number is not included in Appendix A-I, but which contains one or more listed metals, shall be reported as each listed metal's atom equivalent, using the emittent identification number for each metal or applicable metal compound group header.

(e) **Diesel and Gasoline Engine Exhaust:** Emissions of diesel engine exhaust and gasoline engine exhaust shall be reported as emissions of total particulate matter and total organic gas using the emittent identification numbers specified in Appendix A. Individually listed substances from diesel and gasoline combustion shall also be reported using the applicable emittent identification numbers.

(f) **Gasoline Vapors:** Total gasoline vapor emissions shall be reported using the applicable emittent identification number. Emissions of individual components of gasoline vapors which are listed substances shall also be reported.

(~~f~~g) Source test results for polycyclic aromatic hydrocarbons (PAHs) shall include measurement of total PAHs and each of the component substances which are listed substances and to which the ARB-adopted source test method pertains. Each individual substance and total PAHs shall be reported in accordance with the instructions set forth in Appendix B.

(~~g~~h) Source test results for dioxins and furans shall include measurement of total dioxins and furans and each of the component substances which are listed substances and to which the ARB-adopted source test method pertains. The results shall include the determination of total tetra-, penta-, hexa-, hepta-, and octa- PCDD/PCDF homologue groups and all the 2,3,7,8-substituted PCDD/PCDF isomers listed in the method. Each individual substance and total dioxins and furans shall be reported in accordance with the instructions set forth in Appendix B.

(~~h~~i) Trade name products shall be treated as mixtures.

(~~i~~j) A Material Safety Data Sheet (MSDS) or Technical Data Sheet (TDS) shall be considered sufficient to identify listed substances in a mixture or trade name product only if all listed substances can be identified to the degree of accuracy required by Section 93334 and Appendix A unless the district concurs that the presence of a particular substance in the mixture is highly unlikely. An MSDS or TDS shall not be acceptable for purposes of this regulation if trade secret information has been omitted or if it includes a mixture or a category of substances (such as "petroleum process oil") that may reasonably be expected to contain a listed substance (such as benzene), unless, by consulting the

manufacturer or performing a laboratory analysis of the material, the facility operator demonstrates that no listed substances are included in the mixture or establishes the amounts of listed substances that are present.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44321, 44340, 44341, and 44342, Health and Safety Code, and 17 CCR Sections 90700-90704, Appendix A.

**93336. Source Testing and Measurement.**

(a) Source testing shall be required for those sources set forth in Appendix D for the substances specified and in accordance with the measurement methods set forth therein. Exemptions and alternatives are set forth in the third column of Appendix D.

(b) The ARB-adopted test methods shall be used to fulfill the source test requirements in subsection (a) when the specified conditions exist, except that:

(1) To determine quantities of trace elements in fuel, waste, or material samples, the following methods shall be used: EPA Method 7196 for chromium (hexavalent), EPA Method 7471 for mercury, EPA Method 7740 for selenium, and EPA Method 6010 for all other trace elements, all of which are dated September 1986 and set forth in SW-846, Test Methods for Evaluating Solid Waste, Third Edition, ~~November 1986, and all of which are incorporated by reference~~ herein; and

(2) To determine chlorine content and sulfur content of coal and coke fuel samples, ASTM Methods D2361-85 amended as of 1985 and D3177-89 amended as of 1989, both of which are incorporated by reference herein, shall be used, respectively.

(3) To determine chlorine content and sulfur content in wood, refuse-derived, and other solid fuel, waste, or material samples, ASTM Methods E776-87 amended as of 1987 and E775-87 amended as of 1987, both of which are incorporated by reference herein, shall be used, respectively.

(4) To determine chlorine content and sulfur content in other fuel or material samples, ASTM Methods D808-87 amended as of 1987 and D129-64 amended as of 1964, both of which are incorporated by reference herein, shall be used, respectively.

(c) The facility operator may propose in the inventory plan and the district may approve equivalent sampling and analysis methods to accomplish the required source testing only if the facility operator includes in the inventory plan sufficient information to enable the Executive Officer of the ARB to determine in writing that the alternative method is substantially equivalent to the ARB-adopted method for that facility for purposes of complying with this regulation.

(d) The inventory plan may include a proposal for the use of existing source test data from the facility to satisfy the source testing requirement. The district may approve the proposal only if all conditions affecting emissions of listed substances are substantially the same, and the source test methods used are determined by the Air Pollution Control Officer or Executive Officer of the district to be substantially equivalent to the ARB-adopted test methods. The proposal must be approved in writing by the district prior to use.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, and 44342, Health and Safety Code.

**93337. Pooled Source Testing.**

(a) The operators of a group of related facilities may propose in each of their respective inventory plans to satisfy any source testing requirement by performing a limited number of representative source tests and applying the results to each of their respective facilities. Such a proposal shall be submitted for district review and approval with the source test protocol in the inventory plan.

(b) Upon receipt of a proposal for pooled source testing, the district shall ensure that all required components of information are included. Once the proposal is complete, the district shall immediately submit the proposal to the Executive Officer of the ARB for technical review and comment. To the extent practicable, the Executive Officer of the ARB shall indicate whether the proposal is acceptable. If the proposal is unacceptable, the Executive Officer shall identify those areas of the proposal which are deficient. The proposal shall be deemed acceptable to the ARB if the Executive Officer does not respond to the district within 45 days of receipt of the proposal.

(c) The district may approve the proposal for participating facilities which were not source tested but to which the results are proposed to be applied only if:

(1) The facility operator includes in the plan sufficient information regarding operating conditions, input and output streams, equipment characteristics, control equipment, and other parameters affecting emission characteristics of the operator's facility and the facility tested to enable the district to make a determination that sufficient similarity in all parameters affecting emissions of

listed substances exists between the facility tested and the facility to which the results are proposed to be applied, such that emissions can be calculated to yield representative emission results to the required degree of accuracy; and

(2) If applicable, the facility operator corrects the deficiencies identified by the Executive Officer of the ARB.

(d) If the proposal is not approved, each facility shall undertake individual source testing as required.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, and 44342, Health and Safety Code.

**93338. Alternatives to Required Source Testing.**

(a) As a substitute for a required source test as set forth in Appendix D or the alternatives to it as set forth in Sections 93336 and 93337 and Appendix D, the inventory plan may include a proposal for the use of an alternative method to quantify emissions if the facility operator provides adequate documentation to demonstrate that the alternative method will result in the best technologically feasible characterization of the facility's emissions, and:

(1) the proposed alternative method:

(A) has been demonstrated in actual practice to result in a characterization of emissions which is as accurate or more accurate than that achievable by the ARB-adopted source test method, and

(B) is not to be used instead of the required source testing for combustion or incineration processes or for other processes where the mechanisms that result in emissions and the parameters which are necessary to determine the emissions cannot be quantified sufficiently to allow emissions to be estimated to meet the applicable degrees of accuracy set forth in Section 93334; or

(2) use of the required source testing is not technologically feasible because of physical circumstances at the facility, but the ARB-adopted source test method may be modified for use at the facility, in which case such modified method shall be used; or

(3) use of the required source testing is not technologically feasible because of physical circumstances at the facility and the ARB-adopted source test method cannot be modified in accordance with subsection (a)(2) above, in which case the best technologically feasible non-testing alternative may be proposed.

(b) Upon receipt of a proposal for the use of such an alternative method, the district shall ensure that all required components of information are included. Once the proposal is complete, the district shall immediately submit the proposal to the Executive Officer of the ARB for technical review and comment. To the extent practicable, the Executive Officer of the ARB shall determine whether the required source test is feasible and shall note any deficiencies in the proposal. The proposal shall be deemed acceptable to the ARB if the Executive Officer does not respond to the district within 45 days of receipt of the proposal.

(c) If the proposed alternative method is to determine emissions of arsenic or arsenic compounds, beryllium or beryllium compounds, cadmium or cadmium compounds, chromium (hexavalent), benzo(a)pyrene, or chlorinated dioxins and dibenzofurans, the district may approve the proposed alternative only if both the district and the ARB concur that the proposed alternative method complies with subsection (a) above. If the proposal is not approved, the facility shall undertake source testing as required or shall use an alternative method which is determined by the district and the ARB to meet the requirements of subsection (a).

(d) If the proposed alternative method is to determine emissions of a substance other than those identified in subsection (c), the district may approve the proposed alternative only if, after considering any comments by the Executive Officer of the ARB, the district determines that the proposed alternative method complies with subsection (a) above. If the proposal is not approved, the facility shall undertake source testing as required or shall use an alternative method which is determined by the district to meet the requirements of subsection (a).

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, and 44342, Health and Safety Code.

**93339. Source Test Protocol and Source Test Report.**

For each required source test, including pooled source tests conducted pursuant to Section 93337, a proposed source test protocol shall be submitted with the inventory plan. The proposed protocol shall include the information set forth in subsections (a) through (ww) below, responding to language in brackets to indicate future intent or anticipated values, and excluding information claimed to be trade secret.

~~The district-approved source test protocol which was followed during the actual testing~~ For each required source test, a source test report shall be submitted with the inventory report. ~~and~~ The source test report shall include the actual test values for the information required in subsections (a) through (ww) below. Information denoted as trade secret on the facility diagram shall be so denoted ~~in~~ in the source test ~~protocol for the actual testing~~ report according to the procedure set forth in subsection 93321(c). Facilities participating in pooled source tests conducted pursuant to Section 93337 need only reference the source

test report in their inventory report if the district already possesses a copy of the report and the facility obtains the district's findings that a further copy is not needed.

(a) Date on which the source test was [will be] performed.
(b) Name and qualifications of companies and/or persons who conducted [will conduct] the source test and analyzed [will analyze] the samples.
(c) Name of contractor.
(d) Process description.
(e) Process reactant composition and rates [approximate values or range of values for composition and rates].
(f) Fuel analysis and firing rates for combustion processes [approximate values or range of values for fuel composition and firing rates].
(g) Source test and analysis methods for all listed substances for which source testing is required [commitment to source test and analysis methods as required by Sections 93336 and Appendix D].
(h) Equipment specifications and drawings as needed to plan and interpret source test results, including but not limited to stack dimensions (including diameter and height) and port configuration.
(i) ARB independent tester Executive Order, provided pursuant to Section 91207, Title 17, California Code of Regulations, if the tester has been certified by the ARB for the proposed source test method.
(j) Typical values and allowable ranges of operating parameters (including pressure, feed rate) of the process [approximate values or range of values for operating parameters].
(k) Process operating conditions during test [approximate values or range of values anticipated during test].
(l) ~~Stack temperature [approximate value anticipated].~~
(m) Concentration of any listed substances in the exhaust stream [approximate values or range of values anticipated].
(n) Mass emission rate of any listed substances [approximate values or range of values anticipated].
(o) Composition and rate of waste streams, including scrubber effluent, ash, fly ash [approximate values or range of values anticipated].
(p) Oxygen, carbon dioxide and moisture content of exhaust gas [approximate values or range of values anticipated].
(q) Exhaust gas velocity and volumetric flow rate at the point where testing is conducted [approximate values or range of values anticipated].
(r) Sampling points and number of samples [proposed points and number].
(s) Calibration data, including certification that the accuracy of calibration gases is traceable to the National Institute of Standards and Technology (NIST).
(t) Quality assurance and quality control data including analysis audit, zero and span drift, blank and spiked samples [proposed].
(u) Chain of custody document, where appropriate [proposal for provision of document].

(v) Applicable emission standards or other permit conditions affecting emissions of listed substances.

(w) the estimated limit of detection, the proposed number of test runs, and any other pretest calculations for the source test method that is used.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, 44342, and 44346, Health and Safety Code, Government Code Section 6254.7.

**93340. Converting Source Test Results to Emission Rates.**

(a) Source testing shall be performed under representative operating conditions for the reporting year. Representative operating conditions shall be developed in consultation with the appropriate air pollution control district and specified in the inventory plan.

(b) In consultation with the district, and in accordance with the procedures set forth in the ARB-adopted source test methods where applicable, the facility operator shall calculate and report a site-specific emission factor for the listed substance based on the mass emission rate for the listed substance measured during the source test and expressed in terms of the most representative "usage unit". The usage unit shall be the measure of operating conditions which best characterizes the dependence of the emissions of the listed substance on operating conditions. The most appropriate usage unit shall be hours of operation only when the operation undergoes very limited variation over time during the reporting year.

(c) The facility operator shall calculate annual average emissions, in pounds per year, from the site-specific emission factor and the average value of the usage unit during the reporting year.

(d) The facility operator shall calculate maximum hourly emissions, in pounds per hour, from the site-specific emission factor and the maximum value of the usage unit that can reasonably be expected in a one hour period. The maximum value shall be the best possible representation of the process conditions that produce the maximum emissions within the range of allowable conditions, under routine operation or predictable upset, but not including conditions reflecting atypical shut-down of control equipment.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, and 44342, Health and Safety Code.

**93345. Specifications for Acceptable Estimation Methods and Emission Factors.**

(a) Where emissions of substances are required to be quantified but where measurement is not required pursuant to Section 93336, the inventory plan may propose an estimation method to quantify such emissions at all primary locations of release to the degree of accuracy required by Section 93334. The district may approve a proposed method only if all of the following criteria are met:

(1) The district determines that the method is effective and reflects the best available methods and data, and will produce an accurate representation of the types and quantities of air releases at a facility;

(2) The proposed method accounts for all facets of the applicable emitting process and is based on sufficient data about the air toxics emission characteristics under the full range of relevant conditions to characterize the emissions to the degree of accuracy required by Section 93334; and

(3) Standard calculations for mass balance, emission factor application, and engineering calculations comply with the following requirements:

(A) Mass balance calculations are acceptable when no adequate emission factors are available or when a more accurate estimate will be obtained by the use of a mass balance than ~~by the use of available emission factors. All mass balance~~ calculations must account for all routes of inflow and outflow and all accumulations sufficiently to characterize air releases to the degree required.

(B) Proposed emission factors must have been generated under substantially similar conditions for substantially similar facilities or equipment as those to which the emission factors will be applied, to the extent technologically feasible. For purposes of this Section, if the ARB has published, pursuant to Health and Safety Code Section 39650 et seq., an emission factor for a listed substance which is applicable to the emitting process at the facility, the most recent such emission factor shall be used to estimate emissions of the substance.

(C) Engineering calculations shall be based on sufficient data about the air toxics emission characteristics at all relevant conditions to characterize the emissions to the degree of accuracy required by Section 93334.

(b) The estimation method included in the inventory plan may include a proposal to use available data and data from substantially similar facilities or equipment. The district shall not approve the proposal unless the criteria set forth in subsections (a)(1) and (2) are met.

(c) The effects of all air pollution control equipment or process conditions which are adjusted to control air pollution shall be quantified for each listed substance affected by the equipment or process. The facility operator shall propose in the inventory plan a value for the effectiveness of each air pollution control device affecting the emissions of each listed substance and shall cite the justification for the value of control effectiveness for each listed substance under actual operating conditions.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, 44342, and 44345, Health and Safety Code.

**93346. Format for Reports and Presentation of Data.**

(a) The operator of each facility subject to this regulation shall complete the core reporting forms and the S-UP form *any applicable supplemental process parameter reporting forms* in accordance with the formats and instructions set forth in Appendix B, except that the required information shall be submitted in an alternative format if so required by the district.

(b) The core **Facility Description Form** shall be the first page of the required emission inventory report. Other core forms shall be in sequence by device number. The r*R*equired *supplemental process parameters reporting forms*, source test report *protocol and results*, and other documentation supporting the emission calculations shall be attached after the core reporting forms and in an order corresponding to the core reporting forms for the applicable devices, stacks, or emitting processes.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, and 44342, Health and Safety Code.

**93347. Other Procedures.**

Within 90 days of approval of the inventory report, the district shall transmit to the ARB staff all data required on the core and *supplemental* S-UP forms *including completed information in sections designated "office use"*, in a format approved by the ARB staff for transmittals via paper or electronic media.

NOTE: Authority cited: Sections 39600, 39601, and 44342, Health and Safety Code. Reference: Sections 44340, 44341, and 44342, Health and Safety Code.

**93348. Biennial Update Requirements**

(a) Facility operators required to report pursuant to Sections 93304, 93305, 93306, or 93308(b)(1) or (c) are subject to biennial update requirements as specified by Sections 93348-93355. Every two years every facility operator shall submit either a Biennial Summary Form or a biennial update plan and report, as specified in subsections (b-h) below. Facility operators shall comply with these requirements pursuant to the schedule specified in Section 93353. In the following subsections the terms "significant risk facility", "high priority facility", "intermediate priority facility", and "low priority facility" are used as defined in Health and Safety Code Sections 44360(a) and 44362(b). In addition, facility priority categorization, as used in Sections 93348-93353, shall reflect emissions from the most recent facility emission inventory approved by the district.

(b) **Significant Risk Facilities:** Every two years the operator of any facility whose health risk assessment indicates that there is a significant health risk associated with emissions from the facility, as determined by the district pursuant to Health and Safety Code Section 44362(b), shall submit to the district an update plan and report, as specified in Sections 93350-93353. Operators subject to this part shall identify and report all changes in emissions for those devices which constitute, at a minimum, the upper 80 percent of the facility's risk, such that the aggregated risk of devices not identified does not exceed either one cancer in a million or a noncancer hazard index of one, in the judgment of the district. Devices shall be identified with the concurrence of the district. Alternatively, facility operators subject to this part may, at their option, submit update plans and reports which show all changes to all devices at the facility.

(c) **High Priority, Not Significant Risk Facilities:** Every two years the operator of any facility which is categorized by a district as high priority pursuant to Health and Safety Code Section 44360(a), and whose emissions do not present a significant health risk as determined by the district, shall complete and submit to the district for review the Biennial Summary Form as specified in Section 93349. Based on data reported on Part C of the Biennial Summary Form, any facility that experienced a significant increase in facility activity since the facility's previous emission inventory report was submitted shall submit an update plan and report, as specified in Sections 93350-93353. The update plan and report shall include updated information for those devices which experience significant increases in activity.

(1) **Significant Increases.** For facility operators subject to this subsection, significant increases in facility activity shall be defined as a 10 percent or greater increase in device activity. Devices may be identified as described in either (i) or (ii) below:

(i) **Any Devices.** Any device whose activity (as measured by increases in throughput, fuel usage or type, feed rates, emissions, or process rates) has increased by 10 percent or greater since the facility's previous emission inventory report was submitted; or

(ii) **Substantial Risk Devices.** Those devices which constitute, at a minimum, the upper 80 percent of the facility's risk, such that the aggregated risk of devices not identified does not exceed either one cancer in a million or a noncancer hazard index of one, in the judgment of the district. Devices shall be identified with the concurrence with the district. Facility operators shall provide updated data in a biennial update plan and report for any of the identified devices with activity increases of 10 percent or more (as measured by increases in throughput, fuel usage or type, feed rates, emissions, or process rates).

(2) **Consolidated Device Data:** At their option, facility operators may consolidate devices for the purpose of quantifying increases in device activity when reporting on the Biennial Summary Form. All devices, so consolidated, must be within the same Source Classification Code (SCC). Increases shall be in comparison to the activity for comparable devices as reported in the facility's most recently submitted and approved emission inventory report. When the sum of the changes in activity for all consolidated devices within an SCC exceeds a 10 percent increase, an updated Process and Emittents (PRO) Form must be submitted by the facility operator for any individual device or grouped devices (reported on the same PRO Form) whose activity increases by 10 percent or more.

(3) **Other Criteria:** Based upon data reported in Part B of the Biennial Summary Form or other information required by the district, districts may require a facility operator to submit an emission inventory update plan and report for the facility as specified in Sections 93350-93353.

(d) **Low or Intermediate Priority Facilities:** Every two years the operator of any facility which was categorized by a district as low or intermediate priority pursuant to Health and Safety Code Section 44360(a) and which is not subject to Section 93348(b), shall complete and submit to the district for review Parts A and B of the Biennial Summary Form as specified in Section 93349. The Biennial Summary Form shall meet the biennial update requirements for facilities subject to this subsection unless, based upon data reported on the Biennial Summary Form or other information required by the district, the district requires the facility operator to submit an emission inventory

update plan and report for the facility as specified in Sections 93350-93353.

(e) **Facilities Not Yet Prioritized:** Every two years, the operator of any facility that has not been prioritized by a district pursuant to Health and Safety Code Section 44360(a) shall complete and submit to the district Part A of the Biennial Summary Form as specified in Section 93349. The Biennial Summary Form shall meet the biennial update requirements of facilities subject to this subsection. For any facility prioritized by December 1 of a given year, this part no longer applies to the facility for that year or for any subsequent year.

(f) **Voluntary Updates:** Any facility operator may voluntarily submit an update plan and report, following approval and scheduling by the district.

(g) **Data Revised for Prioritizations or Risk Assessments:** If a facility operator requests, and a district allows a facility operator to use revised inventory data for prioritization or risk assessment, the facility operator shall submit an update report to the district which reflects any changes from the previously submitted and approved emission inventory report. The district shall submit this updated inventory to the ARB.

NOTE: Authority cited: Sections 39600, 39601, 44340, 44342, 44344, 44360, and 44362, Health and Safety Code. Reference: Sections 44320, 44322, 44323, 44340, 44341, 44342, 44343, and 44344, Health and Safety Code, and 17 CCR Sections 90700-90704, Appendix B.

**93349. Biennial Summary Form**

(a) Operators of facilities identified in Sections 93348(c-e) shall complete and submit the Biennial Summary Form for the applicable update reporting year based on the schedule specified in Section 93353.

(b) Districts shall review the Biennial Summary Form and respond to the facility operator as specified in Section 93354. The Biennial Summary Form shall satisfy a facility's biennial update requirements for facilities specified in Sections 93348(d-e) unless the operator is notified by the district that an update plan and report is required as specified in Sections 93350-93353.

(c) In reviewing Biennial Summary Forms to determine whether to require the facility to submit an update plan and report, districts may take into account factors including, but not necessarily limited to:

(1) increases in throughput, fuel usage, process rate changes, or emissions;
(2) changes in types of fuels or substances used at the facility;
(3) determinations that previous source test data are inadequate;
(4) addition of new processes or equipment to the facility which cause increases in emissions;
(5) issuance of new permits or changes in permit conditions;
(6) emissions of any listed substances not previously reported, including newly listed substances;
(7) emissions of listed substances whose potency values have increased or whose acceptable exposure levels have decreased;
(8) facility status as it pertains to current or future air pollution control measures;
(9) reductions in the distance from the facility to the nearest receptor;
(10) changes in emission factors.

NOTE: Authority cited: Sections 39600, 39601, 44340, 44342, 44344, 44360, and 44362, Health and Safety Code. Reference: Sections 44320, 44322, 44323, 44340, 44341, 44342, 44343, and 44344, Health and Safety Code, and 17 CCR Sections 90700-90704, Appendix B.

**93350. Update Plans and Update Reports.**

(a) *Every two years pursuant to the schedule specified in Section 93353,* The operator of any facility which is subject to this subchapter shall submit to the appropriate district an update plan and update report according to the schedules specified in Section 93353. The update plan and report need to only update changes in the information contained in the previously submitted emission inventory plan and emission inventory report for the facility in order to represent the most current values of *all of* the information required pursuant to Sections 93310 through 93347 and Appendices A through E. Such information includes but is not limited to any applicable substances added to Appendix A pursuant to Section 93307, which have not previously been addressed in the plan or report.

*(b) Except as provided in Section 93351, updated information shall be submitted for all components of the plan and report to reflect any change in any parameter which affect the nature or quantity of emissions of a listed substance from the facility, including but not limited to any change in the emission controls affecting the process, any change in input materials used, any change in the nature or quantitative extent of any emitting process, any change in stack parameters, and any change in the proposed method of quantifying emissions. A revised process flow diagram shall be submitted, with each such change clearly marked.*

(b) Except as provided in Section 93351, at least the following updated information shall be submitted as part of the update plan and report:

(1) For those facilities subject to this section pursuant to Section 93348(b), updated information shall be submitted for all components of the plan and report as may be necessary to reflect any change in any parameter which affects the nature or quantity of emissions of a listed substance from the facility for all devices identified pursuant to Section 93348(b).

(2) For those facilities subject to this section pursuant to Section 93348(c), updated information shall be submitted for those components of the plan and report which may be necessary to describe emission increases (including emissions of previously unreported listed substances) for all devices identified pursuant to Section 93348(c).

(3) For those facilities subject to this section pursuant to Section 93348(d), updated information shall be submitted only if required by the district following district review of the Biennial Summary Form or other information.

(c) Updated information, when required, may include but is not limited to: the effects of changes in the emission controls affecting the process, changes in input materials used, changes in the nature or quantity of any emitting process, and changes in the proposed method of quantifying emissions. A revised process flow diagram and facility diagram shall only be submitted when new components or processes not reflected in the prior diagrams have been added at the facility. Each such change shall be clearly marked.

(~~c~~d) As required, ~~An addendum~~ updated information shall be provided for each applicable component of ~~the~~ a plan and report ~~for~~ to address any new operation, process, or listed substance at the facility, and to account for any revised or additional requirements pursuant to this subchapter which apply to the facility, including but not limited to any applicable substances added to Appendix A pursuant to Section 93307.

(~~d~~e) For any revision proposed in ~~the~~ an update plan which reflects a reduction in emissions, the facility operator shall include in the update plan adequate documentation to demonstrate to the district the basis and magnitude of the reduction.

(~~e~~f) ~~The~~ An update report shall include all applicable report components as required pursuant to Article 4, beginning with Section 93320, except that only the reporting forms which reflect revised information shall be submitted, with each addition, deletion, and change indicated as

specified in Appendix B. The report shall include the results of any additional source test(s) and any other supporting documentation for updates, as specified in Section 93323, including any new or updated source test results pursuant to Section 93323(b) where such tests have been performed prior to the date of submittal of the update report.

NOTE: Authority cited: Sections 39600, 39601, 44340, 44342, and 44344, 44360, and 44362, Health and Safety Code. Reference: Sections 44320, 44322, 44323, 44340, 44341, 44342, 44343, and 44344, Health and Safety Code, and 17 CCR Sections 90700-90704, Appendix B.

**93351. Use of Previously Submitted Information.**

(a) Except as specified for previous source test results in subsections (b), (c), and (d), below, the facility operator may propose in an the update plan to use an applicable component of a previously submitted plan or report to satisfy the update requirement for that component, and the district may approve the proposal, if the facility operator provides adequate documentation to demonstrate to the district that:

(1) no change has occurred during the previous two years which would affect the accuracy of the originally reported information; or

(2) the previously reported information characterizes the current emissions to within the required degree of accuracy.

(b) Except as specified in subsection (c), below, the facility operator may propose in the update plan to use the results of a previous source test conducted pursuant to Sections 93336, 93337 or 93338, to fulfill the update requirements for a source test required pursuant to Section 93336 and Appendix D provided that:

(1) the test meets the requirements for use of previous source tests specified in Section 93336(d); and

(2) the test meets all other applicable requirements specified in Sections 93336, 93337, and 93338.

Such a proposal to use the "results of a previous source test" may include a proposal to apply the site-specific emission factor developed pursuant to Section 93340, together with current values of the applicable "usage units", to calculate a revised emission result, provided that the current values of the relevant process parameters do not exceed the range of values characterized by the previous source test and that all applicable provisions in subsections (b) and (c) are met.

(c) Unless exempted by the district, tThe results of a previous source test shall not be used to fulfill the update requirements for a source test required pursuant to Section 93336 and Appendix D if:

(1) a major change, including but not limited to: shutdown or startup of equipment, change in air pollution control equipment, or change in the input materials affecting listed substances, has occurred in the operation of the facility which affects the emitting process for which testing is required; or,

(2) a major improvement has occurred in the accuracy of the applicable ARB-adopted test method, including but not limited to a revision adopted by the ARB specifically to lower the detection limit or to increase the accuracy of the test method as it pertains to the substance for which the testing is required; or

(32) the facility has been cited by the district for a violation of any rule limiting or controlling a listed toxic substance associated with the emitting process for which testing is required; or/

(3) the previous source test data submitted by the facility has been determined by the district or the Executive Officer of the Air Resources Board to be invalid or inadequate to accurately assess emissions for the tested process(es).

(d) The district may approve a proposal to use the results of a previous ~~source test to fulfill an update of a required source test if the~~ district determines that the requirements specified in subsections (b) and (c), above, are met. The district may require a new test to update a previous source test if the district has reason to believe that conditions affecting the emissions of listed substances have changed or if the district determines that significantly improved emission quantification is technologically feasible and appropriate for the particular facility.

NOTE: Authority cited: Sections 39600, 39601, 44340, 44342, and 44344, 44360, and 44362, Health and Safety Code. Reference: Sections 44320, 44322, 44323, 44340, 44341, 44342, 44343, and 44344, Health and Safety Code, and 17 CCR Sections 90700/90704, Appendix B.

**93352. Update Reporting Year.**

(a) Information required on the Biennial Summary Form shall reflect facility operations for the calendar year (the update year) prior to the year the Biennial Summary Form is due. Information required on the Biennial Summary Form which describes changes at a facility shall be referenced to either the previously submitted emissions inventory report or to the previous update year, as specified for individual questions on the form.

(b) Emissions data in any update plan and update report shall reflect facility operations during the calendar year prior to the year in which the plan is due (the update year).

NOTE: Authority cited: Sections 39600, 39601, 44340, 44342, 44344, 44360, and 44362, Health and Safety Code. Reference: Sections 44320, 44322, 44323, 44340, 44341, 44342, 44343, and 44344, Health and Safety Code, and 17 CCR Sections 90700/90704, Appendix B.

**93352/ Differing Emissions Between the Previous Two Years/**

*For any emitting process for which the nature or quantity of emissions differs significantly between the two years since the previous plan or report/ the facility operator shall include in the update plan an estimate of the difference in the process parameters and emissions between the two years/ The operator shall propose in the update plan an inventory method which will result in values for maximum hourly and annual emissions and process rates as follows/*

*(a) Values for the maximum hourly emissions and maximum hourly process rate for each emitting process shall represent the emissions and process parameters/ respectively/ during the particular time period during the previous two/year period which had the greatest hourly emissions/ That year and time period shall be specified in the update plan and update report/*

*(b) Values for the annual average emissions and annual process rate for each emitting process shall represent the emissions and process parameters/ respectively/ for the year with greater emissions/ and that year shall be specified in the update plan and update report/ except that the facility operator may propose values which represent the year with the lesser emissions if it is the more recent of the previous two years and if the facility operator provides adequate documentation to demonstrate to the district that/*

*(1) the reduction is due to enforceable permit conditions/ or*

*(2) the operation of the facility is permanently altered due to shutdown/ dismantling/ or relocation outside the facility of a process or equipment at the facility/*

*(c) If usage of one listed substance has been substituted for usage of another in an emitting process that was previously reported/ the facility operator shall account for emissions due to usage of both substances in the year with greatest emissions of the more potent*

substance/ unless the operator provides adequate documentation to demonstrate to the district that the substitution of the less potent substance is permanent/ If so demonstrated/ the emissions during the more recent of the two years may be reported/

NOTE/ Authority cited/ Sections 39600/ 39601/ 44342/ and 44344/ Health and Safety Code/ Reference/ Sections 44340/ 44341/ 44342/ and 44344/ Health and Safety Code/

93353. Schedule for Biennial Update Submittal.

(a) Biennial update submittals The update plan shall be due according to the following schedule/ unless the district specifies in writing in advance an alternative schedule within the same year.

(1) For any facility which is subject to the requirements of this subchapter pursuant to Section 93304(a)/ and to Section 93348(b), the update plan shall be due by August 1, 1994, and every two years thereafter./ unless the district specifies in writing in advance an alternate schedule within the same year if required to facilitate administration of the program/

(2) For any facility which is subject to the requirements of this subchapter pursuant to Section 93304(a) and to Section 93348(c), (d), or (e), the Biennial Summary Form shall be due by February 1, 1994, and every two years thereafter. If the district requires that the facility prepare an update plan, such plan shall be due August 1 of the year the Biennial Summary Form is due.

(2)(3) For any facility which is subject to the requirements of this subchapter pursuant to Section 93304(b) and to Section 93348(b), the update plan shall be due by August 1, 1995, and every two years thereafter./ unless the district specifies in writing in advance an alternate schedule within the same year if required to facilitate administration of the program/

(4) For any facility which is subject to the requirements of this subchapter pursuant to Section 93304(b) and to Section 93348(c), (d), or (e), the Biennial Summary Form shall be due by February 1, 1995, and every two years thereafter. If the district requires that the facility prepare an update plan, such plan shall be due August 1 of the year the Biennial Summary Form is due.

(3)(5) For any facility which is subject to the requirements of this subchapter pursuant to Section 93305 or 93306 and to Section 93348(b), the update plan shall be due by August 1 of the year which is two years after the year the initial plan submittal was required, and every two years thereafter. (unless the district specifies in writing in advance an alternate schedule within the same year if required to facilitate administration of the program) and

(6) For any facility which is subject to the requirements of this subchapter pursuant to Section 93305 or 93306 and to Section 93348(c), (d), or (e), the Biennial Summary Form shall be due by February 1 of the year which is two years after the year the initial plan submittal was required and every two years thereafter. If the biennial update form indicates that the facility must prepare an update plan, such plan shall be due August 1 of the same year the summary form is due.

(4)(7) For any facility which is subject to the requirements of this subchapter pursuant to Section 93308(ab)(1) or (c) and to Section 93348(b), the update plan shall be due by August 1, 1993 and every two years thereafter. (unless the district specifies in writing in advance an alternate schedule within the same year if required to facilitate administration of the program)

(8) For any facility which is subject to the requirements of this subchapter pursuant to Section 93308(b)(1) or (c) and to Section 93348(c), (d), or (e), the Biennial Summary Form shall be due by February 1, 1994, and every two years thereafter. If the district requires that the facility prepare an update plan, such plan shall be due August 1 of the year the Biennial Summary Form is due.

(b) Except as provided in subsection (c), below, the schedule specified for the inventory plan and report in Health and Safety Code Sections 44340(b), 44341, and 44343, and in Sections 93320 and 93347 herein shall apply to the review, approval, and implementation of the update plan and update report.

(c) Nothing in subsection (b), above, shall preclude an operator from submitting a proposed update report at the same time as the update plan provided that all applicable revisions are included in the update report and that no new source testing was required for the facility. If upon review of the update plan, the district requires the operator to revise the update plan, the operator shall implement the revised plan and incorporate all applicable revisions to the update report.

NOTE: Authority cited: Sections 39600, 39601, 44340, 44342, and 44344, 44360 and 44362, Health and Safety Code. Reference: Sections 44320, 44322, 44323, 44340, 44341, 44342, 44343, and 44344, Health and Safety Code, and 17 CCR Sections 90700-90704, Appendix B.

93354. Schedule for Biennial Summary Form Review.

(a) Districts shall review facility Biennial Summary Forms. Following review, districts shall notify facility operators in writing if the facility operator must submit an emissions inventory update plan and report as specified in Sections 93348-93353. Districts shall notify facilities of the requirement to perform an update by May 1 of the year the Biennial Summary Form was submitted, or within 90 days of receipt of the form if an alternative submittal schedule was specified by the district.

(b) If the district does not respond to the facility operator as specified in Section 93354(a), the Biennial Summary Form shall meet the facility's biennial update requirements for the update year. However, failure of the district to respond does not prevent the district from requiring updated information if the district determines that information provided on the Biennial Summary Form form is erroneous, incomplete, or the existing facility emissions inventory does not adequately characterize facility emissions.

NOTE: Authority cited: Sections 39600, 39601, 44340, 44342, 44344, 44360, and 44362, Health and Safety Code. Reference: Sections 44320, 44322, 44323, 44340, 44341, 44342, 44343, and 44344, Health and Safety Code, and 17 CCR Sections 90700-90704, Appendix B.

**93355. Change in Ownership or Company Name.**

The biennial update requirements in this subchapter shall apply to any facility which had been subject to this subchapter pursuant to the provisions of Health and Safety Code Sections 44320 and 44322, which subsequently changed ownership or company name.

NOTE: Authority cited: Sections 39600, 39601, 44342, and 44344, Health and Safety Code. Reference: Sections 44320, 44342, and 44344, Health and Safety Code.

# APPENDIX A

## SUBSTANCES TO BE INVENTORIED

### A-I
### LIST OF SUBSTANCES FOR WHICH EMISSIONS MUST BE QUANTIFIED

### A-II
### LIST OF SUBSTANCES FOR WHICH PRODUCTION, USE, OR OTHER PRESENCE MUST BE REPORTED

## APPENDIX A-I

### Substances For Which Emissions Must Be Quantified

| Chemical Abstracts Service Registry Number (CAS) Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | See Note II Add Date (Note [3]) | See Note I Carcinogen (Note [4]) | Applicable Degree of Accuracy (lbs/yr) (Note [5]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|---|
| 75070 | Acetaldehyde | | c | 100 | 1 2 3 4 | |
| 60355 | Acetamide | | c | 100 | 1 2 3 4 | |
| 67641 | Acetone | 06/91 | | 100 | 1 | |
| 75058 | Acetonitrile | 06/91 | | 100 | 1 2 | |
| 98862 | Acetophenone | 06/91 | | 100 | 1 2 | |
| 53963 | 2-Acetylaminofluorene [PAH-Derivative, POM] | | c | 100 | 1 2 4 5 | |
| 107028 | Acrolein | | | 10 | 1 2 | |
| 79061 | Acrylamide | | c | 100 | 1 2 3 4 | |
| 79107 | Acrylic acid | 06/91 | | 100 | 1 2 | |
| 107131 | Acrylonitrile | | c | 100 | 1 2 3 4 5 | |
| 107051 | Allyl chloride | | c | 100 | 1 2 4 | |
| 7429905 | Aluminum | 06/91 | | 100 | 1 | |
| 1344281 | Aluminum oxide (fibrous forms) | 06/91 | | 100 | 7 | |
| 117793 | 2-Aminoanthraquinone [PAH-Derivative, POM] | | c | 100 | 1 2 4 5 | |
| 92671 | 4-Aminobiphenyl [POM] | | c | 100 | 1 2 3 4 5 | |
| 61825 | Amitrole | | c | 100 | 3 4 5 | |
| 7664417 | Ammonia | | | 100 | 1 2 | |
| 6484522 | Ammonium nitrate | 06/91 | | 100 | 1 | |
| 7783202 | Ammonium sulfate | 06/91 | | 100 | 1 | |
| 62533 | Aniline | 09/90 | c | 100 | 1 2 4 | |
| 90040 | o-Anisidine | | c | 100 | 1 2 3 4 5 | |
| - | Anthracene [PAH, POM], (see PAH) | | | | | |
| 7440360 | Antimony | 06/91 | | 100 | 7 | |
| * | Antimony compounds ## | 06/91 | | 100 | 1 2 | [7] |
| | including but not limited to: | | | | | |
| ~~1327339~~ | 1309644 Antimony trioxide | 09/90 | c | 100 | 1 2 3 4 | [7] |
| 7440382 | Arsenic | | c | 1 | 1 2 3 4 5 | |
| # 1016 | Arsenic compounds (inorganic) ## | | c | 1 | 1 2 3 4 5 | [7] |
| | including but not limited to: | | | | | |
| 7784421 | Arsine | | | 10 | 1 2 7 | [7] |
| # 1017 | Arsenic compounds (other than inorganic) ## | 06/91 | | 100 | 1 | [7] |
| 7440393 | Barium | 06/91 | | 100 | 7 | |
| * | Barium compounds ## | 06/91 | | 100 | 1 | [7] |
| - | Benz[a]anthracene [PAH, POM], (see PAH) | | | | | |
| 71432 | Benzene | | c | 10 | 1 2 3 4 5 | |
| 92875 | Benzidine (and its salts) [POM] | | c | 10 | 1 2 3 4 5 | |
| # 1020 | Benzidine-based dyes [POM] | | c | 10 | 1 2 3 | |
| | including but not limited to: | | | | | |
| 1937377 | Direct Black 38 [PAH-Derivative, POM] | | c | 10 | 1 2 4 5 | |
| 2602462 | Direct Blue 6 [PAH-Derivative, POM] | | c | 10 | 1 2 4 5 | |
| 16071866 | Direct Brown 95 (technical grade) [POM] | 09/89 | c | 10 | 1 2 4 | |
| - | Benzo[a]pyrene [PAH, POM], (see PAH) | | | | | |
| - | Benzo[b]fluoranthene [PAH, POM], (see PAH) | | | | | |
| 271896 | Benzofuran | 06/91 | c | 100 | 4 | |
| 98077 | Benzoic trichloride {Benzotrichloride} | | c | 10 | 1 2 4 4 5 | |



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SOME COLUMNS HAVE BEEN REORDERED

FOOTNOTES HAVE BEEN MOVED TO THE NEW NOTES SECTION AT THE END OF THE APPENDIX

## Substances For Which Emissions Must Be Quantified (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | Add Date (Note [3]) | Carcinogen (Note [4]) | Applicable Degree of Accuracy (lbs/yr) (Note [5]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|---|
| – | Benzo[j]fluoranthene [PAH, POM], (see PAH) | | | | | |
| – | Benzo[k]fluoranthene [PAH, POM], (see PAH) | | | | | |
| 98884 | Benzoyl chloride | 06/91 | | 100 | 1 | |
| 94360 | Benzoyl peroxide | 06/91 | | 100 | 7 | |
| 100447 | Benzyl chloride | | ¢ | 10 | 1 2 4 | |
| 7440417 | Beryllium | | ¢ | 1 | 1 2 3 4 5 | |
| * | Beryllium compounds ## | 09/89 | ¢ | 1 | 1 2 3 4 5 | [7] |
| 92524 | Biphenyl [POM] | 06/91 | | 100 | 1 2 | |
| 111444 | Bis(2-chloroethyl) ether {DCEE} | 09/89 | ¢ | 100 | 1 2 4 | |
| 542881 | Bis(chloromethyl) ether | | ¢ | 10 | 1 2 3 4 5 | |
| 103231 | Bis(2-ethylhexyl) adipate | 06/91 | | 100 | 1 | |
| 7726956 | Bromine | | | 100 | 2 | |
| * | Bromine compounds (inorganic) ## including but not limited to: | | | 100 | 1 2 | [7] |
| 7758012 | Potassium bromate | | | 100 | 1 3 4 | [7] |
| 75252 | Bromoform | 06/91 | | 100 | 1 2 4 | |
| 106990 | 1,3-Butadiene | | ¢ | 10 | 1 2 3 4 5 | |
| 141322 | Butyl acrylate | 06/91 | | 100 | 1 | |
| 71363 | n-Butyl alcohol | 06/91 | | 100 | 1 | |
| 78922 | sec-Butyl alcohol | 06/91 | | 100 | 1 | |
| 75650 | tert-Butyl alcohol | 06/91 | | 100 | 1 | |
| 85687 | Butyl benzyl phthalate | 06/91 | | 100 | 1 | |
| 7440439 | Cadmium | | ¢ | 1 | 1 2 3 4 5 | |
| * | Cadmium compounds ## | | ¢ | 1 | 1 2 3 4 5 | [7] |
| 156627 | Calcium cyanamide | 06/91 | | 100 | 1 2 | |
| 105602 | Caprolactam | 06/91 | | 100 | 1 2 | |
| 2425061 | Captafol | 09/89 | ¢ | 100 | 4 | |
| 133062 | Captan | 09/90 | ¢ | 100 | 1 2 | |
| 63252 | Carbaryl [PAH-Derivative, POM] | 06/91 | | 100 | 1 2 4 | |
| # 1050 | Carbon black extracts | | ¢ | 100 | 1 3 4 | |
| 75150 | Carbon disulfide | 09/89 | | 100 | 1 2 4 | |
| 56235 | Carbon tetrachloride | | ¢ | 10 | 1 2 3 4 5 | |
| 463581 | Carbonyl sulfide | 06/91 | | 100 | 1 2 | |
| # 1055 | Carrageenan (degraded) | | ¢ | 100 | 3 4 | |
| 120809 | Catechol | 06/91 | | 100 | 1 2 | |
| 133904 | Chloramben | 06/91 | | 100 | 1 2 | |
| 56757 | Chloramphenicol | | ¢ | 100 | 3 4 | |
| 57749 | Chlordane | 09/89 | ¢ | 10 | 1 2 4 | |
| 108171262 | Chlorinated paraffins (average chain length, C12; approximately 60% chlorine by weight) | 09/89 | ¢ | 100 | 3 4 5 | |
| 7782505 | Chlorine | | | 10 | 1 2 | |
| 10049044 | Chlorine dioxide | 06/91 | | 100 | 1 | |
| 79118 | Chloroacetic acid | 06/91 | | 100 | 1 2 | |
| 532274 | 2-Chloroacetophenone | 06/91 | | 100 | 1 2 | |



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## Substances For Which Emissions Must Be Quantified (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | Add Date (Note [3]) | Carcinogen (Note [4]) | Applicable Degree of Accuracy (lbs/yr) (Note [5]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|---|
| # 1058 | Chlorobenzenes | 06/91 | | 100 | 1 | |
| | including but not limited to: | | | | | |
| 108907 | Chlorobenzene | | | 100 | 1 2 | |
| 25321226 | Dichlorobenzenes (mixed isomers) | 06/91 | | 100 | 1 7 | |
| | including: | | | | | |
| 95501 | 1,2-Dichlorobenzene | 06/91 | | 100 | 1 7 | |
| 541731 | 1,3-Dichlorobenzene | 06/91 | | 100 | 1 7 | |
| 106467 | p-Dichlorobenzene {1,4-Dichlorobenzene} | | c | 100 | 1 2 3 5 | |
| 120821 | 1,2,4-Trichlorobenzene | 06/91 | | 100 | 1 2 | |
| 510156 | Chlorobenzilate [POM] {Ethyl-4,4'-dichlorobenzilate} | 09/90 | c | 100 | 1 2 4 | |
| 13909096 | 1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1-nitrosourea {Methyl CCNU} | | c | 100 | 3 | |
| 67663 | Chloroform | | c | 10 | 1 2 3 4 5 | |
| 107302 | Chloromethyl methyl ether (technical grade) | | c | 100 | 1 2 4 5 | |
| # 1060 | Chlorophenols | | c | 100 | 1 3 | |
| | including but not limited to: | | | | | |
| 120832 | 2,4-Dichlorophenol | 06/91 | c | 100 | 1 7 | |
| 87865 | Pentachlorophenol | 09/90 | c | 100 | 1 2 4 | |
| 95954 | 2,4,5-Trichlorophenol | 06/91 | c | 100 | 1 2 | |
| 88062 | 2,4,6-Trichlorophenol | | c | 100 | 1 2 4 | |
| 95830 | 4-Chloro-o-phenylenediamine | | c | 100 | 3 4 5 | |
| 76062 | Chloropicrin | | | 10 | 7 | |
| 126998 | Chloroprene | | | 100 | 1 2 | |
| 95692 | p-Chloro-o-toluidine | | c | 100 | 3 4 | |
| 7440473 | Chromium | 06/91 | | 100 | 7 | |
| * | Chromium compounds (other than hexavalent) # | 06/91 | | 100 | 1 2 | [7] |
| 18540299 | Chromium, hexavalent (and compounds) # | | c | .1 | 1 2 3 4 5 | [7] |
| | including but not limited to: | | | | | |
| 10294403 | Barium chromate | 06/91 | c | .1 | 1 2 5 | [7] |
| 13765190 | Calcium chromate | 06/91 | c | .1 | 1 2 5 | [7] |
| 1333820 | Chromium trioxide | 06/91 | c | .1 | 1 2 5 | [7] |
| 7758976 | Lead chromate | 06/91 | c | .1 | 1 2 5 | [7] |
| 10588019 | Sodium dichromate | 06/91 | c | .1 | 1 2 5 | [7] |
| 7789062 | Strontium chromate | 06/91 | c | .1 | 1 2 5 | [7] |
| - | Chrysene [PAH, POM], (see PAH) | | | | | |
| 7440484 | Cobalt | 06/91 | | 100 | 7 | |
| * | Cobalt compounds # | 06/91 | | 100 | 1 | [7] |
| # 1066 | Coke oven emissions | | c | 100 | 1 2 3 4 5 | |
| 7440508 | Copper | | | 100 | 2 | |
| * | Copper compounds # | 09/89 | | 100 | 1 2 | [7] |
| # 1070 | Creosotes | | c | 100 | 1 3 4 | |
| 120718 | p-Cresidine | | c | 100 | 3 4 5 | |



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## Substances For Which Emissions Must Be Quantified (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | Add Date (Note [3]) | Carcinogen (Note [4]) | Applicable Degree of Accuracy (lbs/yr) (Note [5]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|---|
| 1319773 | Cresols (mixtures of) {Cresylic acid} including: | | | 100 | 1 2 | |
| 108394 | m-Cresol | 06/91 | | 100 | 1 2 | |
| 95487 | o-Cresol | 06/91 | | 100 | 1 2 | |
| 106445 | p-Cresol | 06/91 | | 100 | 1 2 | |
| 98828 | Cumene | 06/91 | | 100 | 1 2 | |
| 80159 | Cumene hydroperoxide | 06/91 | | 100 | 1 | |
| 135206 | Cupferron | | C | 100 | 4 5 | |
| # 1073 | Cyanide compounds ## including but not limited to: | 06/91 | | 100 | 1 2 | [8] |
| 74908 | Hydrocyanic acid | | | 10 | 2 | |
| 110827 | Cyclohexane | 06/91 | | 100 | 1 | |
| 66819 | Cycloheximide | | | 100 | 6 | |
| 1163195 | Decabromodiphenyl oxide [POM] | 06/91 | | 100 | 1 2 | |
| # 1075 | Dialkylnitrosamines including but not limited to: | | | 100 | 1 | |
| 924163 | N-Nitrosodi-n-butylamine | | C | 1 | 1 3 4 5 | |
| 1116547 | N-Nitrosodiethanolamine | | C | 100 | 1 3 4 5 | |
| 55185 | N-Nitrosodiethylamine | | C | 1 | 1 3 4 5 | |
| 62759 | N-Nitrosodimethylamine | | C | 1 | 1 2 3 4 5 | |
| #621647 | N-Nitrosodi-n-propylamine | | C | 100 | 1 3 4 5 | |
| 10595956 | N-Nitrosomethylethylamine | | C | 100 | 1 3 4 | |
| 615054 | 2,4-Diaminoanisole | | C | 100 | 3 4 | |
| # 1078 | Diaminotoluenes (mixed isomers) including but not limited to: | 09/90 | C | 100 | 1 4 | |
| 95807 | 2,4-Diaminotoluene {2,4-Toluenediamine} | | C | 100 | 1 2 3 4 5 | |
| 334883 | Diazomethane | 06/91 | C | 100 | 1 2 | |
| 226368 | Dibenz[a,h]acridine [POM] | | C | 100 | 1 2 3 4 5 | |
| 224420 | Dibenz[a,j]acridine [POM] | | C | 100 | 1 2 3 4 5 | |
| - | Dibenz[a,h]anthracene [PAH, POM], (see PAH) | | | | | |
| 194592 | 7H-Dibenzo[c,g]carbazole | | C | 100 | 1 2 3 4 5 | |
| - | Dibenzo[a,e]pyrene [PAH, POM], (see PAH) | | | | | |
| - | Dibenzo[a,h]pyrene [PAH, POM], (see PAH) | | | | | |
| - | Dibenzo[a,i]pyrene [PAH, POM], (see PAH) | | | | | |
| - | Dibenzo[a,l]pyrene [PAH, POM], (see PAH) | | | | | |
| 132649 | Dibenzofuran [POM] | 06/91 | | 100 | 1 2 | |
| - | Dibenzofurans (chlorinated) (see Polychlorinated dibenzofurans) [POM] | | | | | |
| 96128 | 1,2-Dibromo-3-chloropropane {DBCP} | | C | 100 | 1 2 3 4 5 | |
| 84742 | Dibutyl phthalate | 06/91 | | 100 | 1 2 | |
| - | p-Dichlorobenzene {1,4-Dichlorobenzene} (see Chlorobenzenes) | | | | | |
| 91941 | 3,3'-Dichlorobenzidine [POM] | | C | 10 | 1 2 3 4 5 | |
| 72559 | Dichlorodiphenyldichloroethylene {DDE} [POM] | 09/89 | C | 100 | 1 2 4 | |
| 75343 | 1,1-Dichloroethane {Ethylidene dichloride} | 09/90 | C | 100 | 1 2 4 | |



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## Substances For Which Emissions Must Be Quantified (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | See Note II Add Date (Note [3]) | See Note I Carcinogen (Note [4]) | Applicable Degree of Accuracy (lbs/yr) (Note [5]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|---|
| 94757 | Dichlorophenoxyacetic acid, salts and esters {2,4-D} | 06/91 | | 100 | 1 2 | |
| 78875 | 1,2-Dichloropropane {Propylene dichloride} | 09/90 | c | 100 | 1 2 4 | |
| 542756 | 1,3-Dichloropropene | | c | 10 | 1 2 3 4 5 | |
| 62737 | Dichlorovos {DDVP} | 09/89 | c | 100 | 1 2 4 | |
| 115322 | Dicofol [POM] | 06/91 | | 100 | 1 2 | |
| ≠ - - | Diesel engine exhaust | 09/90 | c | 100 | 1 3 4 | [9] |
| 9901 | Diesel engine exhaust, particulate matter | 09/90 | c | 100 | 1 3 4 | [9] |
| 9902 | Diesel engine exhaust, total organic gas | 09/90 | c | 100 | 1 3 4 | [9] |
| ≠ ≠ | Diesel fuel (marine) | 06/91 | c | 100 | 3 | |
| 111422 | Diethanolamine | 06/91 | | 100 | 1 2 | |
| 117817 | Di(2-ethylhexyl) phthalate {DEHP} | | c | 100 | 1 2 3 4 5 | |
| 64675 | Diethyl sulfate | | c | 100 | 1 2 3 4 5 | |
| 119904 | 3,3'-Dimethoxybenzidine [POM] | | c | 100 | 1 2 3 4 5 | |
| 60117 | 4-Dimethylaminoazobenzene [POM] | | c | 100 | 1 2 3 4 5 | |
| 121697 | N,N-Dimethylaniline | 06/91 | | 100 | 1 2 | |
| 57976 | 7,12-Dimethylbenz[a]anthracene [PAH-Derivative, POM] | 09/90 | c | 1 | 1 2 4 | |
| 119937 | 3,3'-Dimethylbenzidine {o-Tolidine} [POM] | | c | 10 | 1 2 3 4 5 | |
| 79447 | Dimethyl carbamoyl chloride | | c | 100 | 1 2 3 4 5 | |
| 68122 | Dimethyl formamide | 09/90 | c | 100 | 1 2 3 | |
| 57147 | 1,1-Dimethylhydrazine | | c | 100 | 1 2 3 4 5 | |
| 131113 | Dimethyl phthalate | 06/91 | | 100 | 1 2 | |
| 77781 | Dimethyl sulfate | | c | 100 | 1 2 3 4 5 | |
| 534521 | 4,6-Dinitro-o-cresol (and salts) | 06/91 | | 100 | 1 2 | |
| 51285 | 2,4-Dinitrophenol | 06/91 | | 100 | 1 2 | |
| 42397648 | 1,6-Dinitropyrene [PAH-Derivative, POM] | 06/91 | c | 100 | 1 2 3 4 | |
| 42397659 | 1,8-Dinitropyrene [PAH-Derivative, POM] | 06/91 | c | 100 | 1 2 3 4 | |
| 25321146 | Dinitrotoluenes (mixed isomers) including but not limited to: | 06/91 | | 100 | | 7 |
| 121142 | 2,4-Dinitrotoluene | 09/89 | c | 100 | 1 2 4 | |
| 606202 | 2,6-Dinitrotoluene | 06/91 | | 100 | | 7 |
| 123911 | 1,4-Dioxane | | c | 100 | 1 2 3 4 5 | |
| - | Dioxins (Chlorinated dibenzodioxins) (see Polychlorinated dibenzo-p-dioxins) [POM] | | | | | |
| 630933 | Diphenylhydantoin [POM] | | c | 100 | 1 2 4 | |
| 122667 | 1,2-Diphenylhydrazine {Hydrazobenzene} [POM] | | c | 100 | 1 2 4 5 | |
| ≠ 1090 | Environmental Tobacco Smoke | | c | 100 | 1 3 4 | |
| 106898 | Epichlorohydrin | | c | 100 | 1 2 3 4 5 | |
| 106887 | 1,2-Epoxybutane | 06/91 | | 100 | 1 2 | |
| ≠ 1091 | Epoxy resins | 09/89 | | 100 | 6 | |
| 140885 | Ethyl acrylate | | c | 100 | 1 2 3 4 5 | |
| 100414 | Ethyl benzene | 06/91 | | 100 | 1 2 | |
| 75003 | Ethyl chloride {Chloroethane} | | | 100 | 1 2 4 | |
| - | Ethyl-4,4'-dichlorobenzilate (see Chlorobenzilate) | | | | | |
| 74851 | Ethylene | 06/91 | | 100 | | 7 |



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## Substances For Which Emissions Must Be Quantified (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | See Note II Add Date (Note [3]) | See Note I Carcinogen (Note [4]) | Applicable Degree of Accuracy (lbs/yr) (Note [5]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|---|
| 106934 | Ethylene dibromide {1,2-Dibromoethane} | | c | 1 | 1 3 4 5 6 | |
| 107062 | Ethylene dichloride {1,2-Dichloroethane} | | c | 10 | 1 2 3 4 5 | |
| 107211 | Ethylene glycol | 06/91 | | 100 | 1 2 | |
| 151564 | Ethyleneimine {Aziridine} | 06/91 | | 100 | 1 2 | |
| 75218 | Ethylene oxide | | c | 10 | 1 2 3 4 5 6 | |
| 96457 | Ethylene thiourea | | c | 100 | 1 2 3 4 5 | |
| ≠ 1101 | Fluorides and compounds including but not limited to: | 09/89 | | 100 | 2 | |
| 7664393 | Hydrogen fluoride | | | 10 | 1 2 7 | |
| ≠ 1103 | Fluorocarbons (brominated) | | | 100 | 6 | [10] |
| ≠ 1104 | Fluorocarbons (chlorinated) including but not limited to: | | | 100 | 1 6 | [10] |
| 76131 | Chlorinated fluorocarbon {CFC-113} | | | 100 | 2 6 | |
| 50000 | Formaldehyde | | c | 100 | 1 2 3 4 5 6 | |
| ≠ - - | Gasoline engine exhaust including but not limited to: | 09/90 | c | 100 | 3 | [9] |
| ≠ - - | Gasoline engine exhaust (condensates & extracts) | 06/91 | c | 100 | 4 | [9] |
| 9910 | Gasoline engine exhaust, particulate matter | 09/90 | c | 100 | 3 4 | [9] |
| 9911 | Gasoline engine exhaust, total organic gas | 09/90 | c | 100 | 3 4 | [9] |
| ≠ 1110 | Gasoline vapors | | c | 100 | 1 2 3 4 | [11] |
| 111308 | Glutaraldehyde | | | 100 | 1 6 | |
| ≠ 1115 | Glycol ethers and their acetates including but not limited to: | | | 100 | 1 2 6 | |
| 111466 | Diethylene glycol | 09/90 | | 100 | 1 6 | |
| 111966 | Diethylene glycol dimethyl ether | 09/90 | | 100 | 1 2 6 | |
| 112345 | Diethylene glycol monobutyl ether | 09/90 | | 100 | 1 2 6 | |
| 111900 | Diethylene glycol monoethyl ether | 09/90 | | 100 | 1 2 6 | |
| 111773 | Diethylene glycol monomethyl ether | 09/90 | | 100 | 1 2 6 | |
| 25265718 | Dipropylene glycol | 09/90 | | 100 | 1 6 | |
| 34590948 | Dipropylene glycol monomethyl ether | 09/90 | | 100 | 1 6 | |
| 629141 | Ethylene glycol diethyl ether | 09/90 | | 100 | 1 2 6 | |
| 110714 | Ethylene glycol dimethyl ether | 09/90 | | 100 | 1 2 6 | |
| 111762 | Ethylene glycol monobutyl ether | 09/90 | | 100 | 1 2 6 | |
| 110805 | Ethylene glycol monoethyl ether | 09/89 | | 100 | 1 2 6 | |
| 111159 | Ethylene glycol monoethyl ether acetate | 09/90 | | 100 | 1 2 6 | |
| 109864 | Ethylene glycol monomethyl ether | 09/89 | | 100 | 1 2 6 | |
| 110496 | Ethylene glycol monomethyl ether acetate | 09/90 | | 100 | 1 2 6 | |
| 2807309 | Ethylene glycol monopropyl ether | 09/90 | | 100 | 1 2 6 | |
| 107982 | Propylene glycol monomethyl ether | 09/90 | | 100 | 1 6 | |
| 108656 | Propylene glycol monomethyl ether acetate | 09/90 | | 100 | 1 6 | |
| 112492 | Triethylene glycol dimethyl ether | 09/90 | | 100 | 1 2 6 | |
| 126078 | Griseofulvin | | c | 100 | 3 4 | |
| 76448 | Heptachlor | 09/89 | c | 100 | 1 2 4 | |
| 118741 | Hexachlorobenzene | | c | 1 | 1 2 3 5 | |
| 87683 | Hexachlorobutadiene | 06/91 | | 100 | 1 2 | |



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## Substances For Which Emissions Must Be Quantified (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | SARA 313 Add Date (Note [3]) | SARA 313 Carcinogen (Note [4]) | Applicable Degree of Accuracy (lbs/yr) (Note [5]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|---|
| ≠ 1120 | Hexachlorocyclohexanes including but not limited to: | | c | 1 | 1 3 4 5 | |
| 58899 | Lindane | 09/90 | c | 1 | 1 2 4 | |
| 77474 | Hexachlorocyclopentadiene | | | 100 | 1 2 | |
| 67721 | Hexachloroethane | 09/90 | c | 100 | 1 2 4 | |
| 680319 | Hexamethylphosphoramide | | c | 100 | 1 2 3 4 5 | |
| 110543 | Hexane | 06/91 | | 100 | 1 2 | |
| 302012 | Hydrazine | | c | 100 | 1 2 3 4 5 | |
| 7647010 | Hydrochloric acid | | | 100 | 1 2 | |
| – | Hydrocyanic acid (see Cyanide compounds ≠≠) | | | | | |
| 7783064 | Hydrogen sulfide | | | 100 | 1 2 | |
| 123319 | Hydroquinone | 06/91 | | 100 | 1 2 | |
| – | Indeno[1,2,3-cd]pyrene [PAH, POM], (see PAH) | | | | | |
| ≠ 1125 | Isocyanates including but not limited to: | | | 100 | 6 | |
| 822060 | Hexamethylene-1,6-diisocyanate | 06/91 | | 100 | 1 2 | |
| 101688 | Methylene diphenyl diisocyanate {MDI} [POM] | 06/91 | | 100 | 1 2 | |
| 624839 | Methyl isocyanate | | | 100 | 1 2 | |
| – | Toluene-2,4-diisocyanate (see Toluene diisocyanates) | | | | | |
| – | Toluene-2,6-diisocyanate (see Toluene diisocyanates) | | | | | |
| 78591 | Isophorone | 06/91 | | 100 | 1 2 | |
| 67630 | Isopropyl alcohol | 06/91 | | 100 | 1 | |
| 80057 | 4,4'-Isopropylidenediphenol [POM] | 06/91 | | 100 | 1 2 | |
| 7439921 | Lead | | c | 10 | 1 4 6 | |
| ≠ 1128 | Lead compounds (inorganic) ≠≠ including but not limited to: | | c | 10 | 1 3 | [7] |
| 301042 | Lead acetate | | c | 10 | 1 2 4 5 | [7] [12] |
| – | Lead chromate (see Chromium, hexavalent) | | | | | |
| 7446277 | Lead phosphate | | c | 10 | 1 4 5 | [7] |
| 1335326 | Lead subacetate | 09/90 | c | 10 | 1 2 4 | [7] [12] |
| ≠ 1129 | Lead compounds (other than inorganic) ≠≠ | 06/91 | | 10 | 1 2 | [7] |
| [illegible] | [illegible] | | ≠ | 10 | | |
| [illegible] | [illegible] | 09/90 | ≠ | 10 | | |
| 108316 | Maleic anhydride | | | 100 | 1 2 | |
| 7439965 | Manganese | | | 100 | 1 2 | |
| * | Manganese compounds ≠≠ | 09/89 | | 100 | 1 2 | [7] |
| 7439976 | Mercury | | | 10 | 1 2 4 6 | |
| * | Mercury compounds ≠≠ including but not limited to: | 09/89 | | 10 | 1 2 4 | [7] |
| 7487947 | Mercuric chloride | | | 10 | 2 | [7] |
| 593748 | Methyl mercury {Dimethylmercury} | | | 10 | 2 | [7] |
| 67561 | Methanol | | | 100 | 1 2 | |



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## Substances For Which Emissions Must Be Quantified (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | Add Date (Note [3]) | Carcinogen (Note [4]) | Applicable Degree of Accuracy (lbs/yr) (Note [5]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|---|
| 72435 | Methoxychlor [POM] | 06/91 | | 100 | 1 2 | |
| 75558 | 2-Methylaziridine {1,2-Propyleneimine} | | c | 100 | 1 2 3 4 | |
| 74839 | Methyl bromide {Bromomethane} | | | 100 | 1 2 6 | |
| 74873 | Methyl chloride {Chloromethane} | 06/91 | | 100 | 1 2 | |
| 71556 | Methyl chloroform {1,1,1-Trichloroethane} | | | 100 | 1 2 6 | |
| 56495 | 3-Methylcholanthrene [PAH-Derivative, POM] | 09/90 | c | 1 | 1 2 4 | |
| 3697243 | 5-Methylchrysene [PAH-Derivative, POM] | | c | 100 | 1 2 3 4 5 | |
| 101144 | 4,4'-Methylene bis(2-chloroaniline) {MOCA} [POM] | | c | 100 | 1 2 3 4 5 | |
| 75092 | Methylene chloride {Dichloromethane} | | c | 100 | 1 2 3 4 5 6 | |
| 101779 | 4,4'-Methylenedianiline (and its dichloride) [POM] | | c | 100 | 1 2 3 4 5 | |
| 78933 | Methyl ethyl ketone {2-Butanone} | 06/91 | | 100 | 1 2 | |
| 60344 | Methyl hydrazine | 06/91 | | 100 | 1 2 | |
| 74884 | Methyl iodide {Iodomethane} | | c | 100 | 1 2 4 5 | |
| 108101 | Methyl isobutyl ketone {Hexone} | 06/91 | | 100 | 1 2 | |
| 80626 | Methyl methacrylate | | | 100 | 1 2 6 | |
| 1634044 | Methyl tert-butyl ether | 06/91 | | 100 | 1 2 | |
| 443481 | Metronidazole | | c | 100 | 3 4 5 | |
| 90948 | Michler's ketone [POM] | | c | 100 | 1 2 4 5 | |
| ≠ 1136 | Mineral fibers (fine, manmade) (fine mineral fibers which are manmade and are airborne particles of a respirable size greater than 5 microns in length, less than or equal to 3.5 microns in diameter, with a length to diameter ratio of 3:1) | 06/91 | c | 100 | 1 2 7 | |
| | including but not limited to: | | | | | |
| ≠ 1056 | Ceramic fibers | 09/89 | c | 100 | 1 2 3 4 | |
| ≠ 1111 | Glasswool fibers | 09/89 | c | 100 | 1 2 3 4 | |
| ≠ 1168 | Rockwool fibers | 09/89 | c | 100 | 1 2 3 | |
| ≠ 1181 | Slagwool fibers | 09/89 | c | 100 | 1 2 3 | |
| ≠ 1135 | Mineral fibers (other than manmade) | | | 100 | 2 7 | |
| | including but not limited to: | | | | | |
| 1332214 | Asbestos | | c | 100 | 1 2 3 4 5 | |
| 12510428 | Erionite | | c | 100 | 2 3 4 | |
| ≠ 1190 | Talc containing asbestiform fibers | | c | 100 | 2 3 4 | |
| 1313275 | Molybdenum trioxide | 06/91 | | 100 | 1 | |
| - | Naphthalene [PAH, POM], (see PAH) | | | | | |
| 7440020 | Nickel | | c | 1 | 1 2 3 4 5 | |
| * | Nickel compounds ≠≠ | | c | 1 | 1 2 3 4 5 | [7] |
| | including but not limited to: | | | | | |
| 373024 | Nickel acetate | 06/91 | c | 1 | 1 2 5 | [7] |
| 3333393 | Nickel carbonate | 06/91 | c | 1 | 1 2 5 | [7] |
| 13463393 | Nickel carbonyl | | c | 1 | 1 2 4 5 | [7] |
| 12054487 | Nickel hydroxide | 06/91 | c | 1 | 1 2 5 | [7] |
| 1271289 | Nickelocene | 06/91 | c | 1 | 1 2 5 | [7] |



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## Substances For Which Emissions Must Be Quantified (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | SARA 313 Add Date (Note [3]) | SARA 313 Carcinogen (Note [4]) | Applicable Degree of Accuracy (lbs/yr) (Note [5]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|---|
| 1313991 | Nickel oxide | 06/91 | c | 1 | 1 2 5 | [7] |
| 12035722 | Nickel subsulfide | | c | 1 | 1 2 4 5 | [7] |
| ≠ 1146 | Nickel refinery dust from the pyrometallurgical process | 09/89 | c | 1 | 4 | |
| 61574 | Niridazole | | c | 100 | 3 4 | |
| 7697372 | Nitric acid | 06/91 | | 100 | 1 | |
| 139139 | Nitrilotriacetic acid | | c | 100 | 1 4 5 | |
| 98953 | Nitrobenzene | | | 100 | 1 2 | |
| 92933 | 4-Nitrobiphenyl [POM] | 09/89 | c | 100 | 1 2 4 | |
| 7496028 | 6-Nitrochrysene [PAH-Derivative, POM] | 06/91 | c | 100 | 1 2 3 4 | |
| 607578 | 2-Nitrofluorene [PAH-Derivative, POM] | 06/91 | c | 100 | 1 2 3 4 | |
| 302705 | Nitrogen mustard N-oxide | | c | 100 | 3 4 | |
| 100027 | 4-Nitrophenol | 06/91 | | 100 | 1 2 | |
| 79469 | 2-Nitropropane | | c | 100 | 1 2 3 4 5 | |
| 5522430 | 1-Nitropyrene [PAH-Derivative, POM] | 06/91 | c | 100 | 1 2 3 4 | |
| 156105 | p-Nitrosodiphenylamine [POM] | | c | 100 | 1 2 4 5 | |
| 684935 | N-Nitroso-N-methylurea | | c | 100 | 1 2 4 5 | |
| 59892 | N-Nitrosomorpholine | | c | 100 | 1 2 3 4 5 | |
| 100754 | N-Nitrosopiperidine | | c | 100 | 3 4 5 | |
| 930552 | N-Nitrosopyrrolidine | | c | 1 | 3 4 5 | |
| ≠ - - | #PAHs (Polycyclic aromatic hydrocarbons) [POM] including but not limited to: | | | 1/0/0 | 1 2 | [13] |
| 1151 | PAHs, total, w/o individ. components reported | | | 100 | 1 2 | |
| 1150 | PAHs, total, with individ. components also reported | | | 100 | 1 2 | |
| 120127 | Anthracene | 06/91 | | 100 | 1 2 7 | |
| 56553 | Benz[a]anthracene | | c | 100 | 1 2 3 4 5 | |
| 50328 | Benzo[a]pyrene | | c | 1 | 1 2 3 4 5 | |
| 205992 | Benzo[b]fluoranthene | | c | 100 | 1 2 3 4 5 | |
| 205823 | Benzo[j]fluoranthene | | c | 100 | 1 2 3 4 5 | |
| 207089 | Benzo[k]fluoranthene | | c | 100 | 1 2 3 4 5 | |
| 218019 | Chrysene | 09/90 | c | 1 | 1 2 4 | |
| 53703 | Dibenz[a,h]anthracene | | c | 100 | 1 2 3 4 5 | |
| 192654 | Dibenzo[a,e]pyrene | | c | 100 | 1 2 3 4 5 | |
| 189640 | Dibenzo[a,h]pyrene | | c | 100 | 1 2 3 4 5 | |
| 189559 | Dibenzo[a,i]pyrene | | c | 100 | 1 2 3 4 5 | |
| 191300 | Dibenzo[a,l]pyrene | | c | 100 | 1 2 3 4 5 | |
| 193395 | Indeno[1,2,3/-cd]pyrene | | c | 100 | 1 2 3 4 5 | |
| 91203 | Naphthalene | | | 100 | 1 2 | |
| ≠ # | #PAH-Derivatives (Polycyclic aromatic hydrocarbon derivatives) [POM] (including but not limited to those substances listed in Appendix A with the bracketed designation [PAH-Derivative, POM]) | 06/91 | | 1/0/0 | 1 2 7 | [14] |
| 56382 | Parathion | 06/91 | | 100 | 1 2 | |
| 1336363 | PCBs (Polychlorinated biphenyls) [POM] | | c | 1 | 1 2 3 4 5 6 | |



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## Substances For Which Emissions Must Be Quantified (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | Add Date (Note [3]) | Carcinogen (Note [4]) | Applicable Degree of Accuracy (lbs/yr) (Note [5]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|---|
| 82688 | Pentachloronitrobenzene {Quintobenzene} | 06/91 | | 100 | 1 2 | |
| 79210 | Peracetic acid | 06/91 | | 100 | 1 | |
| 127184 | Perchloroethylene {Tetrachloroethane} | | c | 100 | 1 2 3 4 5 6 | |
| 50066 | Phenobarbital | | c | 100 | 3 4 | |
| 108952 | Phenol | | | 100 | 1 2 | |
| 106503 | p-Phenylenediamine | 06/91 | | 100 | 1 2 | |
| 90437 | 2-Phenylphenol [POM] | 06/91 | | 100 | 1 2 | |
| 75445 | Phosgene | | | 100 | 1 2 | |
| 7723140 | Phosphorus | | | 100 | 1 2 | |
| ≠ - - | Phosphorus compounds: | 09/89 | | /00 | 2 | |
| 7803512 | Phosphine | | | 10 | 1 2 7 | |
| 7664382 | Phosphoric acid | 09/89 | | 100 | 1 2 | |
| 10025873 | Phosphorus oxychloride | 09/89 | | 100 | 2 | |
| 10026138 | Phosphorus pentachloride | 09/89 | | 100 | 2 | |
| 1314563 | Phosphorus pentoxide | 09/89 | | 100 | 2 | |
| 7719122 | Phosphorus trichloride | 09/89 | | 100 | 2 | |
| 126738 | Tributyl phosphate | 09/89 | | 100 | 2 | |
| 78400 | Triethyl phosphine | 09/89 | | 100 | 2 | |
| 512561 | Trimethyl phosphate | 09/89 | | 100 | 2 | |
| 78308 | Triorthocresyl phosphate [POM] | 09/89 | | 100 | 1 2 | |
| 115866 | Triphenyl phosphate [POM] | 09/89 | | 100 | 1 2 | |
| 101020 | Triphenyl phosphite [POM] | 09/89 | | 100 | 1 2 | |
| 85449 | Phthalic anhydride | | | 100 | 1 2 | |
| ≠ - - | Polychlorinated dibenzo-p-dioxins {PCDDs or Dioxins} [POM] including but not limited to: | | c | /1 | 1 2 | |
| 1086 | Dioxins, total, w/o individ. isomers reported {PCDDs} | | c | .1 | 1 2 | |
| 1085 | Dioxins, total, with individ. isomers also reported {PCDDs} | | c | .1 | 1 2 | |
| 1746016 | 2,3,7,8-Tetrachlorodibenzo-p-dioxin {TCDD} [POM] | | c | .1 | 1 2 3 4 5 | |
| 40321764 | 1,2,3,7,8-Pentachlorodibenzo-p-dioxin [POM] | | c | .1 | 1 2 | |
| 39227286 | 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin [POM] | | c | .1 | 1 2 4 | |
| 57653857 | 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin [POM] | | c | .1 | 1 2 | |
| 19408743 | 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin [POM] | | c | .1 | 1 2 | |
| 35822469 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin [POM] | | c | .1 | 1 2 | |
| ≠ - - | Polychlorinated dibenzofurans {PCDFs or Dibenzofurans} [POM] including but not limited to: | | c | /1 | 1 2 | |
| 1080 | Dibenzofurans (Polychlorinated dibenzofurans) {PCDFs} [POM] | | c | .1 | 1 2 | |
| 51207319 | 2,3,7,8-Tetrachlorodibenzofuran [POM] | | c | .1 | 1 2 | |
| 57117416 | 1,2,3,7,8-Pentachlorodibenzofuran [POM] | | c | .1 | 1 2 | |
| 57117314 | 2,3,4,7,8-Pentachlorodibenzofuran [POM] | | c | .1 | 1 2 | |
| 70648269 | 1,2,3,4,7,8-Hexachlorodibenzofuran [POM] | | c | .1 | 1 2 | |
| 57117449 | 1,2,3,6,7,8-Hexachlorodibenzofuran [POM] | | c | .1 | 1 2 | |



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## Substances For Which Emissions Must Be Quantified (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | Add Date (Note [3]) | Carcinogen (Note [4]) | Applicable Degree of Accuracy (lbs/yr) (Note [5]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|---|
| 72918219 | 1,2,3,7,8,9-Hexachlorodibenzofuran [POM] | | c | .1 | 1 2 | |
| 60851345 | 2,3,4,6,7,8-Hexachlorodibenzofuran [POM] | | c | .1 | 1 2 | |
| 67562394 | 1,2,3,4,6,7,8-Heptachlorodibenzofuran [POM] | | c | .1 | 1 2 | |
| 55673897 | 1,2,3,4,7,8,9-Heptachlorodibenzofuran [POM] | | c | .1 | 1 2 | |
| ≠ ≠ | #POM (Polycyclic organic matter) (including but not limited to those substances listed in Appendix A with the bracketed designation of [POM], [PAH, POM], or [PAH-Derivative, POM]) | 09/89 | | 100 | 1 2 | [15] |
| 57830 | Progesterone | | c | 100 | 3 4 5 | |
| 1120714 | 1,3-Propane sultone | | c | 100 | 1 2 3 4 5 | |
| 57578 | beta-Propiolactone | | c | 10 | 1 2 3 4 5 | |
| 123386 | Propionaldehyde | 06/91 | | 100 | 1 2 | |
| 114261 | Propoxur {Baygon} | 06/91 | | 100 | 1 2 | |
| 115071 | Propylene | | | 100 | 1 2 | |
| 75569 | Propylene oxide | | c | 100 | 1 2 3 4 5 | |
| - | 1,2-Propyleneimine (see 2-Methylaziridine) | | | | | |
| 110861 | Pyridine | 06/91 | | 100 | 7 | |
| 91225 | Quinoline | 06/91 | | 100 | 1 2 | |
| 106514 | Quinone | 06/91 | | 100 | 1 2 | |
| ≠ 1165 | Radionuclides including but not limited to: | | c | 100 | 1 2 4 | [16] |
| 24267569 | Iodine-131 | 09/89 | c | 100 | 1 2 4 | |
| ≠ 1166 | Radon and its decay products | 09/89 | c | 100 | 1 4 | |
| 50555 | Reserpine [POM] | | c | 100 | 1 2 4 5 | |
| ≠ ≠ | Residual (heavy) fuel oils | 06/91 | c | 100 | 3 4 | |
| 7782492 | Selenium | | | 100 | 2 | |
| * | Selenium compounds ≠≠ including but not limited to: | | | 100 | 1 2 | [7] |
| 7446346 | Selenium sulfide | 09/90 | c | 100 | 2 4 5 | [7] |
| ≠ 1175 | Silica, crystalline | | c | 100 | 1 3 4 | |
| 7440224 | Silver | 06/91 | | 100 | 7 | |
| * | Silver compounds ≠≠ | 06/91 | | 100 | 1 | [7] |
| 1310732 | Sodium hydroxide | | | 100 | 1 2 | |
| 100425 | Styrene | | c | 100 | 1 2 3 6 | |
| 96093 | Styrene oxide | | c | 100 | 1 2 3 4 | |
| 7664939 | Sulfuric acid | 06/91 | | 100 | 1 | |
| 100210 | Terephthalic acid | 06/91 | | 100 | 1 | |
| 79345 | 1,1,2,2-Tetrachloroethane | 09/90 | c | 10 | 1 2 4 | |
| 7440280 | Thallium | 06/91 | | 100 | 7 | |
| * | Thallium compounds ≠≠ | 06/91 | | 100 | 7 | [7] |
| 62555 | Thioacetamide | | c | 100 | 3 4 5 | |
| 62566 | Thiourea | | c | 100 | 1 3 4 5 | |
| 7550450 | Titanium tetrachloride | 06/91 | | 100 | 1 2 | |
| 108883 | Toluene | | | 100 | 1 2 4 6 | |
| - | 2,4-Toluenediamine (see 2,4-Diaminotoluene) | | | | | |



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## Substances For Which Emissions Must Be Quantified (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | Section 112 Add Date (Note [3]) | Section 112 Carcinogen (Note [4]) | Applicable Degree of Accuracy (lbs/yr) (Note [5]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|---|
| # 1204 | Toluene diisocyanates including but not limited to: | 06/91 | # | 10 | 1 3 | |
| 584849 | Toluene-2,4-diisocyanate | | # | 10 | 1 2 3 5 | |
| 91087 | Toluene-2,6-diisocyanate | | # | 10 | 1 2 3 5 | |
| 95534 | o-Toluidine | | # | 10 | 1 2 3 4 5 | |
| 8001352 | Toxaphene {Polychlorinated camphenes} | | # | 100 | 1 2 3 4 5 | |
| 79005 | 1,1,2-Trichloroethane {Vinyl trichloride} | 06/91 | # | 100 | 1 2 4 | |
| - | 1,1,1-Trichloroethane (see Methyl chloroform) | | | | | |
| 79016 | Trichloroethylene | | # | 100 | 1 2 4 | |
| - | 2,4,6-Trichlorophenol (see Chlorophenols) | | | | | |
| 121448 | Triethylamine | 06/91 | | 100 | 1 2 | |
| 1582098 | Trifluralin | 06/91 | | 100 | 1 2 | |
| 95636 | 1,2,4-Trimethylbenzene | 06/91 | | 100 | 1 | |
| 540841 | 2,2,4-Trimethylpentane | 06/91 | | 100 | 1 2 | |
| 51796 | Urethane {Ethyl carbamate} | | # | 100 | 1 2 3 4 5 | |
| # 7440622 | Vanadium (fume or dust) | 06/91 | | 100 | 7 | [17] |
| 108054 | Vinyl acetate | 06/91 | | 100 | 1 2 | |
| 593602 | Vinyl bromide | | # | 10 | 1 2 3 4 | |
| 75014 | Vinyl chloride | | # | 100 | 1 2 3 4 5 | |
| 75354 | Vinylidene chloride | | | 100 | 1 2 | |
| # 1206 | Wood preservatives (containing arsenic and chromate) | 09/89 | | 100 | 6 | |
| # 1210 | Xylenes (mixed xylenes) including: | | | 100 | 1 2 6 | |
| 108383 | m-Xylene | 06/91 | | 100 | 1 2 | |
| 95476 | o-Xylene | 06/91 | | 100 | 1 2 | |
| 106423 | p-Xylene | 06/91 | | 100 | 1 2 | |
| 7440666 | Zinc | | | 100 | 2 | |
| * | Zinc compounds ## including but not limited to: | 09/89 | | 100 | 1 2 | [7] |
| 1314132 | Zinc oxide | | | 100 | 2 | [7] |



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## APPENDIX A-II

## Substances For Which Production, Use, Or Other Presence Must Be Reported

| Chemical Abstract Service (CAS) Number Emittent ID (Note [1]) | Substance Name (Note [2]) | See Note II Add Date (Note [3]) | See Note I Carcinogen (Note [4]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|
| 26148685 | A-alpha-C {2-Amino-9H-pyrido[2,3-b]indole} | 09/89 | c | 3 4 | [18] |
| 34256821 | Acetochlor | 09/89 | c | 4 | |
| 546883 | Acetohydroxamic acid | 09/90 | | 4 | |
| 62476599 | Acifluorfen [POM] | 09/90 | c | 1 2 4 | |
| 50760 | Actinomycin D | 09/90 | c | 4 | |
| 23214928 | Adriamycin [PAH-Derivative, POM] | | c | 1 2 3 4 5 | |
| 3688537 | AF-2 | | c | 3 4 | |
| ≠ 1000 | Aflatoxins | | c | 3 4 5 | |
| 15972608 | Alachlor | 09/89 | c | 4 | |
| 309002 | Aldrin | 09/89 | c | 4 | |
| 107186 | Allyl alcohol | 06/91 | | | 7 |
| 28981977 | Alprazolam [POM] | 09/90 | | 1 2 4 | |
| 39831555 | Amikacin sulfate | 09/90 | | 4 | |
| 60093 | p-Aminoazobenzene {4-Aminoazobenzene} [POM] | | c | 1 2 3 4 | |
| 97563 | o-Aminoazotoluene [POM] | | c | 1 2 3 4 5 | |
| 6109973 | 3-Amino-9-ethylcarbazole hydrochloride [POM] | 09/89 | c | 1 2 4 5 | |
| 125848 | Aminoglutethimide | 09/90 | | 4 | |
| 82280 | 1-Amino-2-methylanthraquinone [PAH-Derivative, POM] | | c | 1 2 4 5 | |
| 68006837 | 2-Amino-3-methyl-9H-pyrido(2,3-b) indole {MeA-alpha-C} | 09/89 | c | 3 4 | |
| 712685 | 2-Amino-5-(5-nitro-2-furyl)-1,3,4-thiadiazole | | c | 3 4 | |
| 54626 | Aminopterin | | | 4 | |
| – | 2-Amino-9H-pyrido(2,3-b)indole (see A-alpha-C) | | | | |
| ≠ 1005 | Analgesic mixtures containing phenacetin | | c | 3 4 5 | |
| ≠ 1010 | Androgenic (anabolic) steriods | | c | 3 4 | |
| | including but not limited to: | | | | |
| 58184 | Methyltestosterone | 09/90 | | 4 | |
| 434071 | Oxymetholone | | c | 4 5 | |
| 58220 | Testosterone and its esters | 09/89 | | 4 | |
| | including but not limited to: | | | | |
| 315377 | Testosterone enanthate | 09/90 | | 4 | |
| 134292 | o-Anisidine hydrochloride | | c | 4 5 | |
| 104949 | p-Anisidine | 06/91 | | | 7 |
| 140578 | Aramite | | c | 3 4 | |
| 50782 | Aspirin | 06/91 | | 4 | |
| 492808 | Auramine [POM] | | c | 1 2 3 4 5 | |
| 115026 | Azaserine | | c | 3 4 | |
| 446866 | Azathioprine | | c | 3 4 5 | |
| 103333 | Azobenzene [POM] | 09/90 | c | 1 2 4 | |
| 98873 | Benzal chloride | 06/91 | | | 7 |
| 55210 | Benzamide | 06/91 | | | 7 |
| 5411223 | Benzphetamine hydrochloride [POM] | 09/90 | | 1 2 4 | |
| 1694093 | Benzyl violet 4B [POM] | | c | 1 2 3 4 | |
| ≠ 1025 | Betel quid with tobacco | | c | 3 4 | |



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## Substances For Which Production, Use, Or Other Presence Must Be Reported (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | SARA Section 313 Add Date (Note [3]) | SARA Section 313 Carcinogen (Note [4]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|
| 494031 | N-N-Bis(2-chloroethyl)-2-naphthylamine {Chlornaphazine} [PAH-Derivative, POM] | | c | 1 2 3 4 5 | |
| 154938 | Bischloroethyl nitrosourea | | c | 3 4 | |
| 108601 | Bis(2-chloro-1-methylethyl) ether | 06/91 | | 7 | |
| # 1030 | Bitumens, extracts of steam-refined and air-refined bitumens | | c | 3 4 | |
| # 1035 | Bleomycins | | c | 3 | |
| 75274 | Bromodichloromethane | 09/90 | c | 4 | |
| 1689845 | Bromoxynil | 06/91 | | 4 | |
| 55981 | 1,4-Butanediol dimethanesulfonate {Busulfen/ Myleran} | | c | 3 4 5 | |
| 25013165 | Butylated hydroxyanisole {BHA} | | c | 3 4 | |
| 123728 | Butyraldehyde | 06/91 | | 7 | |
| 3068880 | beta-Butyrolactone | | c | 3 4 | |
| 630080 | Carbon monoxide | 09/89 | | 4 | |
| 41575944 | Carboplatin | 09/90 | | 4 | |
| 474259 | Chenodiol | 09/90 | | 4 | |
| 305033 | Chlorambucil | | c | 3 4 5 | |
| 1620219 | Chlorcyclizine hydrochloride [POM] | | | 1 2 4 | |
| 143500 | Chlordecone {Kepone} | | c | 3 4 | |
| 6164983 | Chlordimeform | 09/89 | c | 4 | |
| 115286 | Chlorendic acid | 09/89 | c | 3 4 5 | |
| 124481 | Chlorodibromomethane | 09/90 | c | 4 | |
| 13010474 | 1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea {CCNU} | | c | 3 4 5 | |
| 563473 | 3-Chloro-2-methylpropene | 09/89 | c | 4 5 | |
| # 1065 | Chlorophenoxy herbicides | | c | 3 | |
| 1897456 | Chlorothalonil | 09/89 | c | 4 | |
| # 1059 | p-Chloro-o-toluidine (strong acid salts) | 06/91 | c | 3 | |
| 4680788 | C. I. Acid Green 3 [POM] | 06/91 | | 1 2 7 | |
| 569642 | C. I. Basic Green 4 [POM] | 06/91 | | 1 2 7 | |
| 989388 | C. I. Basic Red 1 [POM] | 06/91 | | 1 2 7 | |
| 569619 | C. I. Basic Red 9 monohydrochloride [POM] | 09/89 | c | 1 2 4 5 | |
| 2832408 | C. I. Disperse Yellow 3 [POM] (NOTE: "C. I." means "color index") | 06/91 | | 1 2 7 | |
| 87296 | Cinnamyl anthranilate [POM] | 09/89 | c | 1 2 4 5 | |
| 15663271 | Cisplatin | | c | 3 4 | |
| 6358538 | Citrus Red No. 2 [POM] | | c | 1 2 3 4 | |
| 50419 | Clomiphene citrate [POM] | 09/90 | | 1 2 4 | |
| 8007452 | Coal tars | 09/89 | c | 3 4 5 | |
| 21725462 | Cyanazine | 09/90 | | 4 | |
| 14901087 | Cycasin | | c | 3 4 | |
| 50180 | Cyclophosphamide | | c | 3 4 | |
| 13121705 | Cyhexatin | 09/89 | | 4 | |
| 147944 | Cytarabine | 09/89 | | 4 | |



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## Substances For Which Production, Use, Or Other Presence Must Be Reported (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | SARA 313 Add Date (Note [3]) | SARA 313 Carcinogen (Note [4]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|
| 3468631 | D and C Orange No. 17 [PAH-Derivative, POM] | 09/90 | c | 1 2 4 | |
| 81889 | D and C Red No. 19 [POM] | 09/90 | c | 1 2 4 | |
| 2092560 | D and C Red No. 8 [PAH-Derivative, POM] | 06/91 | c | 1 2 4 | |
| 5160021 | D and C Red No. 9 [PAH-Derivative, POM] | 09/90 | c | 1 2 4 | |
| 4342034 | Dacarbazine | | c | 3 4 5 | |
| 1596845 | Daminozide | 09/90 | c | 4 | |
| 17230885 | Danazol | 09/90 | | 4 | |
| 20830813 | Daunomycin [PAH-Derivative, POM] | | c | 1 2 3 4 | |
| 23541506 | Daunorubicin hydrochloride [PAH-Derivative, POM] | 09/90 | | 1 2 4 | |
| 50293 | DDT {1,1,1-Trichloro-2,2-bis(p-chlorophenyl)ethane} [POM] | | c | 1 2 3 4 5 | |
| 613354 | N,N'-Diacetylbenzidine [POM] | | c | 1 2 3 4 | |
| 2303164 | Diallate | 06/91 | | | 7 |
| 39156417 | 2,4-Diaminoanisole sulfate | | c | 4 5 | |
| 101804 | 4,4'-Diaminodiphenyl ether [POM] | | c | 1 2 3 4 5 | |
| 764410 | 1,4-Dichloro-2-butene | 09/90 | c | 4 | |
| 28434868 | 3,3'-Dichloro-4,4'-diaminodiphenyl ether [POM] | 09/89 | c | 1 2 3 4 | |
| 72548 | Dichlorodiphenyldichloroethane {DDD} [POM] | 09/89 | c | 1 2 4 | |
| 540590 | 1,2-Dichloroethylene | 06/91 | | | 7 |
| 78886 | 2,3-Dichloropropene | 06/91 | | | 7 |
| 60571 | Dieldrin | 09/89 | c | 4 | |
| 84173 | Dienestrol [POM] | 09/90 | c | 1 2 4 | |
| 1464535 | Diepoxybutane | | c | 3 4 5 | |
| 1615801 | 1,2-Diethylhydrazine | | c | 3 4 | |
| 84662 | Diethyl phthalate | 06/91 | | | 7 |
| 101906 | Diglycidyl resorcinol ether {DGRE} | | c | 3 4 5 | |
| 94586 | Dihydrosafrole | | c | 3 4 | |
| 20325400 | 3,3'-Dimethoxybenzidine dihydrochloride [POM] | 06/91 | c | 1 2 4 | |
| 55738540 | trans-2-[(Dimethylamino)methylimino]-5-[2-(5-nitro-2-furyl)vinyl-1,3,4-oxadiazol | | c | 3 4 | |
| 540738 | 1,2-Dimethylhydrazine | | c | 3 4 | |
| 105679 | 2,4-Dimethylphenol {2,4-Xylenol} | 06/91 | | | 7 |
| 513371 | Dimethylvinylchloride {DMVC} | 09/89 | c | 4 5 | |
| 25154545 | Dinitrobenzenes (mixtures of) including: | 09/90 | | 4 | 7 |
| 99650 | m-Dinitrobenzene | 06/91 | | | 7 |
| 528290 | o-Dinitrobenzene | 06/91 | | | 7 |
| 100254 | p-Dinitrobenzene | 06/91 | | | 7 |
| 39300453 | Dinocap | 09/90 | | 4 | |
| 88857 | Dinoseb | 09/89 | | 4 | |
| 117840 | n-Dioctyl phthalate | 06/91 | | | 7 |
| 2475458 | Disperse Blue 1 [PAH-Derivative, POM] | 06/91 | c | 1 2 3 4 | |
| 564250 | Doxycycline | 09/90 | | 4 | |
| 379793 | Ergotamine tartrate [POM] | 09/90 | | 1 2 4 | |



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## Substances For Which Production, Use, Or Other Presence Must Be Reported (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | Section 313 Activity II Add Date (Note [3]) | Section 313 Activity I Carcinogen (Note [4]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|
| ≠ 1095 | Estrogens, non-steroidal including but not limited to: | | c | 3 5 | |
| 56531 | Diethylstilbestrol [POM] | | c | 1 2 3 4 5 | |
| ≠ 1100 | Estrogens, steroidal including but not limited to: | | c | 3 5 | |
| ≠ 1068 | Conjugated estrogens | 09/90 | c | 4 | |
| 50282 | Estradiol 17 beta | | c | 4 5 | |
| 53167 | Estrone | | c | 4 5 | |
| 57636 | Ethinyl estradiol | | c | 4 5 | |
| 72333 | Mestranol | | c | 3 4 5 | |
| 541413 | Ethyl chloroformate | 06/91 | | 7 | |
| 62500 | Ethyl methanesulfonate | | c | 3 4 | |
| 33419420 | Etoposide [POM] | 09/90 | | 2 4 | |
| 54350480 | Etretinate | | | 4 | |
| 2164172 | Fluometuron | 06/91 | | 7 | |
| 51218 | Fluorouracil | 09/89 | | 4 | |
| 76437 | Fluoxymesterone | 09/90 | | 4 | |
| 13311847 | Flutamide | 09/90 | | 4 | |
| 133073 | Folpet | 09/89 | c | 4 | |
| 3570750 | 2-(2-Formylhydrazino)-4-(5-nitro-2-furyl)thiazole | | c | 3 4 | |
| 67458 | Furazolidone | 09/90 | c | 4 | |
| 60568050 | Furmecyclox | 09/90 | c | 4 | |
| 67730114 | Glu-P-1 [2-Amino-6-methyldipyrido[1,2-a:3',2'-d]imidazole] | | c | 3 4 | |
| 67730103 | Glu-P-2 [2-Aminodipyrido[1,2-a:3',2'-d]imidazole] | | c | 3 4 | |
| 765344 | Glycidaldehyde | | c | 3 4 | |
| 556525 | Glycidol | 09/90 | c | 4 | |
| 16568028 | Gyromitrin {Acetaldehyde methylformylhydrazone} | | c | 4 | |
| 2784943 | HC Blue 1 | 09/89 | c | 4 5 | |
| 23092173 | Halazepam [POM] | 09/90 | | 1 2 4 | |
| 1024573 | Heptachlor epoxide | 09/89 | c | 4 | |
| 1335871 | Hexachloronaphthalene [PAH-Derivative, POM] | 06/91 | | 1 2 7 | |
| 10034932 | Hydrazine sulfate | | c | 4 5 | |
| 3778732 | Ifosfamide | 09/90 | | 4 | |
| 76180966 | IQ {2-Amino-3-methylimidazo[4,5-f]quinoline} | | c | 3 4 | |
| 9004664 | Iron dextran complex | | c | 3 4 5 | |
| 78842 | Isobutyraldehyde | 06/91 | | 7 | |
| 120581 | Isosafrole | 09/90 | c | 4 | |
| 4759482 | Isotretinoin | | | 4 | |
| 77501634 | Lactofen [POM] | 09/89 | c | 1 2 4 | |
| 303344 | Lasiocarpine | 09/89 | c | 3 4 | |
| 554132 | Lithium carbonate | 06/91 | | 4 | |
| 919164 | Lithium citrate | 06/91 | | 4 | |
| 846491 | Lorazepam [POM] | 09/90 | | 1 2 4 | |



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Substances For Which Production, Use, Or Other Presence Must Be Reported (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | Section 313 Activity I Add Date (Note [3]) | Section 313 Activity I Carcinogen (Note [4]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|
| ≠ 1131 | Lubricant base oils and derived products, specifically vacuum distillates, acid treated oils, aromatic oils, mildly solvent-refined oils, mildly hydrotreated-oils and used engine oils. | 09/89 | c | 3 4 5 | |
| 8018017 | Mancozeb | 09/90 | c | 4 | |
| 12427382 | Maneb | 09/90 | c | 4 | |
| 595335 | Megestrol acetate | 06/91 | | 4 | |
| 148823 | Melphalan | | c | 3 4 5 | |
| 9002680 | Menotropins | 09/90 | | 4 | |
| 6112761 | Mercaptopurine | 09/90 | | 4 | |
| 531760 | Merphalan | 09/89 | c | 4 | |
| 3963959 | Methacycline hydrochloride | 06/91 | | 4 | |
| 60560 | Methimazole | 09/90 | | 4 | |
| 59052 | Methotrexate | 09/89 | | 4 | |
| 15475566 | Methotrexate sodium | 09/90 | | 4 | |
| 484208 | 5-Methoxypsoralen | | c | 3 | |
| 96333 | Methyl acrylate | 06/91 | | | 7 |
| 590965 | Methylazoxymethanol | 09/90 | c | 4 | |
| 592621 | Methylazoxymethanol acetate | 09/89 | c | 3 4 | |
| 101611 | 4,4'-Methylene bis (N,N-dimethyl) benzenamine [POM] | | c | 1 2 4 5 | |
| 838880 | 4,4'-Methylene bis(2-methylaniline) [POM] | 09/89 | c | 1 2 3 4 | |
| 74953 | Methylene bromide | 06/91 | | | 7 |
| 66273 | Methyl methanesulfonate | | c | 3 4 | |
| 129157 | 2-Methyl-1-nitroanthraquinone (uncertain purity) [PAH-Derivative, POM] | | c | 1 2 3 4 | |
| 615532- | N-Methyl-N-nitrosourethane {see N-Nitroso-N-methylurethane} | 00/00 | | | |
| 70257 | N-Methyl-N'-nitro-N-nitrosoguanidine | | c | 3 4 | |
| 924425 | N-Methyloacrylamide | 09/90 | c | 4 | |
| 56042 | Methylthiouracil | | c | 3 4 | |
| 9006422 | Metiram | 09/90 | | 4 | |
| 59467968 | Midazolam hydrochloride [POM] | 09/90 | | 1 2 4 | |
| ≠ 1140 | Mineral oils (untreated and mildly treated oils; and those used in occupations such as mulespinning, metal machining, and jute processing). | | c | 3 4 5 | |
| 2385855 | Mirex | | c | 3 4 5 | |
| 62015398 | Misoprostol | 09/90 | | 4 | |
| 50077 | Mitomycin C | | c | 3 4 | |
| 70476823 | Mitoxantrone hydrochloride [PAH-Derivative, POM] | 09/90 | | 1 2 4 | |
| 315220 | Monocrotaline | | c | 3 4 | |
| 139913 | 5-(Morpholinomethyl)-3-[(5-nitrofurfurylidene)amino]-2-oxazolidinone | | c | 3 4 | |
| 505602 | Mustard gas {Sulfur mustard} | | c | 3 4 5 | |
| 86220420 | Nafarelin acetate [PAH-Derivative, POM] | 09/90 | | 1 2 4 | |
| 3771195 | Nafenopin [POM] | | c | 1 2 3 4 | |



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## Substances For Which Production, Use, Or Other Presence Must Be Reported (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | Section 313 Activity II Add Date (Note [3]) | Section 313 Activity I Carcinogen (Note [4]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|
| 134327 | 1-Naphthylamine [PAH-Derivative, POM] | 09/90 | c | 1 2 4 | |
| 91598 | 2-Naphthylamine [PAH-Derivative, POM] | | c | 1 2 3 4 5 | |
| 1405103 | Neomycin sulfate | 09/90 | | 4 | |
| 56391572 | Netilmicin sulfate | 09/90 | | 4 | |
| 54115 | Nicotine | 09/90 | | 4 | |
| ≠ 1148 | Nitrilotriacetic acid (salts) including but not limited to: | 06/91 | c | 3 | |
| 18662538 | Nitrilotriacetic acid, trisodium salt monohydrate | 06/91 | c | 4 | |
| 602879 | 5-Nitroacenaphthene [PAH-Derivative, POM] | | c | 1 2 3 4 | |
| 99592 | 5-Nitro-o-anisidine | | c | 4 5 | |
| 1836755 | Nitrofen (technical grade) | | c | 3 4 5 | |
| 67209 | Nitrofurantoin | 06/91 | c | 4 | |
| 59870 | Nitrofurazone | 09/90 | c | 4 | |
| 555840 | 1-[(5-Nitrofurfurylidene)amino]-2-imidazolidinone | | c | 3 4 | |
| 531828 | N-[4-(5-Nitro-2-furyl)-2-thiazolyl]acetamide | | c | 3 4 | |
| 51752 | Nitrogen mustard {Mechlorethamine} | | c | 3 4 5 | |
| 55867 | Nitrogen mustard hydrochloride | 09/89 | c | 4 5 | |
| 55630 | Nitroglycerin | 06/91 | | | 7 |
| 88755 | 2-Nitrophenol | 06/91 | | | 7 |
| 57835924 | 4-Nitropyrene [PAH-Derivative, POM] | 06/91 | c | 1 2 3 4 | |
| 86306 | N-Nitrosodiphenylamine [POM] | 09/89 | c | 1 2 4 | |
| 759739 | N-Nitroso-N-ethylurea | | c | 4 5 | |
| 60153493 | 3-(N-Nitrosomethylamino)propionitrile | 09/89 | c | 3 4 | |
| 64091914 | 4-(N-Nitrosomethylamino)-1-(3-pyridyl)-1-butanone {NNK} | 09/89 | c | 3 4 | |
| 615532 | N-Nitroso-N-methylurethane {N-Methyl-N-nitrosourethane} | | c | 3 4 | |
| 4549400 | N-Nitrosomethylvinylamine | | c | 3 4 5 | |
| 16543558 | N-Nitrosonornicotine | | c | 3 4 5 | |
| 13256229 | N-Nitrososarcosine | | c | 3 4 5 | |
| 6533002 | Norgestrel | 09/90 | | 4 | |
| 303479 | Ochratoxin A [POM] | 09/90 | c | 1 2 4 | |
| 2234131 | Octachloronaphthalene [PAH-Derivative, POM] | 06/91 | | 1 2 | 7 |
| 2646175 | Oil Orange SS [PAH-Derivative, POM] | | c | 1 2 3 4 | |
| 20816120 | Osmium tetroxide | 06/91 | | | 7 |
| 79572 | Oxytetracycline | 06/91 | | 4 | |
| 794934 | Panfuran S {Dihydroxymethylfuratrizine} | | c | 3 4 | |
| 115673 | Paramethadione | 09/90 | | 4 | |
| 52675 | Penicillamine | 06/91 | | 4 | |
| 57330 | Pentobarbital sodium | 09/90 | | 4 | |
| 63989 | Phenacemide | 09/90 | | 4 | |
| 62442 | Phenacetin | | c | 3 4 5 | |
| 94780 | Phenazopyridine hydrochloride | | c | 3 4 5 | |
| 3546109 | Phenesterin | 09/89 | c | 4 5 | |
| 59961 | Phenoxybenzamine [POM] | 09/89 | c | 1 2 4 | |



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## Substances For Which Production, Use, Or Other Presence Must Be Reported (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | Section II Add Date (Note [3]) | Section I Carcinogen (Note [4]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|
| 63923 | Phenoxybenzamine hydrochloride [POM] | 09/90 | c | 1 2 3 4 5 | |
| 122601 | Phenyl glycidyl ether | 09/90 | c | 3 4 | |
| 57410 | Phenytoin [POM] | | c | 1 2 3 4 5 | |
| 88891 | Picric acid | 06/91 | | 7 | |
| 54911 | Pipobroman | 09/90 | | 4 | |
| 18378897 | Plicamycin [PAH-Derivative, POM] | 09/90 | | 1 2 4 | |
| ≠ 1155 | Polybrominated biphenyls {PBBs} [POM] | | c | 1 2 3 4 5 | |
| 53973981 | Polygeenan | 09/89 | c | 4 | |
| 3761533 | Ponceau MX [PAH-Derivative, POM] | | c | 1 2 3 4 | |
| 3564098 | Ponceau 3R [PAH-Derivative, POM] | | c | 1 2 3 4 | |
| 366701 | Procarbazine hydrochloride | | c | 3 4 5 | |
| ≠ 1160 | Progestins | | c | 3 | |
| | including but not limited to: | | | | |
| 71589 | Medroxyprogesterone acetate | | c | 3 4 | |
| 68224 | Norethisterone | | c | 4 5 | |
| 51525 | Propylthiouracil | | c | 3 4 5 | |
| 302794 | all-trans-Retinoic acid | 09/89 | | 4 | |
| ≠ 1167 | Retinol/retinyl ≠≠≠≠ esters | 09/89 | c | 4 | |
| 36791045 | Ribavirin | 09/90 | | 4 | |
| 81072 | Saccharin | | c | 3 4 5 | |
| 94597 | Safrole | | c | 3 4 5 | |
| ≠ 1180 | Shale oils | | c | 3 4 | |
| 132274 | Sodium o-phenylphenate [POM] | | c | 1 2 3 4 | |
| 128449 | Sodium saccharin | 09/89 | c | 4 | |
| ≠ 1185 | Soots | | c | 3 4 | |
| 10048132 | Sterigmatocystin [POM] | | c | 1 2 3 4 | |
| 3810740 | Streptomycin sulfate | 06/91 | | 4 | |
| 18883664 | Streptozotocin | | c | 3 4 5 | |
| 95067 | Sulfallate | | c | 3 4 5 | |
| 54965241 | Tamoxifen citrate [POM] | 09/90 | | 1 2 4 | |
| 846504 | Temazepam [POM] | 09/90 | | 1 2 4 | |
| 5216251 | p-alpha,alpha,alpha-Tetrachlorotoluene | 09/90 | c | 4 | |
| 961115 | Tetrachlorvinphos | 06/91 | | 7 | |
| 64755 | Tetracycline hydrochloride | 06/91 | | 4 | |
| 509148 | Tetranitromethane | 09/90 | c | 4 | |
| 50351 | Thalidomide | | | 4 | |
| 139651 | 4,4'-Thiodianiline [POM] | | c | 1 2 3 4 | |
| 154427 | Thioguanine | 09/90 | | 4 | |
| 1314201 | Thorium dioxide | | c | 4 5 | |
| ≠ 1200 | Tobacco products, smokeless | | c | 3 4 | |
| 49842071 | Tobramycin sulfate | 09/90 | | 4 | |
| ≠ 1205 | alpha-chlorinated Toluenes | | c | 3 | |
| 636215 | o-Toluidine hydrochloride | | c | 4 5 | |
| 106490 | p-Toluidine | 09/90 | c | 4 | |
| 299752 | Treosulfan | | c | 3 4 | |



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## Substances For Which Production, Use, Or Other Presence Must Be Reported (cont.)

| CAS Number/ Emittent ID (Note [1]) | Substance Name (Note [2]) | Sec 313 Note 1 Add Date (Note [3]) | Sec 313 Note 1 Carcinogen (Note [4]) | Source List(s) (Note [6]) | Other Notes(s) |
|---|---|---|---|---|---|
| 28911015 | Triazolam [POM] | 09/90 | | 1 2 4 | |
| 52686 | Trichlorfon | 06/91 | | 7 | |
| 13647353 | Trilostane | 09/90 | | 4 | |
| 127480 | Trimethadione | 06/91 | | 4 | |
| 68768 | Tris(aziridinyl)-p-benzoquinone {Triaziquone} | 09/90 | c | 4 | |
| 52244 | Tris(1-aziridinyl) phosphine sulfide {Thiotepa} | | c | 3 4 5 | |
| 126727 | Tris(2,3-dibromopropyl)phosphate | 09/89 | c | 4 | |
| 62450060 | Trp-P-1 [{3-Amino-1,4-dimethyl-5H-pyrido[4,3-b]indole}] | | c | 3 4 | |
| 62450071 | Trp-P-2 [{3-Amino-1-methyl-5H-pyrido[4,3-b]indole}] | | c | 3 4 | |
| 72571 | Trypan blue [PAH-Derivative, POM] | | c | 1 2 3 4 | |
| 66751 | Uracil mustard | | c | 3 4 | |
| 26995915 | Urofollitropin | 09/90 | | 4 | |
| 99661 | Valproate | | | 4 | |
| 143679 | Vinblastine sulfate [POM] | 09/90 | | 1 2 4 | |
| 2068782 | Vincristine sulfate [POM] | 09/90 | | 1 2 4 | |
| 106876 | 4-Vinyl-1-cyclohexene diepoxide {Vinyl cyclohexene dioxide} | 09/90 | c | 4 | |
| 81812 | Warfarin [POM] | | | 1 2 4 | |
| 87627 | 2,6-Xylidene | 06/91 | | 4 | |
| 12122677 | Zineb | 09/90 | c | 4 | |



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NOTES TO APPENDIX A:

| Note | Text of Note |
|---|---|
| [ 1] | Emittent ID (the emittent identification number) is the Chemical Abstract Service (CAS) number where available, or an ARB-assigned 4-digit emittent ID code.<br><br>A dash ("-") is shown for the Emittent ID for substances which are alphabetized under a group header or synonym elsewhere on the list. Refer to the cross reference indicated in parenthesis, "( )".<br><br>A double dash ("- -") is shown for the Emittent ID to indicate that the entry is a non-reportable group header for the substances immediately following it.<br><br>An asterisk ("*") is shown for the Emittent ID to indicate that the emissions of unspecified metal compounds shall be reported as the metal atom equivalent. See Note [7].<br><br>A pound sign ("#") is shown for the Emittent ID to indicate that the individual, component listed substances must be reported for this mixture or group. |
| [ 2] | Individual substances listed under a group heading must be reported individually. Other, unspecified substances in the group must be summed and reported using the emittent ID of the group heading.<br><br>The square bracket designation, "[ ]", indicates that the substance is a component of the chemical group heading(s) within the brackets.<br><br>The braces designation, "{ }" ~~/ THIS PARENTHESIS~~, indicates a synonym for the substance listed. |
| ~~[ 3]~~ | ~~The date the Board approved addition of the substance to the original list.~~ The original list was approved by the Board in July 1988. |
| ~~[ 4]~~ | ~~The letter "c" PRECEDING THE PARENTHESIS~~ indicates that for purposes of this section the substance shall be treated as a human carcinogen or potential human carcinogen. |
| [ 5] | Applicable degree of accuracy (in lbs/year except where noted). Radionuclides must be reported in Curie units, and the accuracy must be considered accordingly. Refer to Section 93334. |
| [ 6] | Substances are required to be included on the AB 2588 list based on the following lists cited in Health & Safety Code Section 44321:<br><br>1=California Air Resources Board; 2=Environmental Protection Agency;<br><br>3=International Agency for Research on Cancer; 4=Governor's List of Carcinogens and Reproductive Toxicants (HSC Section 25249.8);<br><br>5=National Toxicology Program; 6=Hazard Evaluation System and Information Service;<br><br>7=Added pursuant to HSC Section 44321 (f).<br><br>Substances from lists 1, 2, 6, or 7 may not be removed from the AB 2588 list. Refer to H&SC Section 44321. |



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| Note | Text of Note |
|---|---|
| [ 7] | Emissions of unspecified metal compounds shall be reported as the amount of the metal atom equivalent, using the metal emittent identification number for the metal itself (or the emittent identification number indicated on the table, such as for reporting inorganic versus other-than-inorganic arsenic compounds).<br><br>For unspecified metal compounds which contain two or more listed metals (e.g., zinc chromate), each component metal shall be reported as the amount of the appropriate metal atom equivalent (i.e., the zinc portion of the weight as zinc equivalent and the chromate portion as hexavalent chromium equivalent).<br><br>For specific, individually listed metal compounds (e.g., Lead chromate), emissions shall be reported for the compound (as pounds of whole compound), using the emittent identification number for that compound. |
| [ 8] | Compounds of the form "X-CN", where formal dissociation can occur. Report as the amount of Cyanide equivalent in the compound using an emittent identification code of 1073. |
| [ 9] | Emissions of these mixtures shall be reported as emissions of total particulate matter and total organic gas, using the following emittent identification numbers:<br>9901 Diesel exhaust, particulate matter — 9910 Gasoline exhaust, particulate matter<br>9902 Diesel exhaust, total organic gas — 9911 Gasoline exhaust, total organic gas<br><br>Individually listed substances from diesel and gasoline exhaust must also be reported. |
| [10] | The emittent identification number 1105 has been discontinued for all facilities reporting for the first time and for all biennial updates. Use the listed replacement emittent identification codes 1103 and 1104. |
| [11] | Emissions of the individual, component listed substances must be reported in addition to the total gasoline vapors emissions. |
| [12] | These lead compounds are listed here so that the inorganic lead fraction will be quantified and reported if these individual compounds cannot be quantified. |
| [13] | #PAH: (Polycyclic Aromatic Hydrocarbon) – An organic compound consisting of a fused ring structure containing at least two (2) benzene rings, and which may also contain additional fused rings not restricted exclusively to hexagonal rings. The structure does not include any heteroatoms or substituent groups. The structure includes only carbon and hydrogen.<br><br>PAHs are a subgroup of POM and have a boiling point of greater than or equal to 100°C. |
| [14] | #PAH-DERIVATIVE: (Polycyclic Aromatic Hydrocarbon Derivative) – An organic compound consisting of a fused ring structure containing at least two (2) benzene rings, and which may also contain additional fused rings not restricted exclusively to hexagonal rings. The fused ring structure does not contain heteroatoms. The structure does contain one or more substituent groups.<br><br>PAH-Derivatives are a subgroup of POM and have a boiling point of greater than or equal to 100°C. |
| [15] | #POM: (Polycyclic Organic Matter) – Includes organic compounds with more than one benzene ring, and which have a boiling point of greater than or equal to 100°C. |

| Note | Text of Note |
|---|---|
| [16] | Radionuclides and other radioactive substances shall be reported in units of Curies per year (for annual average emissions) and in units of milliCuries per hour (for maximum hourly emissions). |
| [17] | Emissions of Vanadium (fume or dust) shall be reported as the amount of the vanadium atom equivalent, using the identification number 7440622. |
| [18] | The emittent identification number 1001 has been replaced with the CAS number 26148685. |

[#] [illegible]

# [illegible] CAS [illegible] [illegible]

## [illegible]

NOTE THAT REPORTING OF A SUBSTANCE WHICH IS A SUBSTANCE GROUP HEADING DOES NOT SUPERCEDE THE REPORTING OF THE INDIVIDUAL SUBSTANCES WHICH ARE LISTED IN APPENDIX A UNDER THE GROUP HEADING.

Appendix B
**Instructions for Completing Reporting Forms**

The following instructions are for completing core reporting forms, and the S-UP form, and the Biennial Summary Form supplemental process parameter forms as explained in Article 4:

The operator of each facility subject to the regulation shall complete one **Facility Description Form** (FAC Form), an entry on a **Stack Data Form** (STK Form) for each stack or vent from which a listed substance may be released, an entry on a **Device Description and Device-Stack Relations Form** (DEV Form) for each device associated with a release of a listed substance, and a **Process and Emittents Data Form** (PRO Form) for each emitting process within each device. A Process and Emittents Data Form and an entry on a Device Description and Device-Stack Relations Form shall be completed for each general location of fugitive emissions.

The operator shall also complete any supplemental process parameter form(s) required in Article 4/ **Form S-UP** shall be completed and submitted with the inventory report for all substances set forth in Appendix A-II which are 1) manufactured or produced as the result of any activity or process at the facility; 2) used as ingredients in any activity or process at the facility; or 3) otherwise associated with an activity or process, including but not limited to presence in a formulation operation or presence as a by-product or a reaction intermediate which appears temporarily during processing.

**Form S-UP** shall also be completed for all substances set forth in Appendix A-I which are used, manufactured, formulated, or released but for which emissions are below the applicable limit for degree of accuracy required by Section 93334, unless a numeric estimate of such emissions is reported on a Process and Emittents Data Form for the appropriate emitting process. See the instructions for the Process and Emittents Data Form (Item (30)) for information on using the degree of accuracy values for reporting purposes.

**Form S-UP** shall also be completed for all substances set forth in Appendix A-I and Appendix A-II which are used, manufactured, formulated, or released from any facility subject to the requirements set forth in Section 93308(c).

The facility operator shall also complete and submit to the district a Biennial Summary Form (BIS Form) as required to comply with the applicable biennial update requirements specified in Sections 93348-93355.

The district may, but need not, provide to the facility operator, forms which are partially filled out. The district may, but need not, provide to the facility operator, the stack and device information that presently exists for the criteria pollutant inventory. If not known or provided, consult the district. If any of the provided information needs to

be updated or corrected, the facility operator shall delete, add, or change the data according to the instructions provided for each form.

The following are specific instructions for completing each required core reporting form:

Grey shading and "Office Use Only" Removed

INVENTORY YEAR 19__

# AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT
## FACILITY DESCRIPTION

FORM **FAC**

**FACILITY DATA**

COMPANY NAME

ADDRESS

CITY

ZIP CODE

COUNTY ID:

FACILITY ID:

ACTION CODE:

DISTRICT:

AIR BASIN CODE:

CONTACT PERSON

TELEPHONE

FACILITY SIC:

NUMBER OF EMPLOYEES:

CITY CODE (OPTIONAL)

AQCR (OPTIONAL)

SUBCOUNTY ID (OPT.)

**MAILING ADDRESS DATA**

COMPANY NAME

ADDRESS

CITY

STATE:

ZIP CODE

ATTENTION

FACD1 (OPTIONAL)

FACD2 (OPTIONAL)

UTM ZONE

UTM EAST

UTM NORTH

Changes shown in circles.

NAME:_____ DATE:_____

| EMISSION YEAR 19__ | AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT FACILITY DESCRIPTION | FORM FAC |
|---|---|---|

OLD FORM DELETED
See new version of form

**FACILITY DATA**

COMPANY NAME

ADDRESS

CITY

ZIP CODE

CONTACT PERSON

TELEPHONE

FACILITY SIC

NUMBER OF EMPLOYEES

**MAILING ADDRESS DATA**

COMPANY NAME

ADDRESS

CITY

STATE

ZIP CODE

ATTENTION

**FOR OFFICE USE ONLY**

COUNTY ID:

FACILITY ID:

ACTION CODE:

DISTRICT:

AIR BASIN CODE:

CITY CODE (OPTIONAL)

AQCR (OPTIONAL)

SUBCOUNTY ID

FACD1 (OPTIONAL)

FACD2 (OPTIONAL)

UTM ZONE

UTM EAST

UTM NORTH

ARB:FAC:080289

NAME:_____ DATE:_____

## Facility Description Form (FAC Form)

*Do not mark in the shaded areas, which are for office use only.*

Fill in the inventory year for which you are reporting in the space provided at the top of the form.

(1) County ID, District, and Air Basin Codes: Using values provided in Table B-I, enter the appropriate County, District, and Air Basin codes that correspond to the facility location.

(2) Facility ID: Enter the district-assigned facility identification code. If the Facility ID is unknown, contract the district.

(3) Action Code: Enter the appropriate Action Code: A, C, or D.
'A' indicates Add--This is a new facility that has not previously reported. Add the facility to the database.
'C' indicates Change--Previously reported data on the form have been changed.
'D' indicates Delete--The form is to be deleted. CAUTION!! Deletion of a FAC form will cause ALL data for the facility to be deleted. This should only be used if the facility is no longer subject to reporting requirements.

(4) Company Name: The company name and the plant, station, or subsidiary company or division name, if necessary to clearly identify the establishment.

(5) Address (location): Street address where facility is located.

(6) City: City or nearby city or town where facility is located.

(7) ZIP: ZIP code for the facility location.

(8) Contact Person: The person responsible for the information on these forms.

(9) Telephone: Area code and telephone number for the contact person.

(10) Facility SIC: The Standard Industrial Classification (SIC) number best describing the entire plant or facility. The SIC should be a full four-digit code. Do not use abbreviated two or three digit codes with trailing zeroes, such as "2600" or "2620". If not known, consult the air pollution control district.

(11) Number of Employees: Total number of employees working at the facility, including part-time and intermittent.

(12) Mailing Address: Name, address, city, state, zip code, and contact person (Attention) where correspondence regarding the facility should be mailed. If this information is the same as the facility address, write "same as above" diagonally across this section.

(13) UTM Zone, UTM East, UTM North: These codes are used to describe the facility location in Universal Transverse Mercator (UTM) coordinates. Enter the coordinates which most closely correspond to the facility location. For large facilities or if facility coordinates are unknown, contact the district, who will provide guidance on assigning facility coordinates.

(14) Optional Fields: The fields CITY CODE, AQCR, SUBCOUNTY ID, FACD1 and FACD2 are optional fields for district use and do not need to be filled in by the facility.

Grey shading and "Office Use Only" Removed

INVENTORY YEAR 19__

# AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT
## STACK DATA

FORM **STK**

AIR BASIN: | | COUNTY ID: | | FACILITY ID: | | | | | | |

DO NOT DELETE STACK IF IT SERVES OTHER DEVICES. SEE INSTRUCTIONS

| DESC CODE | STACK/VENT CATEGORY | REQUIRED INFORMATION |
|---|---|---|
| | **AMBIENT TEMP & LOW-VELOCITY EXHAUST** (T W/IN 25 F OF AMBIENT & V LT 750 FPM) | |
| 1 | RELEASE POINT(RP) AT GROUND-LEVEL | STACK ID & CODE ONLY |
| 2 | RELEASE FROM BLDG HVAC ONLY | STACK ID, CODE, & STACK HEIGHT |
| 3 | RP W/IN (2.5 X HB) ABOVE GROUND AND W/IN (5 X HB) SIDEWAYS TO NEAREST BLDG | STACK ID, CODE & STACK HEIGHT |
| 4 | OTHER STACK/VENT (LOW T,V) | STACK ID, CODE & STACK HEIGHT |
| | **OTHER TEMP & FLOW CONDITIONS** | |
| 5 | RP W/IN (2.5 X HB) ABOVE GROUND AND W/IN (5 X HB) SIDEWAYS TO NEAREST BLDG | ALL STACK INFORMATION |
| 6 | OTHER STACK/VENT (OTHER T,V) | ALL STACK INFORMATION |

WHERE HB = HEIGHT OF NEAREST BUILDING AND HVAC = HEATING, VENTILATING AND AIR CONDITIONING

| ACTION CODE | STACK ID | DESC CODE | HEIGHT ABOVE GROUND (FEET) | DIAMETER (FEET) | ********* EXHAUST ********* GAS TEMP (F) | GAS FLOW RATE (CFM) | GAS VELOCITY (FPM) | UTM EAST (KILOMETER) | UTM NORTH (KILOMETER) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Changes shown in circles.

| EMISSION YEAR 19__ | AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT<br>STACK DATA | FORM **STK** |
|---|---|---|

FOR OFFICE USE ONLY  COUNTY ID:  FACILITY ID:

DO NOT DELETE STACK IF IT SERVES OTHER DEVICES. SEE INSTRUCTIONS

| DESC CODE | STACK/VENT CATEGORY | REQUIRED INFORMATION |
|---|---|---|
| | **AMBIENT TEMP & LOW-VELOCITY EXHAUST** (T W/IN 25 F OF AMBIENT & V LT 750 FPM) | |
| 1 | RELEASE POINT(RP) AT GROUND LEVEL | STACK ID & CODE ONLY |
| 2 | RELEASE FROM BLDG HVAC ONLY | STACK ID, CODE, & STACK HEIGHT |
| 3 | RP W/IN (2.5 X HB) ABOVE GROUND AND W/IN (5 X HB) SIDEWAYS TO NEAREST BLDG | STACK ID, CODE & STACK HEIGHT |
| 4 | OTHER STACK/VENT (LOW T,V) | STACK ID, CODE & STACK HEIGHT |
| | **OTHER TEMP & FLOW CONDITIONS** | |
| 5 | RP W/IN (2.5 X HB) ABOVE GROUND AND W/IN (5 X HB) SIDEWAYS TO NEAREST BLDG | ALL STACK INFORMATION |
| 6 | OTHER STACK/VENT (OTHER T,V) | ALL STACK INFORMATION |

WHERE HB = HEIGHT OF NEAREST BUILDING  AND HVAC = HEATING, VENTILATING AND AIR CONDITIONING

OFC USE

********** EXHAUST **********

| ACTION CODE | STACK ID | DESC CODE | HEIGHT ABOVE GROUND (FEET) | DIAMETER (FEET) | GAS TEMP (F) | GAS FLOW RATE (CFM) | GAS VELOCITY (FPM) | *OFC USE ONLY* UTM EAST (KILOMETER) | UTM NORTH (KILOMETER) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

OLD FORM DELETED
See new version of form

NAME _____ DATE _____



ARB/STK/890323

## Stack Data Form (STK Form)

This form can be copied as many times as needed. *If more space is needed, copy the blank form before completing the original.*

*Do not mark in the shaded areas, which are for office use only.*

Fill in the inventory year for which you are reporting in the space provided at the top of the form.

The district may, but need not, provide information on the facility's Stack ID's and corresponding parameters that exist in the criteria pollutant inventory. If not known or provided, consult the district. *If you are adding stack data to the information provided, or if no information exists on your form, write "add" above the new stack ID and fill out all corresponding information. If you are deleting stack data from the information provided to you, write "delete" along with a brief explanation of the reason for deleting the stack data) over the stack ID you want to eliminate, and cross out all corresponding data for the stack. If you are deleting a stack because a device it serves is no longer in use, make sure the stack does not serve other devices. If you wish to change the stack data for a specific stack ID, write "change" over the stack ID, cross out the incorrect data and write in the correct data.*

Report on the Stack Data Form, with a unique Stack ID number, every stack, vent, ducted building exhaust site, and other site of exhaust release of a listed substance. "Exhaust" shall refer to a release where the listed substance is entrained in air and where the direction of the release is determined or influenced by a duct, louver, or similar construction. Do not report on the Stack Data Form a non-ducted, non-directional release. Instead, specify "fugitive", if applicable, in the process description field on the Process and Emittents Data Form.

(1) Air Basin and County ID: Using values provided in Table B-I, enter the Air Basin and County ID codes that correspond to the facility location.

(2) Facility ID: Enter the district-assigned facility identification code. If the Facility ID is unknown, contact the district.

(3) Action Code: Enter the appropriate Action Code: A, C, or D.
'A' indicates Add--A new stack ID and the corresponding stack parameters have been added.
'C' indicates Change--Previously reported data for the stack have been changed.
'D' indicates Delete--The stack and its associated data are to be deleted. If deleting a stack, provided a brief explanation for the deletion. If a stack is being deleted because a device it serves is no longer in use, ensure the stack does not serve other devices.

(14) Stack ID: The Stack ID is a key numbering field used to link the information from these forms among stacks and to data in existing inventories. If a facility is adding a stack, a new stack ID needs to be created by the operator consistent with the existing number convention.

(25) Description of Stack or Vent (Desc. Code): Select the listed code number of the category which best describes the nature of the release point. To determine if codes 3 or 5 are appropriate, first determine the quantity HB, which is the height of the building closest to the release point. If there is no building within 500 horizontal feet of the release point, codes 3 and 5 do not apply. If there is a building within 500 horizontal feet of the release point, determine whether the actual point of release is BOTH less than a vertical distance from the ~~nearest building~~ ground of two-and-one-half times the value of HB AND less than a horizontal distance from the nearest building of five times the value of HB.

For stacks or vents in category 1, only the stack ID number and stack description code number are required. Other stack data are optional. For stacks or vents in categories 2, 3 or 4 described on the form, the stack height is also required. See item (6) below. For stacks or vents in categories 5 or 6 described on the form, all stack parameters are required. See items (6) through (10) below.

(36) Stack Height Above Ground: The vertical distance in feet, from ground ~~to the point of emission.~~

(47) Inside Diameter: Inside diameter of the stack in feet. If the stack is not round, list the equivalent diameter (diameter of a circle of the same cross-sectional area as the stack).

(58) Exhaust Gas Temperature: Temperature, estimated to the nearest 50 degrees Fahrenheit, of the gas coming out of the stack under normal operating conditions.

(69) Exhaust Gas Flow Rate: The actual flow rate, measured in cubic feet per minute, of the gas exiting the stack at the reported gas temperature and atmospheric pressure. Ideally, the flow rate represents a measured value. If no measured data are available, a design rate may be used. Design rate or other available data may be expressed in standard cubic feet per minute (scfm) or any other reference cubic feet per minute (rcfm). The rate should be converted to actual cubic feet per minute (acfm) as follows:

$$\text{flow rate (acfm)} = \text{flow rate (rcfm)} \times \frac{Ta + 460}{Tr + 460}$$

where: Ta = actual exhaust gas temperature in degrees F, and
Tr = temperature at reference conditions (for standard conditions these would be one atmosphere pressure and 70 degree F)

(710) Exhaust Gas velocity: Exhaust velocity in feet per minute corresponding to exhaust flow rate. This field is optional if Exhaust Gas Flow Rate has been completed.

(811) Initial and date the form in the space provided at the bottom.

(12) UTM East, UTM North: These codes are used to describe the stack location in UTM (Universal Transverse Mercator) coordinates. Enter the coordinates which most closely correspond to the stack location. If the coordinates are not known, contact the district, who will provide guidance on assigning stack coordinates.

Grey shading and "Office Use Only" Removed

INVENTORY YEAR 19__

# AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT
## DEVICE DESCRIPTION AND DEVICE-STACK RELATIONS

FORM **DEV**

AIR BASIN: COUNTY ID:

FACILITY ID

*** ITEMS BELOW ARE OPTIONAL ***

| ACTION CODE | DEVICE ID | DEVICE NAME | NBR OF DEV. | STACK ID | PERMIT ID (IF AVAILABLE) | DEVD1 | DEVD2 | DEVICE GROUP |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Changes shown in circles.

NAME_____ DATE_____

EMISSION YEAR 19__

# AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT
## DEVICE DESCRIPTION AND DEVICE-STACK RELATIONS

FORM **DEV**

FOR OFFICE USE ONLY

COUNTY ID

FACILITY ID

OFC USE

ACTION CODE | DEVICE ID | DEVICE NAME | NBR OF DEV.

STACK ID | PERMIT ID (IF AVAILABLE)

****** OFFICE USE ONLY ******
**** EACH ITEM IS OPTIONAL ***

DEVD1 | DEVICE GROUP

DEVD2

OLD FORM DELETED
See new version of form

NAME _____ DATE _____



ARB/DEV/240389

Device Description and Device-Stack Relations Form (DEV Form)

This form can be copied as many times as needed. *If you need more space, copy the blank form before completing the original.*

*Do not mark in the shaded areas which are for office use only.*

Fill in the inventory year for which you are reporting in the space provided at the top of the form.

The district may, but need not, provide information on the facility's device ID's and corresponding parameters that exists in the criteria pollutant inventory. If not known or provided, consult the district. *If you are adding device data to the information provided or if no information exists on this form, write "add" above the new device ID and fill in all corresponding data. To delete a device and the corresponding parameter data from the information provided to you, write "delete" along with a brief explanation of the reason for deleting the device data above the device number you want to eliminate, and cross out all corresponding data. To change the device data for a specific device ID, write "change" above the device ID, cross out the incorrect data and write in the correct data.*

(1) Air Basin and County ID: Using values provided in Table B-I, enter the Air Basin and County ID codes that correspond to the facility location.

(2) Facility ID: Enter the district assigned facility identification code. If the Facility ID is unknown, contact the district.

(3) Action Code: Enter the appropriate Action Code: A, C, or D.
'A' indicates Add--A new device has been added to the facility. Include corresponding device parameters.
'C' indicates Change--Previously reported data for an existing device have been changed.
'D' indicates Delete--The device and its associated data are to be deleted. CAUTION!! Deletion of a device will cause deletion of ALL process and emissions data (PRO Form data) associated with the device.

(14) Device ID: The Device ID is a key numbering field used to link the information from these forms among devices and to data in existing inventories. To add a device, create a new device ID consistent with the existing numbering convention.

(25) Device Name: A common name used to identify the equipment or device.

(36) Number of Devices: This is the number of similar small devices that are aggregated together and considered for reporting purposes as one device. If this field is left blank it is assumed that there is only one device represented by the device ID.

(47) Stack ID: The number of the stack associated with the device. If you are deleting a device and a stack which serves that device only, then it is appropriate to delete the stack ID from the stack data form, but DO NOT DELETE THE STACK if it serves any other reported device at the facility. Also, if a single device is served by more than one stack, enter the individual stack ID numbers on the appropriate PRO forms, rather than on the DEV form (see the PRO form stack ID instructions for more information).

(58) Permit ID: The district permit number for the device.

(69) Initial and date the form in the space provided at the bottom.

Grey shading and "Office Use Only" Removed

INVENTORY YEAR 19__

# AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT
## PROCESS AND EMITTENTS DATA

FORM **PRO** SIDE A

PROCESS DESCRIPTION C | SCC NO | COUNTY ID: | AIR BASIN

ACTION CODE | PROD1 (OPTIONAL) | PROD2 (OPTIONAL) | FACILITY ID:

**STOP** - FILL OUT ANY SUPPLEMENTAL PROCESS FORM(S) FOR THIS PROCESS FIRST. THEN FILL OUT THIS PAGE, SUBMITTING ONE FOR EACH EMITTING PROCESS IN YOUR FACILITY.

**SECTION 1 PROCESS DATA**

DEVICE I.D. | SIC | CONFIDENTIAL (Y/N) IF Y CHECK SMALL BOXES AS APPROPRIATE

PROCESS EQUIPMENT DESCRIPTION C | FUEL TYPE /OTHER PROCESS INFO C | YR. OF EST./PRO

**NOTE** USE 1 SPACE FOR EACH DECIMAL POINT

STACK ID

TOTAL YEARLY PROCESS RATE (UNITS/YR) C | MAXIMUM HOURLY PROCESS RATE (UNITS/HR) C | PROCESS UNITS P|T C | HRS/ DAY C | DAYS/ WEEK C | WKS/ YEAR C

RELATIVE MONTHLY ACTIVITY (%) C

| JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |

**SECTION 2** — EMITTENT DATA — EMISSIONS

SUBSTANCE NAME: _____

ACTION CODE | YR. OF EST./EMS | EMITTENT ID | EST METH C | ACTUAL EMISSIONS FACTOR(LBS/UNIT) C | ANNUAL AVERAGE EMISSIONS (LBS/YR)

ALLOWABLE EMIS LBS/YR(OPTIONAL) | *CONTROL EQPT CODES* PRIMARY C | SECONDARY C | OVERALL CONTROL EFF(%) C | FULL/ PART C | HOURLY MAX EMISSIONS (LBS/HOUR)

SUBSTANCE NAME: _____

ACTION CODE | YR. OF EST./EMS | EMITTENT ID | EST METH C | ACTUAL EMISSIONS FACTOR(LBS/UNIT) C | ANNUAL AVERAGE EMISSIONS (LBS/YR)

ALLOWABLE EMIS LBS/YR(OPTIONAL) | *CONTROL EQPT CODES* PRIMARY C | SECONDARY C | OVERALL CONTROL EFF(%) C | FULL/ PART C | HOURLY MAX EMISSIONS (LBS/HOUR)

Changes shown in circles.

Grey shading and "Office Use Only" Removed

INVENTORY YEAR 19__

# AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT
## PROCESS AND EMITTENTS DATA
## (ADDITIONAL EMITTENTS)

FORM **PRO** SIDE B

page

CO: _____
FACID: _____
DEVICE: _____
SCC: _____

EMITTENT DATA | EMISSIONS

SUBSTANCE NAME: _____

| ACTION CODE | YR. OF EST./EMS | EMITTENT ID | EST METH C | ACTUAL EMISSIONS FACTOR (LBS/UNIT) C | ANNUAL AVERAGE EMISSIONS (LBS/YR) |
|---|---|---|---|---|---|
| | | | | | |

| ALLOWABLE EMIS LBS/YR (OPTIONAL) | *CONTROL EQPT CODES* PRIMARY C | SECONDARY C | OVERALL CONTROL EFF(%) C | FULL/ PART C | HOURLY MAX EMISSIONS (LBS/HOUR) |
|---|---|---|---|---|---|
| | | | | | |

SUBSTANCE NAME: _____

| ACTION CODE | YR. OF EST./EMS | EMITTENT ID | EST METH C | ACTUAL EMISSIONS FACTOR (LBS/UNIT) C | ANNUAL AVERAGE EMISSIONS (LBS/YR) |
|---|---|---|---|---|---|
| | | | | | |

| ALLOWABLE EMIS LBS/YR (OPTIONAL) | *CONTROL EQPT CODES* PRIMARY C | SECONDARY C | OVERALL CONTROL EFF(%) C | FULL/ PART C | HOURLY MAX EMISSIONS (LBS/HOUR) |
|---|---|---|---|---|---|
| | | | | | |

SUBSTANCE NAME: _____

| ACTION CODE | YR. OF EST./EMS | EMITTENT ID | EST METH C | ACTUAL EMISSIONS FACTOR(LBS/UNIT) C | ANNUAL AVERAGE EMISSIONS (LBS/YR) |
|---|---|---|---|---|---|
| | | | | | |

| ALLOWABLE EMIS LBS/YR (OPTIONAL) | *CONTROL EQPT CODES* PRIMARY C | SECONDARY C | OVERALL CONTROL EFF(%) C | FULL/ PART C | HOURLY MAX EMISSIONS (LBS/HOUR) |
|---|---|---|---|---|---|
| | | | | | |

SUBSTANCE NAME: _____

| ACTION CODE | YR. OF EST./EMS | EMITTENT ID | EST METH C | ACTUAL EMISSIONS FACTOR (LBS/UNIT) C | ANNUAL AVERAGE EMISSIONS (LBS/YR) |
|---|---|---|---|---|---|
| | | | | | |

| ALLOWABLE EMIS LBS/YR (OPTIONAL) | *CONTROL EQPT CODES* PRIMARY C | SECONDARY C | OVERALL CONTROL EFF(%) C | FULL/ PART C | HOURLY MAX EMISSIONS (LBS/HOUR) |
|---|---|---|---|---|---|
| | | | | | |

SUBSTANCE NAME: _____

| ACTION CODE | YR. OF EST./EMS | EMITTENT ID | EST METH C | ACTUAL EMISSIONS FACTOR (LBS/UNIT) C | ANNUAL AVERAGE EMISSIONS (LBS/YR) |
|---|---|---|---|---|---|
| | | | | | |

| ALLOWABLE EMIS LBS/YR (OPTIONAL) | *CONTROL EQPT CODES* PRIMARY C | SECONDARY C | OVERALL CONTROL EFF(%) C | FULL/ PART C | HOURLY MAX EMISSIONS (LBS/HOUR) |
|---|---|---|---|---|---|
| | | | | | |

Changes shown in circles.

NAME _____ DATE _____



ARB/PRO8/930312

EMISSION YEAR 19__

# AIR TOXICS EMISSION DATA SYSTEM REVIEW AND UPDATE REPORT
## PROCESS AND EMITTENTS DATA

FORM **PRO** SIDE A

FOR OFFICE USE ONLY

PROCESS DESCRIPTION C | SCC NO | COUNTY ID: | AIR BASIN

ACTION CODE | PROD1 (OPTIONAL) | PROD2 (OPTIONAL) | FACILITY ID:

**STOP** FILL OUT ANY SUPPLEMENTAL PROCESS FORM(S) FOR THIS PROCESS FIRST. THEN FILL OUT THIS PAGE, SUBMITTING ONE FOR EACH EMITTING PROCESS IN YOUR FACILITY.

**SECTION 1**
**PROCESS DATA**

DEVICE I.D. | SIC | CONFIDENTIAL (Y/N) IF Y CHECK SMALL BOXES AS APPROPRIATE

PROCESS EQUIPMENT DESCRIPTION C | FUEL TYPE /OTHER PROCESS INFO C

**NOTE** USE 1 SPACE FOR EACH DECIMAL POINT

TOTAL YEARLY PROCESS RATE (UNITS/YR) C | MAXIMUM HOURLY PROCESS RATE (UNITS/HR) C | PROCESS UNITS C (P T) | HRS/ DAY C | DAYS/ WEEK C | WKS/ YEAR C

RELATIVE MONTHLY ACTIVITY (%) C

| JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |

OFFICE USE ONLY

**SECTION 2**

| EMITTENT DATA | | | | EMISSIONS |
|---|---|---|---|---|
| EMITTENT ID | EST METH C | ACTUAL EMISSIONS FACTOR(LBS/UNIT) C | | ANNUAL AVERAGE EMISSIONS (LBS/YR) |
| ACTION CODE | *CONTROL EQPT CODES* PRIMARY C | SECONDARY C | OVERALL CONTROL EFF(%) C | FULL/ PART C | HOURLY MAX EMISSIONS (LBS/HOUR) |
| ALLOWABLE EMIS LBS/YR(OPTIONAL) | | | | | |
| EMITTENT ID | EST METH C | ACTUAL EMISSIONS FACTOR(LBS/UNIT) C | | ANNUAL AVERAGE EMISSIONS (LBS/YR) |
| ACTION CODE | *CONTROL EQPT CODES* PRIMARY C | SECONDARY C | OVERALL CONTROL EFF(%) C | FULL/ PART C | HOURLY MAX EMISSIONS (LBS/HOUR) |
| ALLOWABLE EMIS LBS/YR(OPTIONAL) | | | | | |

OLD FORM DELETED See new version of form

NAME _____ DATE _____



ARB.PRO.890327

EMISSION YEAR 19__

# AIR TOXICS EMISSION DATA SYSTEM REVIEW AND UPDATE REPORT
## PROCESS AND EMITTENTS DATA
## (ADDITIONAL EMITTENTS)

FORM PRO SIDE B

OFFICE USE ONLY
CO. _____
FACID _____

DEVICE ID

EMITTENT DATA | EMISSIONS

ACTION CODE

EMITTENT ID | EST METH C | ACTUAL EMISSIONS FACTOR (LBS/UNIT) C | ANNUAL AVERAGE EMISSIONS (LBS/YR)

ALLOWABLE EMIS LBS/YR (OPTIONAL)

*CONTROL EQPT CODES* PRIMARY C | SECONDARY C | OVERALL CONTROL EFF(%) C | FULL/ PART C | HOURLY MAX EMISSIONS (LBS/HOUR)

ACTION CODE

EMITTENT ID | EST METH C | ACTUAL EMISSIONS FACTOR (LBS/UNIT) C | ANNUAL AVERAGE EMISSIONS (LBS/YR)

ALLOWABLE EMIS LBS/YR (OPTIONAL)

*CONTROL EQPT CODES* PRIMARY C | SECONDARY C | OVERALL CONTROL EFF(%) C | FULL/ PART C | HOURLY MAX EMISSIONS (LBS/HOUR)

ACTION CODE

EMITTENT ID | EST METH C | ACTUAL EMISSIONS FACTOR(LBS/UNIT) C | ANNUAL AVERAGE EMISSIONS (LBS/YR)

ALLOWABLE EMIS LBS/YR (OPTIONAL)

*CONTROL EQPT CODES* PRIMARY C | SECONDARY C | OVERALL CONTROL EFF(%) C | FULL/ PART C | HOURLY MAX EMISSIONS (LBS/HOUR)

ACTION CODE

EMITTENT ID | EST METH C | ACTUAL EMISSIONS FACTOR (LBS/UNIT) C | ANNUAL AVERAGE EMISSIONS (LBS/YR)

ALLOWABLE EMIS LBS/YR (OPTIONAL)

*CONTROL EQPT CODES* PRIMARY C | SECONDARY C | OVERALL CONTROL EFF(%) C | FULL/ PART C | HOURLY MAX EMISSIONS (LBS/HOUR)

ACTION CODE

EMITTENT ID | EST METH C | ACTUAL EMISSIONS FACTOR (LBS/UNIT) C | ANNUAL AVERAGE EMISSIONS (LBS/YR)

ALLOWABLE EMIS LBS/YR (OPTIONAL)

*CONTROL EQPT CODES* PRIMARY C | SECONDARY C | OVERALL CONTROL EFF(%) C | FULL/ PART C | HOURLY MAX EMISSIONS (LBS/HOUR)

OLD FORM DELETED
See new version of form

NAME _____ DATE _____



ARB PRCB-8903176

## Process and Emittents Data Form (PRO Form)

*Before completing this form, fill out any supplemental process form(s) for the emitting process first. Then f*Fill out the Process and Emittents Data Form, submitting one for each emitting process in your facility. If more space is needed to report emittent data for additional substances from the process, use Side B of the form. Fill out Side A of the PRO Form only once per process. Copy the blank original as needed.

*Do not mark in the shaded areas, which are for office use only.*

Fill in the inventory year for which you are reporting in the space provided at the top of the form.

**Process Data**

The district may, but need not, provide information on the facility's process and corresponding emittent data that exists in the criteria pollutant inventory. If not known or provided, consult the district. *If a process no longer exists at your facility, write 'delete' at the top of the form (under the shaded area) and cross out all invalid process and emittent data. To delete specific items, write 'delete' (along with a brief explanation of the reason for deleting the information) over the field you wish to eliminate, and cross it out. If you are deleting an emittent ID, be sure to cross out all corresponding parameter data. To change any of the information provided, write 'change' over the incorrect data and write in the correct data. To add a pollutant to a process, write 'add' above the new emittent ID, and fill in the corresponding parameter data.*

(1) Process Description: Enter a short description of the process.

(2) SCC Number: Enter the SCC (Source Classification Code) which most closely corresponds to the process. Contact the district if assistance is needed in assigning codes.

(3) County ID and Air Basin Codes: Using values provided in Table B-I, enter the appropriate County and Air Basin codes that correspond to the facility location.

(4) Facility ID: Enter the district assigned facility identification code. If the Facility ID is unknown, contact the district.

(5) Action Code/PRO: Enter the appropriate Action Code: A, C, or D. The Process Action Code should only be used for information reported on the top section of the PRO Form.
'A' indicates Add--A new process has been added to the facility. Include all corresponding data on a PRO form.
'C' indicates Change--Previously reported process data have been changed.

'D' indicates Delete--The process and its associated data are to be deleted. CAUTION!! Deletion of a process will cause deletion of ALL process and emissions data (PRO Form data) associated with the process.

(16) Device ID: The number of the device associated with the process. This device ID should be included on the Device Description and Device-Stack Relations Form.

(17) SIC: The Standard Industrial Classification number best describing the industrial activity associated with the process. If unknown, consult the district. The SIC data field has been added to the process data to describe activity at a portion of the facility when it is not the same as that of the overall facility activity. The SIC that is reported should be a full four-digit code. Do not use abbreviated two or three digit codes with trailing zeros such as "2600" or "2620".

(18) Trade secret data: Indicate if any of the data items required on the facility diagram and designated on the facility diagram as instructed under Article 4 are trade secrets by placing a "Y" in the confidential box and a check mark in the smaller box labelled with a "C" to the right of each data item or group of items on the reporting form.

If there has been a request for the release of information to the public which has been designated as trade secret by the facility operator, additional codes are used to designate trade secret data. The following codes should be inserted as appropriate into the small boxes labelled with a "C" to the right of each data item or group of items on the reporting form.

1 - Confidentiality not claimed
2 - Confidentiality claimed--Denied: Following a public request for data, the facility operator did not obtain an action in an appropriate court for a declaratory judgement that the information is subject to protection
3 - Confidentiality claimed
4 - Confidentiality claimed--Granted: Following a public request for data, the facility operator obtained an action in an appropriate court for a declaratory judgement that the information is subject to protection.

Refer to Section 44346 of the Health and Safety Code for additional information about trade secret data.

(19) Process Equipment Description: A common name to describe the equipment used in the process. If any of the following are represented, the description field shall so indicate: boiler, internal combustion engine, kiln, flare, incinerator, oven, furnace, dryer, or heater. Include the rated capacity of any boiler or other combustion device in either the process equipment description field or the fuel type/other process information field described in item (5) below.

(~~9~~10) Fuel Type/Other Process Information: Describe the type of fuel used in the process or any other information needed to describe the process.

(11) Stack ID: Enter the number of the stack associated with the process. The stack ID entered should correspond to a stack entered on the STK Form. By entering the stack ID on the PRO form, it is possible to assign more than one stack to a single device. For example, a boiler may burn two fuels, natural gas and fuel oil, which are reported on separate PRO forms with distinct SCC numbers (to indicate two processes). If different control devices are used based upon the fuel usage, stack parameters may be different between the processes. Therefore, in this case, although the same device is performing the combustion, it is appropriate to assign the emissions to different stacks on the individual PRO forms.

(12) Year of Estimate/PRO: Enter the year that the data in Section 1 (Process Data) of the PRO Form corresponds to. For example, if the original submittal was for the 1989 inventory year, but in 1991, the value for the Total Yearly Process Rate was updated, the Year of Estimate/PRO field should be set to 1991.

(~~10~~13) Total Yearly Process Rate: The actual annual process rate during the reporting year.

(~~11~~14) Maximum Hourly Process Rate: The greatest operating rate that would be expected for the source in a one hour period.

(~~12~~15) ~~Process Units: The units for the total yearly and maximum hourly~~ process rate. Refer to Table B-I to determine the correct code. When assigning Process Units, ensure that they are identical to the units of the associated SCC number.

(~~13~~16) Hours/Day: The number of hours per day the process is in operation during the reporting year.

(~~14~~17) Days/Week: The number of days per week the process is in operation during the reporting year.

(~~15~~18) Weeks/Year: The number of weeks per year the process is in operation during the reporting year.

(~~16~~19) Relative Monthly Activity: The relative percentage of annual activity for the process that occurred during the month, reported to no more than three significant figures. For example, 12.3 in January would mean 12.3% of the yearly activity occurred in January.

**Emittent Data and Emissions**

(20) Action Code/EMS: Enter the appropriate Action Code: A, C, or D. The Emissions Action Code should be used for each substance reported on Section 2 of the PRO Form.
'A' indicates Add--A substance not previously reported is being emitted by the process. Include all corresponding emissions data.
'C' indicates Change--Previously reported emissions related data for the process data have been changed.
'D' indicates Delete--The substance identified is no longer emitted from the process.

(21) Year of Estimate/EMS: Enter the year that the reported data in Section 2 (Emittent Data) for each reported substance corresponds to. For example, if the original submittal was for the 1989 inventory year, but in 1991, emissions of some substances were updated based upon new source test results, the Year of Estimate/EMS field should be set to 1991 for the substances updated.

(22) Substance Name: Write the name of the substance emitted. Use the substance names as shown in Appendix A. Because of space limitations, it is acceptable to abbreviate or truncate the substance names entered into this field.

(1323) Emittent ID: Enter Tthe Chemical Abstracts Service Registry number (CAS number) or Emittent ID code created by the ARB for substances in Appendix A-I or A-II. *Where indicated for the substance in Appendix A/I or A/II, or the applicable Emittent ID code provided in Table B/II for substances for which no CAS number exists.*

*As specified in Section 93335, gasoline vapors and coke oven emissions shall be reported as the aggregate substance using the corresponding Emittent ID code and CAS number, respectively. To avoid double counting of emissions in other cases listed in Section 93335, for which the list of substances includes individual substances and an aggregate substance that may contain one or more such individual substances, the following instructions apply:*

**Mixtures:** In accordance with Section 93335, emissions of any individually listed substances shall be reported individually (except as specified in parts (a), (b), (c), and (d) below) even if the substances in Appendix A-I are included as part of a mixture or they are included in a group heading for a class of substances. Any unspecified (not individually listed) substances that are included in a mixture or group shall be summed and reported under the emittent identification number for the mixture or group heading. If there is not an emittent ID number in Appendix A-I for a mixture or group heading for a class of substances, only those component substances which are individually listed shall be reported.

(a) Emissions of unspecified metal compounds shall be reported as the amount of the metal atom equivalent, using the metal emittent identification number for the metal itself (or the emittent identification number indicated in Appendix A, such as for reporting inorganic versus other-than-inorganic arsenic compounds).

For unspecified metal compounds which contain two or more listed metals (e.g., zinc chromate), each component metal shall be reported as the amount of the appropriate metal atom equivalent (i.e., the zinc portion of the weight as zinc equivalent and the chromate portion as hexavalent chromium equivalent).

For specific, individually listed metal compounds (e.g. lead chromate), emissions shall be reported for the compound (as pounds of the compound), using the emittent identification number for that compound.

(b) Emissions of diesel exhaust and gasoline exhaust shall be reported as emissions of total particulate matter and total organic gas using the emittent identification numbers specified in Appendix A. Individually listed substances from diesel and gasoline combustion must also be reported using the applicable emittent identification numbers.

(c) For gasoline vapors, total gasoline vapor emissions shall be reported using the applicable emittent identification number. Emissions of individual components of gasoline vapors which are listed substances shall also be reported.

(dd) To avoid double counting of emissions in the cases listed in Sections 93335(f) and (g), pertaining to PAHs and dioxins, respectively, the following instructions apply:

(1) Where the emissions of the individual substances are required to be quantified by source testing or other methods, these emissions shall be reported for each individual substance using the corresponding CAS number or Emittent ID code. Also, Eemissions of all substances source tested (even if not individually listed) for the substance group (PAHs or dioxins) shall be summed and the aggregate substance shall then be reported using the Emittent ID code indicating "Total, with individual substances also reported."

(b2) Where the emissions of the individual substances are not required to be quantified by source testing or other methods, and information is not available to estimate these emissions of individually listed substances, only the aggregate substance shall be reported, using the Emittent ID code indicating "Total, with individual substances not reported."

(1424) Estimation Method: Enter a code from Table B-III that describes the method used to collect or calculate the emissions of this substance.

(1525) Actual Emission Factor: The average rate at which the pollutant is actually being emitted to the atmosphere in lbs per process unit. The emission factor should include the effect of any pollution control equipment which reduces emissions of the listed emittent.

(1626) Control Equipment Codes (Primary and Secondary), Overall Control Efficiency, and Control Schedule Code: Primary control equipment is any installed equipment whose main purpose is to reduce emissions of the emittent listed. When more than one piece of control equipment is used, the equipment that is most effective in reducing the emissions of the listed emittent is the primary equipment; other equipment may be listed as secondary for that emittent. Control equipment which is primarily designed to remove another emittent and is not typically considered effective in controlling the listed emittent, but is demonstrated to affect the removal of the listed emittent, is considered secondary. Thus, secondary control equipment may be the only equipment controlling the listed emittent or may be used in conjunction with the primary control equipment which has a greater effect in reducing the listed emittent.

Enter the 3 digit code number from Table B-IV that best describes the control equipment used for a listed emittent, if applicable.

Table B-IV also shows the various emittents (PM, TOG, and $SO_2$) that are affected by each control equipment listed. An "x" in an emittent's column means the control equipment is known to reduce the particular emittent. Report the control efficiency approved by the district in the inventory plan for each affected substance.

Enter an F or P, respectively, in the Control Schedule Code field if control equipment was fully or only partially operational during the reporting period. If control equipment did not operate for part of the time that the source being controlled was in operation, adjust the control efficiency to account for downtime of the control equipment, and provide an explanation with the inventory report.

On the far right-hand side of the Table B-IV are listed substances that may be reduced by the specific control equipment. The column is not exhaustive but provides guidance in determining for what substances emissions may be reduced by different control devices.

For consistency with state and federal emission inventory practices, do not report a device as a control equipment that is used as a normal part of a process. For example, the recovery system for by-product gases from a coke oven should not be reported as VOC control equipment; a baghouse used to separate carbon particles from the main process vent gas stream at carbon black plants should not be reported as a particulate control. The effect of these devices on resultant

emissions should be accounted for within the basic emission calculation.

There are several gaseous control methods which are unique in that they function both as control devices while also producing emissions separate from the process(es) they are controlling. Examples are afterburners, CO-boilers, and flares. For consistency with state and federal emission inventory practices, the emissions produced by these control devices should be reported as a separate device.

(17~~2~~7) Annual Average Emissions: The actual annual emissions of the emittent under typical (average) operating conditions, expressed in pounds per year, except for radionuclides and other radioactive substances, which shall be expressed in Curies per year. For instructions on how to use degree of accuracy values (Section 93334) in reporting facility emissions, refer to item (30). For reporting emissions derived from below Limit of Detection (LOD) source test data, refer to the Below Limit of Detection Emissions instructions in item (31).

(18~~2~~8) Hourly Maximum Emission: The maximum hourly emissions of the emittent, expressed in pounds per hour, except for radionuclides and other radioactive substances, which shall be expressed in milliCuries per hour.

(19~~2~~9) Initial and date the form in the space provided at the bottom.

**Using Degree of Accuracy Values in Reporting Facility Emissions**

(30) **Degree of Accuracy.** The general use of the degree of accuracy values is described in Section 93334 of the regulation. The actual degree of accuracy values for each substance are listed in Appendix A. This item specifically describes how to apply the degree of accuracy values when reporting facility emissions.

Note that degree of accuracy values are to be applied on a facilitywide basis, and not at the process level. For reporting, the total facility emissions of substances should be rounded to the nearest unit of the applicable degree of accuracy to determine if they must be reported on PRO forms. In other words, if facility emissions of a substance exceed one-half of the applicable degree of accuracy for the substance, then the substance emissions shall be reported on PRO forms. For example, assume that the total emissions of benzene from a facility are 7 lbs/year. The degree of accuracy value for benzene is 10 lbs/yr. Because the facility emissions exceed one-half of the benzene degree of accuracy, the emissions must be reported for any devices emitting benzene. If the total facility benzene emissions were 4 lbs/yr, the emissions (to the nearest ten) would round down to zero and would not need to be reported on any PRO Form. However, the presence of benzene would be required to be reported on the S-UP form.

The foregoing degree of accuracy discussion pertains only to reporting emissions that are calculated from estimation methods (such as mass balance or emission factors). Emissions from processes for which source testing is required must be reported to within the detection limit of the applicable source test method (see item (31) below).

## Reporting Emissions Derived from Below the Limit of Detection Source Test Results

(31) **Below Limit of Detection Emissions.** This section provides instructions for reporting required "Hot Spots" source test data where some or all of the individual source test runs for a substance produce values which are below the limit of detection ("below LOD"). These instructions are intended to provide a uniform convention which ensures that the manner of reporting the data on the "Hot Spots" reporting forms conveys the available information most completely and consistently.

The below LOD instructions can be applied to the handling of "non-detected" test data from all types of source testing and measurement methods conducted under the "Hot Spots" program. These methods may include stack testing, fuel analysis, laboratory analysis of materials, and other monitoring and measurement methods.

In the following instructions, two cases are discussed separately: (a) a case for which some (but not all) runs are below the LOD, and (b) a case for which all runs are below the LOD.

**(a) Some (But Not All) Test Runs Below LOD:**

In situations where several test runs are performed for a given substance from a specific source, and one or more of the runs produced values below the LOD, while at least one run produced a value above the LOD, assign one-half of the corresponding LOD for each run which is below the LOD. Average the one-half LOD values together with the other runs that were above detetectable limits for use in emissions computations.

The resultant Annual Average Emissions (in pounds per year) and the Hourly Maximum Emissions (in pounds per hour) shall be reported on the "Process and Emittents Data Form" (the PRO Form). In addition, a value of "98" must be recorded in the "Estimation Method Code" ("EST METH") field on the PRO Form to identify that the emissions have been computed from some detection-limited data. The "98" code indicates that a source test was conducted, but that some runs were above and some below the LOD. If all runs had been above the detection limits, the "normal" estimation method code for the applicable type of source test would have been used; for example, an EST METH code of "1" for stack testing, "2" for fuel analysis, etc.

(b) All Runs Below LOD:

In situations where several test runs are performed for a given substance from a particular source, and all of these runs resulted in values below the detection limits ("below the LOD"), facility operators shall report Annual Average Emissions and the Hourly Maximum Emissions on the "Process and Emittents Data Form" (the PRO Form) as "ND" (for non-detect). In addition, a value of "99" must be recorded in the "Estimation Method Code" ("EST METH") field on the PRO Form. The code of "99" indicates that a source test was conducted, but that all runs were below detectable limits.

When "ND" values are reported, the actual analytical limit of detection for all runs and the number of sample runs shall be reported in the source test report with other required source test results. Also, all tests shall be performed using appropriate sampling times, methods, and protocols as specified in the district approved source test protocol, and there must be no site specific data which could indicate the presence of the tested substance.

| INVENTORY YEAR 19__ | AIR TOXICS EMISSION DATA SYSTEM REVIEW AND UPDATE REPORT<br>BIENNIAL SUMMARY FORM | FORM **BIS** Page 1 |
|---|---|---|

**Part A** To be completed by all facility operators subject to CCR Sections 93348(c-e).

COMPANY NAME

FACILITY ID

ADDRESS

COUNTY ID

CITY

ZIP CODE

AIR BASIN

TELEPHONE

CONTACT PERSON

SIGNATURE _____ DATE _____

Failure to submit required information or knowingly supplying false information is punishable to the extent defined in Health and Safety Code Sections 44381(a) and 44381(b), which includes minimum fines of not less than five hundred dollars.

**Part B** To be completed by facility operators subject to CCR Sections 93348(c-d).

(1) Is any new or updated source testing required because previous source test data were determined to be invalid by the district or the Executive Officer of the ARB?

Answer: Yes ☐ No ☐

Specify: _____

_____

(2) Have any new permits been issued or existing permits been modified since the last update year which allow the facility to change the nature or quantity of air emissions of any substances listed in Appendix A-I or A-II?

Answer: Yes ☐ No ☐

Specify: _____

_____

(3) Have processes or equipment been added or modified at the facility since the last update year which change the nature or quantity of facility emissions of any listed substances?

Answer: Yes ☐ No ☐

Specify: _____

_____

(4) Are there any substances listed in Appendix A-I or A-II that are now being emitted by the facility that were not reported during the last inventory period? (Consider changes due to new processes, fuel usage, fuel type, material usage at the facility, and new substances added to the list of substances.)

Answer: Yes ☐ No ☐

Specify: _____ _____ _____

_____ _____ _____

**Part B** (continued) To be completed by facility operators subject to CCR Sections 93348(c-d).

(5) Has the distance to the nearest receptor (as defined by the district prioritization and risk assessment procedures) decreased since the previous update year?

Answer: Yes ☐ No ☐ If Yes, provide the following:

Previous Value _____ meters Current Value _____ meters

(6) Using sound engineering judgment, estimate increases in overall facility activity since the last inventory year (consider cumulative changes in throughput, process rates, known emissions increases, or other activity indicators).

Overall Activity Increase (check one)

| <10% | 10–50% | 51–100% | >100% |
|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ |

**Part C** To be completed by facility operators subject to CCR Sections 93348(c).

(7) Has there been a net increase of 10% or more in the activity (e.g. throughput, fuel usage or type, process rates, feed rates, or emissions) of any facility device during the current update year in comparison to the last inventory period? [Facility operators may choose to identify devices that contribute to facility risk in accordance with CCR Section 93348(c).]

Answer: Yes ☐ No ☐ If yes, update all required information via a biennial update plan and report.

Specify: _____

_____

_____

## Biennial Summary Form (BIS Form)

Note: All information provided on the Biennial Summary Form is subject to verification by the district staff.

For the purposes of completing the Biennial Summary Form (the form), "update year" is defined as the calendar year prior to the year the form is due. The "last inventory period" is defined as the most recent reporting year for which an approved facility emission inventory report was submitted.

Fill in the update year in the space provided at the top of the form for the inventory year.

**PART A**

Fill in the Company Name. Enter the Address, City, and Zip Code for the facility location. Enter the name of a contact person for the facility and the phone number. Enter the district assigned facility identification code. If the Facility ID is unknown, contact the district. Using Table B-I locate the appropriate County and Air Basin codes which correspond to the facility location.

**PART B**

Part B of the form is to be filled out by all facility operators subject to Sections 93348(c-d). The information provided in this section will be reviewed by the district to determine if there have been significant changes at the facility which could increase the facility risk.

(1) Updated Source Tests. If any new or updated source testing is required, check "Yes". Also, if conditions specified in Section 93351(c) are met (regarding when previous source test data cannot be used), check "Yes", and specify the affected sources and the condition(s) met. Answering yes to this question does not necessarily require re-source testing. It is provided to assist the districts in determining if the changes and substances affected are substantial enough to warrant retesting.

(2) New or Modified Permits. Check "Yes" for this question if ANY new permits or modifications to existing permits have been issued to the facility which affect the nature or quantity of emissions of substances listed in Appendix A-I or A-II. Specify the new permits. For example: "Permit #394-453 issued on 8-28-90 to add XXX BTU Natural Gas Fired Boiler". Also, answer yes and specify any changes to existing permits which increase, or have the potential to increase emissions. Modifications to permits may include but are not limited to changes in fuel types, feed rates, production rates, or other parameters. For example: "Permit #887-124 modified to allow use of fuel oil in boiler".

(3) New Processes or Equipment. If any new processes or equipment have been added or modified at the facility since the last update year which affects the nature or quantity of the emissions of any listed substance, check "Yes" and describe the changes. This question should address new sources of emissions which result from new processes or equipment, or are due to changes in solvent types, fuel types, control equipment, or other process modifications.

(4) New Substances. If there are any substances listed in Appendix A-I or A-II that were not reported during the last inventory period, answer yes to the question and write the substance name. Consider substances resulting from new processes or material usage, and any new substances added to the list of substances that were not previously addressed.

(5) Receptor Proximity Changes. If, since the last update year, the distance to the nearest receptor has decreased as defined by the district's prioritization and risk assessment procedures, answer yes and enter the previous and current values in meters. In answering the question consider changes at the facility which may have moved emission sources closer to property boundaries, changes which may have placed receptors closer to facility property boundaries, and changes in proximity to residential and nonresidential receptors. Distance estimates should be accurate to within 50 meters.

(6) Increases in Facility Activity. Check the box which most accurately describes the changes in facility activity since the last update year. For this question estimate overall facility activity increases using fuel usage, process rates, throughput, economic, or other applicable indicators of facilitywide activity.

PART C

Part C shall be completed by facility operators subject to 93348(c).

(7) Increases in Device Activity. If the activity for any identified device at the facility has increased by 10 percent or more since the last inventory period, answer "Yes" to question (7). Facility operators shall identify devices as specified in Section 93348(c). Device activity increases can be measured as increases in either the throughput, fuel usage, process rates, emissions of any listed substances, or other activity indicators.

For facility operators subject to Section 93348(c) which answer "Yes" to question (7), updated process and emissions data for the identified devices with increases shall be reported via a biennial update plan and report as specified in Sections 93350-93353.

For those facilities with no device activity increases (question (7) is "No"), the Biennial Summary Form shall meet their biennial update requirements unless, based upon date reported on the Biennial Summary Form or other information required by the district, the district requires an update plan and report.

For the purposes of answering question (7) devices may be consolidated. Consolidated devices must be within the same Source Classification Code (SCC). When the sum of the changes in activity for all consolidated devices within an SCC exceeds a 10 percent increase, an updated Process and Emittents (PRO) Form must be submitted by the facility operator for any individual device or groups of devices (reported on the same PRO Form) whose activity increases by 10 percent or more.

Revised form.

| | | |
|---|---|---|
| INVENTORY YEAR<br>19__ | AIR TOXICS EMISSION DATA SYSTEM REVIEW AND UPDATE REPORT<br>SUPPLEMENTAL PROCESS PARAMETER FORM<br>SUBSTANCES USED, PRODUCED, OR OTHERWISE PRESENT | FORM<br>S-UP |

COUNTY ID: AIR BASIN: FACILITY ID:

ACTION CODE USED PRODUCED OTHERWISE PRESENT (SPECIFY)

SUBSTANCE NAME

ACTION CODE USED PRODUCED OTHERWISE PRESENT (SPECIFY)

SUBSTANCE NAME

ACTION CODE USED PRODUCED OTHERWISE PRESENT (SPECIFY)

SUBSTANCE NAME

ACTION CODE USED PRODUCED OTHERWISE PRESENT (SPECIFY)

SUBSTANCE NAME

ACTION CODE USED PRODUCED OTHERWISE PRESENT (SPECIFY)

SUBSTANCE NAME

ACTION CODE USED PRODUCED OTHERWISE PRESENT (SPECIFY)

SUBSTANCE NAME

New fields shown in circles.

draft / phg /3-04-92

## Supplemental Process Parameter Form
## Substances Used, Produced, or Otherwise Present (S-UP Form)

Copy the form as many times as necessary for your facility.

The Supplemental Process Parameter Form (S-UP Form) is used to satisfy three separate reporting requirements.

(a) Any substances listed in Appendix A-I (list of substances to be inventoried) which are emitted in quantities below the applicable degree of accuracy for the facility are to be reported on the S-UP form unless the emissions are based on source test results or reported on PRO forms. The quantities used, produced, or present (and their units) are not required to be reported.

(b) Substances listed in Appendix A-II (list of substances to be inventoried) that are used, produced, or otherwise present at the facility are to be reported on the S-UP form. The quantities used, produced, or present (and their units) not required to be reported.

(c) Facilities subject to Section 93308(d) shall use the S-UP form to report substances in Appendix A-I and A-II which are used, produced, or otherwise present. Quantities of substances used, produced, or present, and their units, must be reported.

(1) Fill in the inventory year for which you are reporting in the space provided at the top of the form.

(2) County ID and Air Basin Codes: Using values provided in Table B-I, enter the appropriate County and Air Basin codes that correspond to the facility location.

(3) Facility ID: Enter the district assigned facility identification code. If the Facility ID is unknown, contact the district.

(4) Action Code: Enter the appropriate Action Code: A, C, or D.
'A' indicates Add--A new substances is being reported for the facility on the S-UP Form.
'C' indicates Change--Previously reported data for a substance has been changed.
'D' indicates Delete--The substance is no longer used, produced, or otherwise present at the facility.

(5) Emittent ID: Enter the Chemical Abstracts Service Registry number (CAS number) or Emittent ID code where indicated for the substance in Appendix A-I or A-II. Refer to the PRO Form Emittent ID instructions for instructions on reporting listed substances which are mixtures or classes of substances.

(6) Substance Name: Write the name of the substance emitted. Use the substance names as shown in Appendix A. Because of space limitations, it is acceptable to abbreviate or truncate the substance names entered into this field.

(7) Substance Used Fields - "Used" refers to substances which are ingredients in any activity or process at the facility.
- -Used: Enter an "X" in the space provided if the reported substance is used at the facility.
- -Quantity: If required, approximate the quantity of the substance used and write in the value. Also provide the units corresponding to the quantity used (such as gallons, tons, etc.).

(8) Substance Produced Fields - "Produced" refers to substances which are the result of any activity or process taking place at the facility.
- -Produced: Enter an "X" in the space provided if the reported substance is produced at the facility.
- -Quantity: If required, approximate the quantity of the substance produced and write in the value. Also provide the units corresponding to the quantity produced (such as barrels, pounds, etc.).

(9) Substance Present Fields - "Otherwise Present" refers to substances present in any other way in an activity or process, such as by-products or reaction intermediates which appear temporarily during processing. Please specify the nature of the presence of the substance.
- -Otherwise Present: Enter an "X" in ths space provided if the reported substance is present at the facility.
- -Quantity: If appropriate, write in the approximate quantity of the substance present at the facility and the units (such as gallons, pounds, etc.). Provide a brief description of how the substance is present.

## TABLE B-I

## COUNTY, AIR BASIN, AND DISTRICT CODES

| CO # | County Name | AB | Air Basin Name | DIS | District Name |
|---|---|---|---|---|---|
| 1 | ALAMEDA | SF | SAN FRANCISCO BAY AREA | BA | BAY AREA AQMD |
| 2 | ALPINE | GBV | GREAT BASIN VALLEYS | GBU | GREAT BASIN UNIFIED APCD |
| 3 | AMADOR | MC | MOUNTAIN COUNTIES | AMA | AMADOR COUNTY APCD |
| 4 | BUTTE | SV | SACRAMENTO VALLEY | BUT | BUTTE COUNTY APCD |
| 5 | CALAVERAS | MC | MOUNTAIN COUNTIES | CAL | CALAVERAS COUNTY APCD |
| 6 | COLUSA | SV | SACRAMENTO VALLEY | COL | COLUSA COUNTY APCD |
| 7 | CONTRA COSTA | SF | SAN FRANCISCO BAY AREA | BA | BAY AREA AQMD |
| 8 | DEL NORTE | NC | NORTH COAST | NCU | NORTH COAST UNIFIED AQMD |
| 9 | EL DORADO | MC | MOUNTAIN COUNTIES | ED | EL DORADO COUNTY APCD |
| 9 | EL DORADO | LT | LAKE TAHOE | ED | EL DORADO COUNTY APCD |
| 10 | FRESNO | SJV | SAN JOAQUIN VALLEY | SJU | SAN JOAQUIN VALLEY UNIFIED APCD |
| 11 | GLENN | SV | SACRAMENTO VALLEY | GLE | GLENN COUNTY APCD |
| 12 | HUMBOLDT | NC | NORTH COAST | NCU | NORTH COAST UNIFIED AQMD |
| 13 | IMPERIAL | SED | SOUTHEAST DESERT | IMP | IMPERIAL COUNTY APCD |
| 14 | INYO | GBV | GREAT BASIN VALLEYS | GBU | GREAT BASIN UNIFIED APCD |
| 15 | KERN | SED | SOUTHEAST DESERT | KER | KERN COUNTY APCD |
| 15 | KERN | SJV | SAN JOAQUIN VALLEY | SJU | SAN JOAQUIN VALLEY UNIFIED APCD |
| 16 | KINGS | SJV | SAN JOAQUIN VALLEY | SJU | SAN JOAQUIN VALLEY UNIFIED APCD |
| 17 | LAKE | LC | LAKE COUNTY | LAK | LAKE COUNTY APCD |
| 18 | LASSEN | NEP | NORTHEAST PLATEAU | LAS | LASSEN COUNTY APCD |
| 19 | LOS ANGELES | SC | SOUTH COAST | SC | SOUTH COAST AQMD |
| 19 | LOS ANGELES | SED | SOUTHEAST DESERT | SC | SOUTH COAST AQMD |
| 20 | MADERA | SJV | SAN JOAQUIN VALLEY | SJU | SAN JOAQUIN VALLEY UNIFIED APCD |
| 21 | MARIN | SF | SAN FRANCISCO BAY AREA | BA | BAY AREA AQMD |
| 22 | MARIPOSA | MC | MOUNTAIN COUNTIES | MPA | MARIPOSA COUNTY APCD |
| 23 | MENDOCINO | NC | NORTH COAST | MEN | MENDOCINO COUNTY APCD |
| 24 | MERCED | SJV | SAN JOAQUIN VALLEY | SJU | SAN JOAQUIN VALLEY UNIFIED APCD |
| 25 | MODOC | NEP | NORTHEAST PLATEAU | MOD | MODOC COUNTY APCD |
| 26 | MONO | GBV | GREAT BASIN VALLEYS | GBU | GREAT BASIN UNIFIED APCD |
| 27 | MONTEREY | NCC | NORTH CENTRAL COAST | MBU | MONTEREY BAY UNIFIED APCD |
| 28 | NAPA | SF | SAN FRANCISCO BAY AREA | BA | BAY AREA AQMD |
| 29 | NEVADA | MC | MOUNTAIN COUNTIES | NSI | NORTHERN SIERRA AQMD |
| 30 | ORANGE | SC | SOUTH COAST | SC | SOUTH COAST AQMD |
| 31 | PLACER | MC | MOUNTAIN COUNTIES | PLA | PLACER COUNTY APCD |
| 31 | PLACER | LT | LAKE TAHOE | PLA | PLACER COUNTY APCD |
| 31 | PLACER | SV | SACRAMENTO VALLEY | PLA | PLACER COUNTY APCD |
| 32 | PLUMAS | MC | MOUNTAIN COUNTIES | NSI | NORTHERN SIERRA AQMD |
| 33 | RIVERSIDE | SC | SOUTH COAST | SC | SOUTH COAST AQMD |
| 33 | RIVERSIDE | SED | SOUTHEAST DESERT | SC | SOUTH COAST AQMD |

TABLE B-I (continued)

COUNTY, AIR BASIN, AND DISTRICT CODES

| CO # | County Name | AB | Air Basin Name | DIS | District Name |
|---|---|---|---|---|---|
| 34 | SACRAMENTO | SV | SACRAMENTO VALLEY | SAC | SACRAMENTO METROPOLITAN AQMD |
| 35 | SAN BENITO | NCC | NORTH CENTRAL COAST | MBU | MONTEREY BAY UNIFIED APCD |
| 36 | SAN BERNARDINO | SC | SOUTH COAST | SC | SOUTH COAST AQMD |
| 36 | SAN BERNARDINO | SED | SOUTHEAST DESERT | SBD | SAN BERNARDINO COUNTY APCD |
| 37 | SAN DIEGO | SD | SAN DIEGO | SD | SAN DIEGO COUNTY APCD |
| 38 | SAN FRANCISCO | SF | SAN FRANCISCO BAY AREA | BA | BAY AREA AQMD |
| 39 | SAN JOAQUIN | SJV | SAN JOAQUIN VALLEY | SJU | SAN JOAQUIN VALLEY UNIFIED APCD |
| 40 | SAN LUIS OBISPO | SCC | SOUTH CENTRAL COAST | SLO | SAN LUIS OBISPO COUNTY APCD |
| 41 | SAN MATEO | SF | SAN FRANCISCO BAY AREA | BA | BAY AREA AQMD |
| 42 | SANTA BARBARA | OCS | OUTER CONTINENTAL SHELF | SB | SANTA BARBARA COUNTY APCD |
| 42 | SANTA BARBARA | SCC | SOUTH CENTRAL COAST | SB | SANTA BARBARA COUNTY APCD |
| 43 | SANTA CLARA | SF | SAN FRANCISCO BAY AREA | BA | BAY AREA AQMD |
| 44 | SANTA CRUZ | NCC | NORTH CENTRAL COAST | MBU | MONTEREY BAY UNIFIED APCD |
| 45 | SHASTA | SV | SACRAMENTO VALLEY | SHA | SHASTA COUNTY APCD |
| 46 | SIERRA | MC | MOUNTAIN COUNTIES | NSI | NORTHERN SIERRA AQMD |
| 47 | SISKIYOU | NEP | NORTHEAST PLATEAU | SIS | SISKIYOU COUNTY APCD |
| 48 | SOLANO | SF | SAN FRANCISCO BAY AREA | BA | BAY AREA AQMD |
| 48 | SOLANO | SV | SACRAMENTO VALLEY | YS | YOLO SOLANO APCD |
| 49 | SONOMA | NC | NORTH COAST | NS | NORTH SONOMA APCD |
| 49 | SONOMA | SF | SAN FRANCISCO BAY AREA | BA | BAY AREA AQMD |
| 50 | STANISLAUS | SJV | SAN JOAQUIN VALLEY | SJU | SAN JOAQUIN VALLEY UNIFIED APCD |
| 51 | SUTTER | SV | SACRAMENTO VALLEY | FR | FEATHER RIVER AQMD |
| 52 | TEHAMA | SV | SACRAMENTO VALLEY | TEH | TEHAMA COUNTY APCD |
| 53 | TRINITY | NC | NORTH COAST | NCU | NORTH COAST UNIFIED AQMD |
| 54 | TULARE | SJV | SAN JOAQUIN VALLEY | SJU | SAN JOAQUIN VALLEY UNIFIED APCD |
| 55 | TUOLUMNE | MC | MOUNTAIN COUNTIES | TUO | TUOLUMNE COUNTY APCD |
| 56 | VENTURA | SCC | SOUTH CENTRAL COAST | VEN | VENTURA COUNTY APCD |
| 57 | YOLO | SV | SACRAMENTO VALLEY | YS | YOLO SOLANO APCD |
| 58 | YUBA | SV | SACRAMENTO VALLEY | FR | FEATHER RIVER AQMD |

TABLE B-II

PROCESS (PT) UNIT CODES AND DESCRIPTIONS

| CODE | DESCRIPTION |
|---|---|
| PT001 | # HOLES DRILLED |
| PT002 | # ITEMS CAPACITY |
| PT003 | # ITEMS IN OPERATION |
| PT004 | # ITEMS MANUFACTURED |
| PT005 | # ITEMS PROCESSED |
| PT006 | # ITEMS PRODUCED |
| PT007 | # ITEMS THROUGHPUT |
| PT008 | # ITEMS USED |
| PT009 | # OF AVG. SIZE GAS LEAKS |
| PT010 | # OF ITEMS BURNED |
| PT011 | # OF TIMES USED |
| PT012 | 100 TONS LIQUIFIED |
| PT013 | 100 TONS MINED |
| PT014 | 100 TONS PRODUCED |
| PT015 | 1000 BARRELS |
| PT016 | 1000 BARRELS BURNED |
| PT017 | 1000 BARRELS OF WASTEWATER |
| PT018 | 1000 BARRELS PROCESSED |
| PT019 | 1000 BARRELS PRODUCED |
| PT020 | 1000 BBLS |
| PT021 | 1000 BOARD FEET |
| PT022 | 1000 CUBIC FEET BURNED |
| PT023 | 1000 GALLONS |
| PT024 | 1000 GALLONS BURNED |
| PT025 | 1000 GALLONS CAPACITY |
| PT026 | 1000 GALLONS PROCESSED |
| PT027 | 1000 GALLONS PRODUCED |
| PT028 | 1000 GALLONS PUMPED |
| PT029 | 1000 GALLONS STORAGE CAPACITY |
| PT030 | 1000 GALLONS STORED |
| PT031 | 1000 GALLONS THROUGHPUT |
| PT032 | 1000 GALLONS TRANSFERRED |
| PT033 | 1000 GALLONS TRANSPORTED |
| PT034 | 1000 GALLONS WASTEWATER |
| PT035 | 1000 HORSEPOWER-HOUR |
| PT036 | 1000 HOURS OF OPERATION |
| PT037 | 1000 POUNDS |
| PT038 | 1000 POUNDS PRODUCED |
| PT039 | 1000 SQ FT BOARD SAWED |
| PT040 | 1000 SQ FT PRODUCT SURFACE |
| PT041 | 1000 TONS SHIPPED |
| PT042 | 10000 SQ FT OF 3/8 IN. PLYWOOD |
| PT043 | 100000 BRAKE HORSEPOWER |
| PT044 | ACRES |
| PT045 | AMPERE-HOURS |
| PT046 | BALES PROCESSED |
| PT047 | BALES PRODUCED |
| PT048 | BARREL YEAR |
| PT049 | BARRELS |
| PT050 | BARRELS OF OIL SEEPING |
| PT051 | BARRELS PROCESSED |
| PT052 | BBL-YEAR OF STORED ITEM |
| PT053 | BOARD FEET |
| PT054 | COATING LINE |
| PT055 | CUBIC YARDS PILE |
| PT056 | CUBIC YARDS PRODUCED |
| PT057 | CYCLES |
| PT058 | EACH |
| PT059 | FEET DRILLED |
| PT060 | GALLONS |
| PT061 | GALLONS BURNED |
| PT062 | GALLONS CONSUMED |
| PT063 | GALLONS HEATED |
| PT064 | GALLONS OF COATING |
| PT065 | GALLONS PROCESSED |
| PT066 | GALLONS PRODUCED |
| PT067 | GALLONS STORED |
| PT068 | GALLONS USED |
| PT069 | HOT OIL TEST STATIONS |
| PT070 | HOURS OF OPERATION |
| PT071 | MEGAWATT-HOURS |
| PT072 | MILLION BTU HEAT INPUT |
| PT073 | MILLION CUBIC FEET |
| PT074 | MILLION CUBIC FEET BURNED |
| PT075 | MILLION CUBIC FT PROCESSED |
| PT076 | MILLION GALLONS THROUGHPUT |
| PT077 | MILLION GALLS OF WASTEWATER |
| PT078 | PERSONS |
| PT079 | POUNDS |
| PT080 | POUNDS STORED |
| PT081 | PRINTING LINE |
| PT082 | SCFM AVERAGE AIR FLOW |
| PT083 | SQ FT AREA |
| PT084 | TONS |
| PT085 | TONS BURNED |
| PT086 | TONS CAPACITY |
| PT087 | TONS CAST |
| PT088 | TONS CATALYST REMOVED |
| PT089 | TONS CHARGED |
| PT090 | TONS CLEANED |

TABLE B-II (cont.)

PROCESS (PT) UNIT CODES AND DESCRIPTIONS

| CODE | DESCRIPTION | CODE | DESCRIPTION |
|---|---|---|---|
| PT091 | TONS COATED | PT116 | TONS OVERBURDEN |
| PT092 | TONS CONSUMED | PT117 | TONS PROCESSED |
| PT093 | TONS DRIED | PT118 | TONS PRODUCED |
| PT094 | TONS HANDLED | PT119 | TONS RECEIVED |
| PT095 | TONS IN OPERATION | PT120 | TONS REMOVED |
| PT096 | TONS IN PILE | PT121 | TONS SHIPPED |
| PT097 | TONS INOCULATED | PT122 | TONS SHREDDED |
| PT098 | TONS MELTED | PT123 | TONS SPRAYED |
| PT099 | TONS MINED | PT124 | TONS STORED |
| PT100 | TONS OF COATING | PT125 | TONS THROUGHPUT |
| PT101 | TONS OF COATING APPLIED | PT126 | TONS TRANSFERRED |
| PT102 | TONS OF MATERIAL | PT127 | TONS TRANSPORTED |
| PT103 | TONS OF MATERIAL LOADED | PT128 | TONS TREATED |
| PT104 | TONS OF MATERIAL UNLOADED | PT129 | TONS USED |
| PT105 | TONS OF PRODUCT | PT130 | WELLS IN OPERATION |
| PT106 | TONS OF RECLAIMED SOLVENT | PT131 | 100 POUNDS OF PRODUCT |
| PT107 | TONS OF REFUSE IN-PLACE | PT132 | 100 TONS PROCESSED |
| PT108 | TONS OF SOLVENT ADDED | PT133 | VEHICLE MILES |
| PT109 | TONS OF SOLVENT CONSUMED | PT134 | 1000 PIECES PROCESSED |
| PT110 | TONS OF SOLVENT IN COATING | PT135 | # OF X-RAYS TAKEN |
| PT111 | TONS OF SOLVENT IN INK | PT136 | 1000 CONTAINERS STORED |
| PT112 | TONS OF SOLVENT USED | PT137 | TONS SOLVENT STRIPPED |
| ~~PT113~~ | ~~TONS OF STEAM PRODUCED~~ | ~~PT138~~ | ~~TONS OF FUEL~~ |
| PT114 | TONS OF WASTE DISPOSED | PT139 | 1000 CUBIC FEET |
| PT115 | TONS OF WASTE REMOVED | PT140 | POUNDS PROCESSED |

TABLE B-II

EMITTENT ID CODES FOR LISTED SUBSTANCES LACKING CAS NUMBERS

| Emittent ID | Name of Listed Substance |
|---|---|
| [Refer to Note 1 regarding substance group headings] | |
| 1000 | Aflatoxins |
| 1001 [Note 7] | 2-Amino-9H-pyrido(2,3-b) indole (A-alpha-C) |
| 1005 | Analgesic mixtures containing phenacetin |
| 1010 | Androgenic (anabolic) steroids |
| [Note 2] | Antimony compounds |
| 1016 [Note 2] | Arsenic compounds (inorganic) |
| 1017 [Note 2] | Arsenic compounds (other than inorganic) |
| [Note 2] | Barium compounds |
| 1020 | Benzidine-based dyes |
| [Note 2] | Beryllium compounds |
| 1025 | Betel quid with tobacco |
| 1030 | Bitumens, extracts of steam- and air-refined bitumens |
| 1035 | Bleomycins |
| [Note 2] | Bromine compounds (inorganic) |
| [Note 2] | Cadmium compounds |
| 1050 | Carbon black extracts |
| 1055 | Carrageenan (degraded) |
| 1056 | Ceramic fibers |
| 1058 | Chlorobenzenes |
| 1059 | p-Chloro-o-toluidine (strong acid salts) |
| 1060 | Chlorophenols |
| 1065 | Chlorophenoxy herbicides |
| [Note 2] | Chromium compounds (other than hexavalent) |
| [Note 2] | Cobalt compounds |
| 1066 | Coke oven emissions |
| 1068 | Conjugated estrogens |
| [Note 2] | Copper compounds |
| 1070 | Creosotes |
| 1073 [Note 4] | Cyanide compounds |
| 1075 | Dialkylnitrosamines |
| 1078 | Diaminotoluenes (mixed isomers) |
| 1080 | Dibenzofurans (chlorinated) |
| [Note 3] | Diesel engine exhaust |
| [Note 5] | Diesel fuel (marine) |
| 1085 | Dioxins (chlorinated dibenzodioxins), total, with the individual isomers also reported |
| 1086 | Dioxins (chlorinated dibenzodioxins), total, with the individual isomers not reported |
| 1090 | Environmental tobacco smoke |
| 1091 | Epoxy resins |
| 1095 | Estrogens, nonsteroidal |
| 1100 | Estrogens, steroidal |
| 1101 | Fluorides and compounds |
| 1103 | Fluorocarbons (brominated) |
| 1104 | Fluorocarbons (chlorinated) |
| 1105 [Note 7] | Fluorocarbons (chlorinated & brominated) |

TABLE B-II. (cont.)

EMITTENT ID CODES FOR LISTED SUBSTANCES LACKING CAS NUMBERS

| Emittent ID | Name of Listed Substance |
|---|---|
| [Note 3] | Gasoline engine exhaust |
| [Note 3] | Gasoline engine exhaust (condensates and extracts) |
| 1110 | Gasoline vapors |
| 1111 | Glasswool |
| 1115 | Glycol ethers and their acetates |
| 1120 | Hexachlorocyclohexanes |
| 1125 | Isocyanates |
| 1128 [Note 2] | Lead compounds (inorganic) |
| 1129 [Note 2] | Lead compounds (other than inorganic) |
| 1131 | Lubricant based oils and derived products, etc. |
| [Note 2] | Manganese compounds |
| [Note 2] | Mercury compounds |
| 1135 | Mineral fibers (other than manmade) |
| 1136 | Mineral fibers (fine; manmade) |
| 1140 | Mineral oils (untreated and mildly treated oils), etc. |
| [Note 2] | Nickel compounds |
| 1146 | Nickel refinery dust from the pyrometallurgical process |
| 1148 | Nitrilotriacetic acid (salts) |
| 1150 | PAHs (Polycyclic aromatic hydrocarbons), total, with individual components also reported |
| 1151 | PAHs (Polycyclic aromatic hydrocarbons), total, with individual components not reported |
| [Note 5] | PAH-Derivatives (Polycyclic aromatic hydrocarbon derivatives) |
| 1155 | Polybrominated biphenyls (PBBs) |
| - | Polychlorinated dibenzo-p-dioxins, see Dioxins |
| - | Polychlorinated dibenzofurans, see Dibenzofurans |
| 1156 [Note 5] | POM (Polycyclic organic matter) |
| 1161 | Progestins |
| 1165 | Radionuclides |
| 1166 | Radon and its decay products |
| 1167 | Retinol/retinyl ethers |
| 1168 | Rockwool |
| [Note 5] | Residual (heavy) fuel oils |
| [Note 2] | Selenium compounds |
| 1175 | Silica, crystalline |
| [Note 2] | Silver compounds |
| 1180 | Shale oils |
| 1181 | Slagwool |
| 1185 | Soots |
| 1190 | Talc containing asbestiform fibers |
| [Note 2] | Thallium compounds |
| 1200 | Tobacco products, smokeless |
| 1204 | Toluene diisocyanates |
| 1205 | alpha-chlorinated toluenes |
| [Note 6] | Vanadium (fume or dust) |
| 1206 | Wood preservatives (containing arsenic and chromate) |
| 1210 | Xylenes |
| [Note 2] | Zinc compounds |

TABLE DELETED
INFORMATION MOVED TO APPENDIX A

TABLE B-II. (cont.)

EMITTENT ID CODES FOR LISTED SUBSTANCES LACKING CAS NUMBERS

Notes:

[1] - Reporting of a total for a substance which is a substance group heading does not supercede the required reporting of the individual substances which are listed in Appendix A under the group heading.

[2] - Emissions of unspecified metals compounds shall be reported as the amount of the metal atom equivalent, using the metal emittent identification number for the metal itself (or the emittent identification number indicated on the table).

For specific, individually listed metal compounds, emissions shall be reported for each compound using the emittent identification number for that compound.

[3] - Emissions of these mixtures shall be reported as emissions of total particulate matter and total organic gas, using the following emittent ID numbers:

| | |
|---|---|
| 9901 | Diesel exhaust, particulate matter |
| 9902 | Diesel exhaust, total organic gas |
| 9910 | Gasoline exhaust, particulate matter |
| 9911 | Gasoline exhaust, total organic gas |

Reporting of these mixtures shall not supercede the reporting of individually listed toxic substances from diesel and gasoline combustion.

[4] - Compounds of the form "X-CN". Report as the amount of Cyanide equivalent in the compound using an emittent identification code of 1073.

[5] - Individual, component listed substances must be reported for this mixture or group.

[6] - Emissions of Vanadium (fume or dust) shall be reported as the amount of the vanadium atom equivalent, using the identification number 7440622.

[7] - The emittent identification number has been discontinued for all facilities reporting for the first time and for all biennial updates. Use the listed replacement emittent identification code(s) or the assigned CAS number.

TABLE DELETED

MOVED TO APPENDIX A

INFORMATION

Table B-III

EMISSION ESTIMATION METHOD CODES

0 Not applicable or emissions are known to be zero (e.g., intermittent process).

MEASUREMENT-DERIVED METHODS*

1 Emissions based on source testing (primarily stack testing).

2 Emissions based on fuel analysis.

3 Emissions based on fence-line monitoring.

4 Emission based on laboratory analysis of composition.

ESTIMATION/CALCULATION METHODS*

5 Emissions calculated using ARB emission factors.

6 Emissions calculated using other factors.

7 Emissions based on material balance using engineering expertise and knowledge of process.

8 Emissions based on Material Safety Data Sheets or Technical Data Sheets.

9 Emissions calculated from an emission estimation technique developed by the ARB.

10 Emissions calculated from other emission estimation techniques.

11 Emissions based on other engineering calculations.

12 Best estimate.

OTHER*

13 New construction, not yet in operation.

14 Operation ceased.

LIMITED BY DETECTION LIMIT OF TEST METHOD*

98 Source test or other measurement conducted; however emissions from some (but not all) test runs were below detection limit.

99 Source test or other measurement conducted; however emissions from all test runs were below detection limit.

(* Headings will remain underlined in final text.)

TABLE B-IV

CONTROL EQUIPMENT IDENTIFICATION CODE NUMBERS AND VARIOUS EMITTENTS AFFECTED

| EQUIPMENT CODE | CONTROL DEVICE/METHOD | VARIOUS EMITTENTS AFFECTED | | | |
|---|---|---|---|---|---|
| | | PM[a] | TOG[b] | SOx[c] | TOXIC SUBSTANCES THAT MAY BE CONTROLLED |
| 000 | No equipment | | | | |
| 001 | Wet Scrubber | x | x | x | Cadmium, Chlorobenzene, Chromium Nickel, Toluene diisocyanate |
| 002 | Impingement Plate Scrubber | x | x | x | |
| 003 | Venturi Scrubber | x | x | x | |
| 004 | Fluid Bed Dry Scrubber | x | x | | |
| 005 | Other Scrubbers (includes magnesium oxide, dual alkali, citrate process, ammonia, Wellman-Lord/ sodium sulfite, wet lime slurry, alkaline fly ash, sodium carbonate, sodium-alkali, sulfur oxides, hydrogen chloride, tray scrubber) | | x | x | |
| 006 | Gravity Collector | x | | | |
| 007 | Centrifugal Collector | x | | | |
| 008 | Electrostatic Precipitator (wet and dry) | x | | | Arsenic, Beryllium, Cadmium, Chromium, Copper, Manganese, Nickel, Lead, Zinc, and other trace metals |
| 009 | Gas Scrubber | | x | x | |
| 010 | Mist/ Vapor Suppressant in Solution | x | | x | |

| EQUIPMENT CODE | CONTROL DEVICE/METHOD | VARIOUS EMITTENTS AFFECTED | | | TOXIC SUBSTANCES THAT MAY BE CONTROLLED |
|---|---|---|---|---|---|
| | | PM | TOG | SOx | |
| 011 | Drift Eliminator for Cooling Towers | x | | | Chromium |
| 012 | Fabric Filter (Baghouse) | x | | | Arsenic, Beryllium, Cadmium, Chromium, Copper, Manganese, Nickel, Lead, Zinc, and other trace metals |
| 013 | Catalytic Afterburner | x | x | | |
| 014 | Direct Flame Afterburner | x | x | | |
| 015 | Catalytic Incineration | | x | | Acrylonitrile, Benzene, 1,3 Butadiene, Ethylene dichloride, Ethylene oxide, Phenol |
| 016 | Incineration | | x | | Acrolein, Acrylonitrile, Benzene, Benzyl chloride, 1,3 Butadiene, Epichlorohydrin, Ethylene dichloride, Formaldehyde, Methyl chloroform, Perchloroethylene/ trichloroethylene, Toluene, Toluene diisocyanate, Vinylidene chloride |
| 017 | Flaring | x | x | | Acetaldehyde, Acrolein Acrylonitrile, Allyl chloride, 1,3 Butadiene, Chloromethanes[d], Chloroprene, Ethylbenzene/styrene Ethylene oxide, Formaldehyde, Methyl methacrylate, Propylene oxide |
| 018 | Foam Blanket on plating solution | x | | | Chromium |
| 019 | Plastic/Styrofoam Balls or Plastic Bead Covering for Plating Solution | x | | | Chromium |
| 020 | Catalytic Oxidation- Flue Gas desulfurization | | | x | |

| EQUIPMENT CODE | CONTROL DEVICE/METHOD | VARIOUS EMITTENTS AFFECTED | | | |
|---|---|---|---|---|---|
| | | PM | TOG | SOx | TOXIC SUBSTANCES THAT MAY BE CONTROLLED |
| 021 | Alkalized Alumina | | | x | |
| 022 | Dry Limestone Injection | | | x | |
| 023 | Wet Limestone Injection | | | x | |
| 024 | Sulfuric Acid Plant-Contact Process | | | x | |
| 025 | Sulfuric Acid Plant- Double Contact Process | | | x | |
| 026 | Sulfur plant | | | x | |
| 027 | Vapor Recovery System (includes condensers, hooding, and other enclosures) | | x | | |
| 028 | Adsorption (includes use of activated carbon, activated clay, molecular sieve, and resins) | | x | | Acrylonitrile, Benzene, Carbon Tetrachloride/Perchloroethylene, Chlorobenzene, Chloroform, Ethylene dichloride, Methyl chloroform, Methyl methacrylate, Methylene chloride, Phenol, Naphthalene, Phosgene, Styrene, Toluene, Toluene diisocyanate, Trichloroethylene, Vinyl chloride, Vinylidene chloride, Xylene |
| 029 | Liquid Filtration System | x | | | |
| 030 | Absorption Column | x | x | x | Acetaldehyde, Acrylonitrile, Allyl chloride, Benzene, Benzyl chloride, 1,3 Butadiene, Carbon tetrachloride, Chlorobenzene, Chloromethanes[d], Chloroprene, Epichlorohydrin, Ethylbenzene/ Styrene, Ethylene dichloride, Ethylene oxide, Methyl chloroform, Perchloroethylene/Trichloroethylene Phenol, Phosgene, Propylene/oxide, Vinylidene chloride, Xylene |
| 031 | Spray Tower | x | x | x | |
| 032 | Dynamic Separator | x | | | |

| EQUIPMENT CODE | CONTROL DEVICE/METHOD | VARIOUS EMITTENTS AFFECTED | | | |
|---|---|---|---|---|---|
| | | PM | TOG | SOx | TOXIC SUBSTANCES THAT MAY BE CONTROLLED |
| 033 | Mat or Panel Filter | x | | | |
| 034 | Metal Fabric Filter | x | | | |
| 035 | Process Gas Recovery | | x | | |
| 036 | Dust Suppression by Water Sprays, Chemical Stabilizers, or Wetting Agents | x | | | |
| 037 | Gravel Bed Filter | x | | | |
| 038 | Annular Ring Filter | x | | | |
| 039 | Condensers | | x | | Acetaldehyde, Acrylonitrile, Allyl chloride, Benzene, Benzyl chloride, Butadiene, Carbon tetrachloride, Chlorobenzene, Chloromethanes[d], Chloroprene, Ethylbenzene/Styrene, Ethylene dichloride, Ethylene oxide, Formaldehyde, Methyl chloroform Methyl methacrylate, Perchloroethylene/Trichloroethylene Phenol, Toluene, Toluene diisocyanate, Vinylidene chloride, Xylene |
| 040 | Cyclones | x | | | Cadmium, Copper, Nickel |
| 041 | Chemical Oxidation | x | x | | |
| 042 | Chemical Reduction | | x | | |
| 043 | Ozonation | | x | | |
| 044 | Chemical Neutralization | | x | x | |
| 045 | Water Curtain | x | x | | |
| 046 | Nitrogen Blanket | | x | | |
| 047 | Conservation Vent | | x | | |
| 048 | Bottom Filling | | x | | |
| 049 | Submerged Filling | | x | | |

| EQUIPMENT CODE | CONTROL DEVICE/METHOD | VARIOUS EMITTENTS AFFECTED | | | |
|---|---|---|---|---|---|
| | | PM | TOG | SOx | TOXIC SUBSTANCES THAT MAY BE CONTROLLED |
| 050 | Other Fugitive Emissions Controls (includes tank covers, collection hoods, and closed containers) | x | x | | Methyl Chloroform, Methylene Chloride, Perchloroethylene, Trichloroethylene, Trichloroethane |
| 051 | Miscellaneous Control Devices | | | | |

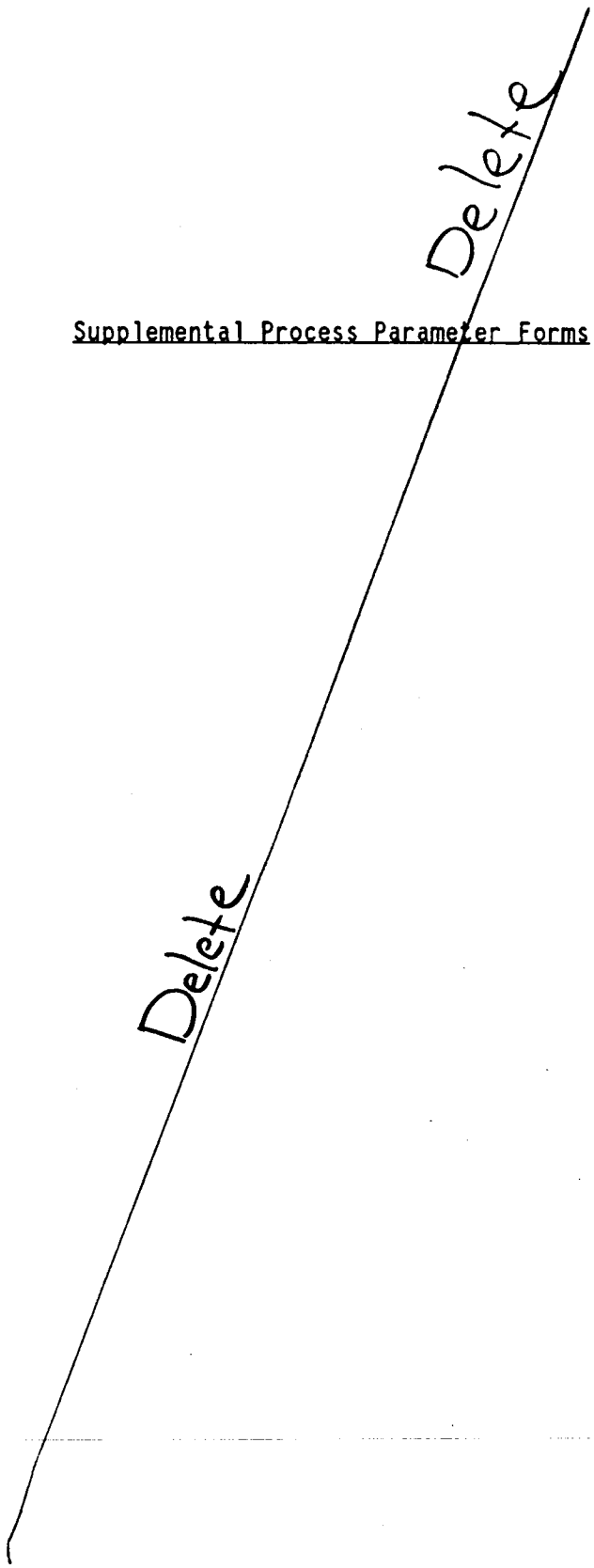
[a] Particulate Matter

[b] Total Organic Gases

[c] Sulfuric Oxides

[d] Chloromethanes include Methylene chloride, Chloroform, and Carbon tetrachloride.

Supplemental Process Parameter Forms



| EMISSION YEAR 19__ | AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT<br>SUPPLEMENTAL PROCESS PARAMETER FORM<br>SUBSTANCES USED, PRODUCED, OR OTHERWISE PRESENT | FORM S-UP |
|---|---|---|

FACILITY NAME _____

FOR OFFICE USE ONLY
CO: | | AB: | | |
FACID: | | | | | | | | |

PLEASE COPY THIS FORM AS MANY TIMES AS NECESSARY FOR YOUR FACILITY.
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS FORM.

**ALL AFFECTED FACILITIES: USE THIS FORM TO REPORT SUBSTANCES LISTED IN APPENDIX A-II WHICH ARE USED, PRODUCED OR OTHERWISE PRESENT.**

**FACILITIES SUBJECT TO SECTION 93303: ALSO USE THIS FORM TO REPORT SUBSTANCES IN APPENDIX A-I WHICH ARE BELOW THE APPLICABLE DEGREE OF ACCURACY.**

**FACILITIES SUBJECT TO SECTION 93308(C): ALSO USE THIS FORM TO REPORT SUBSTANCES IN APPENDIX A-I WHICH ARE USED, PRODUCED OR OTHERWISE PRESENT.**

FOR EACH LISTED SUBSTANCE REPORTED WITH THIS FORM, PLEASE INDICATE (Y/N) WHETHER IT IS USED, PRODUCED OR OTHERWISE PRESENT WITHIN YOUR FACILITY.

"USED" REFERS TO SUBSTANCES WHICH ARE INGREDIENTS IN ANY ACTIVITY OR PROCESS AT YOUR FACILITY.
"PRODUCED" REFERS TO SUBSTANCES WHICH ARE THE RESULT OF ANY ACTIVITY OR PROCESS TAKING PLACE IN YOUR FACILITY.
"OTHERWISE PRESENT" REFERS TO SUBSTANCES PRESENT IN ANY OTHER WAY IN AN ACTIVITY OR PROCESS, SUCH AS BY-PRODUCTS OR REACTION INTERMEDIATES WHICH APPEAR TEMPORARILY DURING PROCESSING. PLEASE SPECIFY THE NATURE OF THE PRESENCE OF THE SUBSTANCE.

| *LISTED SUBSTANCE EMITTENT ID* | *USED* | *PRODUCED* | *OTHERWISE PRESENT* | *(SPECIFY)* |
|---|---|---|---|---|
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |
| | ( ) | ( ) | ( ) | |

OLD FORM DELETED
See new version of form

NAME: _____ DATE: _____

ARB/S-UP/90086

| EMISSION YEAR 19__ | AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT<br>SUPPLEMENTAL PROCESS PARAMETER FORM<br>STATIONARY COMBUSTION | FORM S-CMB |
|---|---|---|

FOR OFFICE USE ONLY
CO: AB:
FACID:
SCC:

COMPANY NAME _____

DEVICE ID: |_|_|_|_|

PLEASE COPY THIS FORM AS MANY TIMES AS NECESSARY FOR YOUR FACILITY.
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS FORM.

## FUEL & FEEDSTOCK COMPOSITION

*UNCONVENTIONAL FUELS & FEEDSTOCKS:*

INDICATE WITH A CHECKMARK ANY UNCONVENTIONAL FUELS OR FEEDSTOCKS USED IN YOUR FACILITY AT THE DEVICE ID INDICATED ABOVE. DESCRIBE BRIEFLY THE NATURE OF SUCH FUEL OR FEEDSTOCK IN THE SPACE PROVIDED.
ALSO SUMMARIZE THIS FEEDSTOCK INFORMATION IN THE DATA FIELD, "FUEL TYPE/OTHER PROCESS INFO" ON CORE FORM PRO.

FORM DELETED

____ MUNICIPAL WASTE _____

____ HOSPITAL WASTE _____

____ HAZARDOUS WASTE _____

____ WASTE OIL _____

____ WASTE SOLVENT _____

____ AGRICULTURAL DEBRIS _____

____ TIRES

____ OTHER (PLEASE SPECIFY): _____

REPORT USE OF AUXILIARY FUEL WITH THESE FEEDSTOCKS IN ACCORDANCE WITH THE STATIONARY COMBUSTION REPORTING INSTRUCTIONS FOR THIS FORM, S-CMB.

## FUEL & FEEDSTOCK ANALYSIS

COMPLETE THIS PART FOR EACH FUEL AND FEEDSTOCK USED AT THE DEVICE ID INDICATED ABOVE FOR WHICH A FUEL ANALYSIS WAS PERFORMED.

(IN WEIGHT %):

SULFUR: |_|_|_|_|_|

(IN PARTS-PER-MILLION BY WEIGHT (PPMW) OR MG/KG):

| | | |
|---|---|---|
| | CHROMIUM VI: |_|_|_|_|_|_| | PHOSPHORUS: |_|_|_|_|_|_| |
| ARSENIC: |_|_|_|_|_|_| | COPPER: |_|_|_|_|_|_| | RADIONUCLIDES: |_|_|_|_|_|_| |
| BERYLLIUM: |_|_|_|_|_|_| | FLUORINE: |_|_|_|_|_|_| | SELENIUM: |_|_|_|_|_|_| |
| BROMINE: |_|_|_|_|_|_| | LEAD: |_|_|_|_|_|_| | ZINC: |_|_|_|_|_|_| |
| CADMIUM: |_|_|_|_|_|_| | MANGANESE: |_|_|_|_|_|_| | |
| CHLORINE: |_|_|_|_|_|_| | MERCURY: |_|_|_|_|_|_| | |
| | NICKEL: |_|_|_|_|_|_| | |

REPORT EMISSIONS IN SECTION 2 OF CORE FORM PRO

NAME _____ DATE: _____

ARB/S-CMB/89100

S-CMB

## STATIONARY COMBUSTION REPORTING INSTRUCTIONS

Complete one "Stationary Combustion Supplemental Form" (S-CMB) for each fuel or feedstock which has been analyzed, and also for each type of unusual fuel or feedstock used in your facility.

1. Unconventional Fuels & Feedstocks

   Provide a brief description of such inputs in the space provided. Include the main components of more complex feedstocks such as municipal waste, hospital waste, or hazardous waste. Report components including plastic, metal, pathological wastes, treated wood, tires, consumer products, and batteries.

2. Fuel Analysis

   Report here the results of any required lab analysis of any fuel or feedstock.

3. Completion of form PRO

   Report the use of standard fuels as auxiliary fuels to supplement the listed feedstock as an individual emitting process called "Auxiliary Fuel Use" on a separate core form PRO.

   If data are available to distinguish emissions resulting from the auxiliary fuel versus those resulting from the feedstock, report separately the emissions from each of these emitting processes (auxiliary fuel use and feedstock combustion) on separate PRO forms. If such data are not available to distinguish these emissions, summarize the combined emissions from the feedstock and fuel together and report them only on the feedstock combustion process core reporting form PRO.

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| EMISSION YEAR 19__ | AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT<br>SUPPLEMENTAL PROCESS PARAMETER FORM<br>COOLING TOWER | FORM S-CT |
|---|---|---|

FOR OFFICE USE ONLY
CO: | | AB: | |
FACID: | | | | | | | | | | |
SCC: | | | | | | | | | | |

COMPANY NAME _____

DEVICE ID: | | | | |

PLEASE COPY THIS FORM AS MANY TIMES AS NECESSARY FOR YOUR FACILITY.
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1. DEVICE INFORMATION

*DESIGN DRIFT FRACTION (MFR. SPEC.):* | | | | | | | | *GPM DRIFT/GPM THROUGHPUT*

*TOWER DESIGN:* ____ *OPEN CIRCUIT* ____ *FORCED DRAFT*
____ *CLOSED CIRCUIT* ____ *COUNTERFLOW*
____ *EVAPORATIVE CONDENSER* ____ *CROSSFLOW*

FORM DELETED

2. PROCESS INFORMATION

*RATED COOLING CAPACITY (TONS):* _____

*AVERAGE: WATER FLOW (GPM):* | | | | *MAXIMUM: WATER FLOW (GPM):* | | | |

*TOWER APPLICATION:* ____ *PROCESS COOLING* ____ *BUILDING HVAC* ____ *REFRIGERATION*

3. EMITTENT INFORMATION:

| WATER TREATMENT CHEMICAL | CONCENTRATION IN WATER (PPMW) AVERAGE | MAXIMUM |
|---|---|---|
| *CHROMATE* | | |
| *CHLORINE* | | |
| *SODIUM HYDROXIDE* | | |
| *ZINC* | | |
| *BROMINE* | | |
| | | |
| | | |
| | | |
| | | |

REPORT EMISSIONS IN SECTION 2 OF CORE FORM PRO

*NAME:* _____ B - 27(del) _____ *DATE:* _____

# COOLING TOWER SUPPLEMENTAL FORM INSTRUCTIONS

First, make as many copies of this form as you have cooling towers which use listed substances for water treatment. Enter the Device ID for each such cooling tower (refer to the Core Form instructions for information on Device IDs).

1. Device Information

   Report each tower's design drift fraction, which should be specified by the manufacturer. If you do not know a tower's drift fraction, use the appropriate default listed below.

   | | |
   |---|---|
   | No controls | 0.02 gpm drift/gpm water circulation |

   Indicate the basic design of your cooling tower by checking the appropriate space(s).

2. Process Information

   Provide the manufacturer's specified cooling tower capacity in tons, and the average and maximum water flow rates. ("Average" here is not intended to include unpredictable process upsets.) Indicate the type of application for this cooling tower by checking the appropriate space.

3. Emittent Information

   Report average and maximum concentrations (in parts-per-million-by-weight (ppmw)) for each water treatment which involves a listed substance, including the use of chromate and biocides which contain listed substances.

   For each such chemical, please supply the average and the maximum concentrations used, in terms of ppmw. To calculate the concentration of a listed substance which is part of an additive, you can multiply the additive concentration by the ratio of the molecular weight of the listed substance to the molecular weight of the additive.

4. CORE FORM PRO

   Inorganic Additives

   Average emissions of chromium VI in lbs/yr can be calculated using the following formula, which does not explicitly include the control efficiency:

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EMS = (DF)(WR)(Co/1E6)(OF)(8.33 lb/gal)(8760 hr/yr)(60 min/hr)(52 lb Cr/116 lb CrO4)

where DF = Drift Fraction (in gpm/gpm)
WR = Water Circulation Rate (in gpm)
Co = Concentration (in ppmw or lb additive per million lbs water)
OF = Operation Fraction (in yr/yr)(dimensionless fraction of year)
Cr = Chromium (VI)
CrO4 = Chromate
1E6 = 1,000,000

If any of this information is not available, use the following defaults:

DF = 0.02
WR = (2.4 gpm/ton of cooling) x (cooling tower capacity in tons)
Co = 10 ppmw or 10 lb chromate/million lbs water (for chromate ONLY)
OF = 1 yr/yr (for maximum possible operation)

Report any control devices on Form PRO. Assume no more than 90% control efficiency for a low-efficiency drift eliminator, and no more than 99.6% control efficiency for a high-efficiency drift eliminator, unless documentation is provided to demonstrate a greater value.

Calculate the resultant average annual emissions, using the average values for all the above quantities and reflecting any applicable control. Report these emissions on both Form S-CT and Form PRO.

To calculate the maximum hourly emissions, substitute the maximum values of each of the variables and divide the formula by 8760 hr/yr. Also, substitute the maximum value of the Operation Fraction which is probably 1. The calculation of maximum hourly emissions may require several trial calculations if all maximum conditions never occur simultaneously. For example, the maximum chromate concentration may only occur at the average water circulation rate, and vice versa. Then, both cases would need to be calculated to determine the actual maximum hourly emission rate.

Calculate inorganic emissions other than those of Chromium VI as follows:

If the concentration of a mixture containing a listed substance is used, replace the ratio 52/116 with the weight of the listed substance per unit weight of the mixture. If the concentration of the listed substance itself is used, replace the ratio 52/116 with 1. In these cases, DO NOT USE the default for additive concentration.

Organic Additives:

To report any listed organic substance which is contained in an organic additive to the cooling tower water, assume that what goes in comes out. Calculate emission rates based on the frequency and amount of additions of the additive.

DELETED

| EMISSION YEAR 19__ | AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT<br>SUPPLEMENTAL PROCESS PARAMETER FORM<br>METAL PLATING | FORM S-MP |
|---|---|---|

COMPANY NAME _____

DEVICE ID: | | | | |

FOR OFFICE USE ONLY
CO: | | AB: | | |
FACID: | | | | | | | | | |
SCC: | | | | | | | | | | | |

PLEASE COPY THIS FORM AS MANY TIMES AS NECESSARY FOR YOUR FACILITY.
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS FORM.

GENERAL INFORMATION:

*TYPE OF PLATING:* ____ *CHROME* *TYPE OF CHROME PLATING:* ____ *HARD PLATING*
____ *NICKEL* ____ *ANODIZING*
____ *CADMIUM* ____ *DECORATIVE*

TANK INFORMATION:

CURRENT *(TYPICAL OPERATING COND.):* | | | | | *AMPS* *(MAX. OPER. COND.):* | | | | | *AMPS*

OTHER INGREDIENTS: _____ % CYANIDE _____ % HYDROCHLORIC ACID _____ % HYDROFLUORIC ACID

AGITATION: ____AIR JETS _____ CFM.
____IMPELLER
____OTHER (SPECIFY) _____

FORM DELETED

REPORT EMISSIONS IN SECTION 2 OF CORE FORM PRO

*NAME:* _____ *DATE:* _____



ARB S-MP/89087

S-MP

# METAL PLATING SUPPLEMENTARY FORM INSTRUCTIONS

Copy the blank form as many time as you have plating tanks in your facility.

1. General Information

   For each tank, check the appropriate space(s) to indicate the type of metal plating performed.

2. Tank Information

   Report the amounts of electrical current used under both typical and maximum operating conditions. Report the bath's other ingredients, their concentrations, and the type of agitation, if any.

DELETED

EMISSION YEAR 19__

# AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT
## SUPPLEMENTAL PROCESS PARAMETER FORM
## STERILIZATION

FORM **S-ETO**

COMPANY NAME_____

PLEASE COPY THIS FORM AS MANY TIMES AS NECESSARY FOR YOUR FACILITY.
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS FORM.

FOR OFFICE USE ONLY
CO: | | AB: | |
FACID:
SCC:

*I. ETHYLENE OXIDE (ETO)*

| DEVICE ID | STERILIZER VOL.(CU FT) | ETO % OF GAS USED* 100% | 12% | OTHER | LBS OF ETO / CHARGE |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

*CALCULATE ETO GAS DENSITY (SEE INSTRUCTIONS)*

*II. OTHER LISTED GASES (OLG)*

| DEVICE ID | OTHER LISTED GAS | STERILIZER VOL (CU FT) | OLG % OF GAS USED | OLG DENSITY (LB/CU FT) | LBS OLG/ CHARGE |
|---|---|---|---|---|---|
| | *CFC-12* ** | | | | |
| | *FORMALDEHYDE* | | | | |
| | *PROPYLENE OXIDE* | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

SCC:

* - PLEASE REPORT IN SECTION II OF THIS FORM ANY OTHER STERILIZING GAS USED WHICH IS ALSO A LISTED SUBSTANCE
** - REPORT ANY OTHER CHLORINATED & BROMINATED FLUOROCARBONS IN THE SPACES PROVIDED

REPORT EMISSIONS IN SECTION 2 OF CORE FORM PRO

FORM DELETED

# STERILIZER SUPPLEMENTAL FORM INSTRUCTIONS

Copy the blank form as needed to report additional ETO sterilizers or additional listed gases.

## 1. ETO Sterilization

For each ETO sterilizer, report its device ID, interior volume (in cubic feet) and the percentage of ETO used in the sterilizing atmosphere. If either of the typical fractions of 100% or 12% (weight percent) are used, check the appropriate box; for other percentages, report them in the 5th column, "other."

Calculate the number of pounds of ETO per sterilizing cycle by multiplying the 3 quantities, sterilizer volume, sterilizer gas density (see table below), and ETO fraction (i.e., percentage/100). The table provides values for sterilizer gas density at the most common pressures and temperatures for actual sterilizer operating conditions. For pressures and/or temperatures other than those listed in the table, the density formula below the table may be applied.

Other Listed Gases

Follow the same procedure as that for ETO. In all cases, report the exact weight percentage and the density of the sterilizing gas in question, at the actual pressure and temperature inside the sterilizer. As with ETO, calculate and report pounds/cycle for each such gas.

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TABLE - Densities of Sterilizing Gases (lb/cu ft)

| Temperature (deg. F) | Typical Gas Mixtures & Pressures: 100% ETO 13.7 psia | 12% ETO/88% CFC-12 24.7 psia | 10% ETO/90% CO2 44 psia |
|---|---|---|---|
| 70 | 0.106106 | 0.485073 | 0.340500 |
| 100 | 0.100422 | 0.459087 | 0.322259 |
| 130 | 0.095316 | 0.435743 | 0.305873 |
| 140 | 0.093727 | 0.428481 | 0.300775 |

Facilities using sterilizing gases containing other listed substances must calculate the appropriate density. The formula below, which was used to calculate the densities in the table, may be used by facilities reporting emissions of sterilizing gases containing other listed substances.

Density (of sterilizer gas in lbs/cu ft) = $P(MW)/RT$

Where P = pressure in lb/sq ft
MW = molecular weight of sterilizing gas in lb/lb-mol
R = thermodynamic gas constant, 1545.3 ft-lb/lb-mol deg. R
T = temperature in deg. Rankine (deg. F + 460)

Core Form PRO

Complete one Core Form PRO for each sterilizer at the facility. The "Actual Emission Factor" for each listed gas used is the number of pounds/cycle for that gas. If there are controls on your sterilizer exhaust which permanently remove the listed gas from the atmosphere, please so indicate by selecting the appropriate controls code(s) from Table B-IV. This code(s), and the overall control efficiency, should be reported in the control equipment data field(s) in section 2 of Core Form PRO. When controls are used, the "Actual Emission Factor" is calculated by multiplying the number of pounds/cycle of each sterilizing gas by the quantity (1 minus the overall fractional control efficiency). Report the "Actual Emission Factor" in section 2 of Core Form PRO.

The appropriate process units are "cycles," PT057.

Using the operating schedule for each sterilizer, determine the annual number of sterilization cycles based on average operation, and the maximum number of cycles/hour.

Report the total yearly process rate in Section 1 of Core Form PRO as the total number of cycles/year. Similarly, report the maximum hourly rate as the maximum number of cycles/hour. To complete the emission information in Section 2 of Core Form PRO, multiply the average annual process rate and the maximum hourly process rate by the Actual Emission Factor to get the annual average emissions and the maximum hourly emissions, respectively, and fill in the appropriate boxes for each sterilizer and each listed gas used therein.

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# APPENDIX C

## FACILITY GUIDELINE INDEX
## ("FACILITY LOOK-UP TABLE")

### C-I
### RESPONSIBILITIES OF ALL FACILITIES

### C-II
### FURTHER RESPONSIBILITIES FOR SPECIFIC FACILITY CLASSES

## APPENDIX C-I
## RESPONSIBILITIES OF ALL FACILITIES

NOTHING IN THIS APPENDIX SHALL BE CONSTRUED AS REQUIRING THAT SOURCE TESTING BE CONDUCTED FOR SUBSTANCES SET FORTH IN THIS APPENDIX. FURTHER, IN CASES WHERE A SUBSTANCE SET FORTH HEREIN IS NOT PRESENT AT A PARTICULAR FACILITY, THE FACILITY OPERATOR SHALL NOT ATTEMPT TO QUANTIFY THE EMISSIONS OF SUCH SUBSTANCE, BUT SHALL PROVIDE ADEQUATE DOCUMENTATION TO DEMONSTRATE TO THE DISTRICT THAT THE POSSIBLE PRESENCE OF THE SUBSTANCE AT THE FACILITY HAS BEEN ADDRESSED AND THAT THERE ARE NO EMISSIONS OF THE SUBSTANCE FOR SPECIFIED REASONS.

Notes For Appendix C-I

(1) The following substance abbreviations are used throughout the index:

| | |
|---|---|
| BaP | = Benzo[a]Pyrene |
| CFC-113 | = Chlorinated fluorocarbon |
| EDB | = Ethylene dibromide |
| EDC | = Ethylene dichloride |
| ETO | = Ethylene oxide |
| Perc | = Perchloroethylene, Tetrachloroethylene |
| PCBs | = Polychlorinated biphenyls |
| PAHs | = Polycyclic aromatic hydrocarbons |
| POM | = Polycyclic organic matter (other than PAHs) |
| TCA | = 1,1,1-Trichloroethane, Methyl chloroform |
| TCE | = Trichloroethylene |

(2) The following Supplemental Process Parameter Reporting Form abbreviations are used throughout the index:

| | |
|---|---|
| S-CMB | = Supplemental Combustion Form |
| S-CT | = Supplemental Cooling Tower Form |
| S-ETO | = Supplemental ETO Sterilizers Form |
| S-MP | = Supplemental Metal Plating Form |
| S-UP | = Supplemental Use/Production Form |

(3) PAHs are composed of the following substances:

| | |
|---|---|
| Acenaphthene | |
| Acenaphthylene | |
| Anthracene | |
| Benz[a]anthracene | ** |
| Benzo[b]fluoranthene | ** |
| Benzo[k]fluoranthene | ** |
| Benzo[a]pyrene | ** |
| Benzo[g,h,i]perylene | |
| Chrysene | |
| Dibenzo[a,h]anthracene | ** |
| Fluoranthene | |
| Fluorene | |
| Indeno[1,2,3,-cd]pyrene | ** |
| Naphthalene | ** |
| Phenanthrene | |
| Pyrene | |

** listed substances

(4) Substances emitted by a particular device or process may not be limited to those listed in Facility Guideline Index. ALL FACILITIES ARE RESPONSIBLE FOR IDENTIFYING AND ACCOUNTING FOR ANY LISTED SUBSTANCE USED, MANUFACTURED, FORMULATED, OR RELEASED; THIS APPENDIX IS NOT AN EXHAUSTIVE LIST.

(5) Nitrosamines refer to the following listed substances:

Dialkylnitrosamines
4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK)
N-Methyl N'-nitro-N-nitrosoguanidine
p-Nitrosodiphenylamine
N-Nitrosodi-n-butylamine
N-Nitrosodiethanolamine
N-Nitrosodiethylamine
N-Nitrosodimethylamine
N-Nitrosodi-n-propylamine
N-Nitroso-N-ethylurea
N-Nitrosomethylethylamine
N-Nitroso-N-methylurethane
N-Nitrosomethylvinylamine
N-Nitroso-N-methylurea
N-Nitrosonornicotine
N-Nitrosopiperidine
N-Nitrosopyrrolidine
N-Nitrososarcosine

(6) This Facility Guideline Index is arranged in alphabetical order. The first part of the index, Appendix C-I, lists devices common to many industries and the second part of the index, Appendix C-II, lists industry types. Extensive cross-referencing has been incorporated into the index, particularly in Appendix C-II, to identify industries and processes known by alternative names. It may be necessary to consult alternate names to locate a given industry type. Furthermore, more than one industry type may apply to a given facility. Column four of the index summarizes the Supplemental Process Parameter reporting forms that are likely to be necessary for reporting emissions from a particular industry type. (If the Device/Process category is extensive some of the forms listed with a main category heading may not be necessary for all processes listed under the main category heading.)

APPENDIX C-I
RESPONSIBILITIES OF ALL FACILITIES

ALL FACILITIES ARE RESPONSIBLE FOR IDENTIFYING AND ACCOUNTING FOR ANY LISTED SUBSTANCE USED, MANUFACTURED, FORMULATED, OR RELEASED; THIS APPENDIX IS NOT AN EXHAUSTIVE LIST.

All Facilities shall account for the following devices and emitting processes and associated emissions, and shall account for ANY OTHER PROCESS EQUIPMENT THAT MAY BE A SOURCE OF RELEASE OF ANY LISTED SUBSTANCE:

| Device/Process | Types of Emissions | Specific Substances (see note 4) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| FUEL/WASTE COMBUSTION | | | |
| Boilers, Heaters, Kilns IC Engines, Furnaces | | | S-CMB |
| Coal-fired | Particulate metals including but not limited to: | Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Manganese, Mercury, Nickel, Radionuclides, Selenium, Zinc And any other listed metals | |
| | Other particulate-phase substances including but not limited to: | BaP & other PAHs*, Dibenzofurans, Dioxins, Phosphorus, POM | |
| | Gaseous products including but not limited to: | Acetaldehyde, Benzene, Dichlorobenzenes, EDC, EDB, Formaldehyde, Hydrogen chloride, Hydrogen fluoride, Phenols | |
| Oil-fired Residual Distillate | Gaseous and particulate substances including but not limited to: | Arsenic, BaP & other PAHs*, Benzene, Beryllium, Cadmium, Chromium, Copper, Dioxins, Formaldehyde, Lead, Manganese, Mercury, Nickel, POM, Radionuclides, Selenium, Zinc, Any other listed metals | |
| Waste | | Arsenic, Benzene, BaP & other PAHs*, Beryllium, Cadmium, Chloroform, Chromium, Copper, Dibenzofurans, Dioxins, EDB, EDC, Manganese, Mercury, Methylene chloride, Nickel, Perc, PCBs, POM, Toluene, TCA, TCE, Xylenes, Any other listed metals | |
| Natural gas-fired | Gaseous and particulate substances including but not limited to: | Acetaldehyde, Acrolein, Benzene, Formaldehyde, POM, BaP & other PAHs*, Propylene, Toluene, Xylenes, Any other listed metal (due to contamination or other means) | |

* See Note 3 (Notes appear at the beginning of this index.)

| Device/Process | Types of Emissions | Specific Substances (see Note 4) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| FUEL/WASTE COMBUSTION continued | | | |
| Process gas-fired | Gaseous and particulate substances including but not limited to: | Benzene, Formaldehyde, Phenol, Any other listed metal | |
| Solid Waste-fired | Gaseous and particulate substances including but not limited to: | Formaldehyde, Manganese, Nickel, Phenol | |
| Wood-fired | Gaseous and particulate substances including but not limited to: | Acetaldehyde, Arsenic, Benzene, BaP & other PAHs*, Chromium, Copper, Dioxins, PCBs, POM, And any pesticides used on wood | |
| Other Liquid-fired | From boiler corrosion inhibitor | Nitrosomorpholine, Any other listed metals | |
| Coke Ovens | | Benzene, BaP & other PAHs*, Benzyl chloride, Coke oven emissions, Cresols, Dibenzofurans, Dioxins, Nitrosamines, POM | S-CMB |
| Flares | Particulate metals including but not limited to: | Arsenic, Beryllium, Chromium, Lead, Mercury, Nickel Any other listed metal | S-CMB |
| | Other particulate-phase substances including but not limited to: | BaP, Dibenzofurans, Dioxins | |
| | Gaseous products including but not limited to: | Aldehydes, Benzene, Dichlorobenzenes, EDB, EDC | |
| Landfill Gas<br>Also see Boilers, Heaters, IC Engines, etc, Appendix C-I | | | |
| Incinerators - see ALL other combustion releases, but pay particular attention to the following: | | | S-CMB |
| | Particulate metals including but not limited to: | Arsenic, BaP & other PAHs*, Beryllium, Cadmium, Chromium, Copper, Manganese, Mercury, Nickel, POM, Selenium, Zinc, Any other listed metal | |
| | Other particulate-phase substances including but not limited to: | BaP & other PAHs*, Dibenzofurans, Dioxins, PCBs, POM | |
| | Gaseous products including but not limited to: | Benzene, Dichlorobenzenes, EDB, EDC, Hydrogen chloride, Hydrogen fluoride, Vinyl chloride | |

| Device/Process | Types of Emissions | Specific Substances (see Note 4) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Incinerators continued | | | |
| Cotton Gin Waste | | Arsenic | |
| Hazardous Waste | | Dioxins, Any other listed metals | |
| Hospital Waste | | Dioxins, Radionuclides, Any listed metals | |
| Municipal Refuse | | BaP & other PAHs*, Beryllium, Cadmium, Chromium, Manganese, Mercury, Nickel, POM | |
| Pathological | | Dioxins | |
| Scrap Wood | | BaP & other PAHs*, POM | |
| Sludge | | Acrolein, Arsenic, Asbestos, Beryllium, Cadmium, Chromium, Dioxins, Manganese, Mercury, Nickel, POM, PAHs*, Any other listed metals | |
| Solid/Biomass Waste | | Any listed metals | |
| Waste-To-Energy | | Acrolein, Dibenzofurans, Dioxins, Manganese, Nickel, POM, PAHs*, Any other listed metals | |
| SOLVENT USE | | | |
| Miscellaneous Use | | Acetaldehyde, Acrolein, Benzene, Carbon tetrachloride, CFC-113, Chlorobenzene, Chloroform, Cresols, Dimethyl sulfate, Dioxane, EDC, Mercury, Methanol, Methylene chloride, Nitrobenzene, Perc, Toluene, TCA, TCE, Xylenes, Any other listed chlorinated solvents | |
| Degreasing Operations | Gaseous and aerosol organic compounds including but not limited to: | Benzene, Carbon tetrachloride, Chlorinated fluorocarbon, Chlorobenzene, 1,4-Dioxane, Freons, Methylene chloride, Perc, Toluene, TCA, TCE, Any other listed substances | |
| Cleaning & Drying | | Chlorinated fluorocarbons | |
| Metal D'grs | | Methylene chloride, 1,4-Dioxane, TCA, TCE | |
| Oil, Wax, Fat Extracting | | Carbon tetrachloride, Dichloroethane, Methylene Chloride | |
| Photoresist Stripping | | Glycol ethers, Methylene chloride, Xylenes | |
| Vapor Degreasing | | Perc, TCE | |
| Fabric Finishing (Woven) | | 1,4-Dichlorobenzene | |
| Floor Wax | | Carbon tetrachloride | |
| Paint & Varnish Removal | | Dioxane, Methylene chloride | |
| Polish (Shoe, Furniture) | | Carbon tetrachloride | |

| Device/Process | Types of Emissions | Specific Substances (see Note 4) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| SOLVENT USE continued | | | |
| Rubber Cement | | Carbon tetrachloride | |
| Surface Coating | Gaseous and aerosol organic compounds including but not limited to: | Acetaldehyde, Benzene, Carbon tetrachloride, Chlorobenzenes, Chloroform, Cresols, Dioxane, Methanol, Methylene chloride, Michler's ketone, Nitrobenzenes, 2-Nitropropane, Perc, Phenol, Phthalic anhydride, Styrene, Toluene, TCA, TCE, Xylenes | |
| | From adhesives | Carbon tetrachloride, Chloroform, Methylene chloride, Toluene, TCE | |
| | From wood finishing | Dioxane, Methylene chloride, Perc, Toluene | |
| | From metal finishing | Perc, Toluene, TCA | |
| Resin Application | | Formaldehyde | |
| Coating Application | | | |
| Flashoff | | | |
| Baking/Curing | | | |
| Quenching | | | |
| Storage & Handling - see Liquid Storage & Transfer, Appendix C-I | | | |
| LIQUID STORAGE & TRANSFER (Fugitive Emissions) | | | |
| Pipelines | | | |
| Petroleum | Gaseous and aerosol fugitives From: joints, valves | Benzene, Gasoline vapors, Toluene, Xylenes | |
| | | Transported listed substances | |
| Process Vents | | | |
| Tanks | | | |
| Petroleum Products Tank Breathing | Gaseous and liquid petroleum products including but not limited to: | Benzene, EDC, Gasoline vapors, Toluene, Xylenes, Stored listed substances | |
| Tank Cars and Trucks | | | |
| Filling | Gaseous, liquid and volatile solids | | |
| Tank Breathing | including but not limited to: | Each pure organic stored or transferred that is a listed substance | |
| | | Each component of a mixture that is a listed substance | |
| Fugitives | Gaseous and aerosol organic compounds | Emissions vary according to substances | |
| Equipment Leaks | From: vents, tanks, condensors pumps, valves, compressors | involved in specific process | |

| Device/Process | Types of Emissions | Specific Substances (see Note 4) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| OTHER PROCESSES | | | |
| Contaminated Soil/Water Remediation | Chlorinated organics including: | Carbon tetrachloride, Chloroform, EDC, Methyl chloroform, Perc, TCA, TCE | |
| | Other organics including | Benzene, Chlorobenzene, Toluene, Xylenes | |
| Cooling Towers | | | |
| Comfort Cooling | Gaseous and aerosol releases possibly containing additives and including but not limited to: In part due to drift loss | Chloroform, Chromium, Manganese, Nickel, Any other additives | S-CT |
| Process Cooling | Gaseous and aerosol releases possibly containing additives and including but not limited to: In part due to drift loss | Chloroform, Chromium, Manganese, Nickel, Any other additives | |
| Drinking Water Trtment | | Chloroform | |
| Industrial Wastewater Treatment | Chlorinated organics including: | Carbon tetrachloride, Chloroform, EDC, Methylene chloride, Perc, TCA, TCE | |
| | Other organics including: | Benzene, Chlorobenzene, Toluene, Xylenes | |
| On-site Fuel Dispensing | Gaseous and aerosol releases including but not limited to: | Benzene, Dibromoethane, Dichloroethane, EDB, EDC, Gasoline vapors, Toluene, Xylenes | |
| Pesticide Use | | Arsenic, Carbon tetrachloride, Dibromoethane, 1,4-Dichlorobenzene, Dioxins, EDB, EDC, Lead, Nickel titanate, Zinc oxide | |
| Printing - see Solvent Use, Appendix C-I<br>Also see Printing & Publishing, Appendix C-II | | | |
| Sterilizers | | ETO, Formaldehyde, Lead, Toluene, Propylene oxide | S-ETO |
| Surface Coating | Pigments | Arsenic, Chromium oxide, Lead oxide, Mercury, Zinc oxide | |
| | Polymer & Resin Precursors Residues/Impurities | Acrylonitrile, 1,3-Butadiene, Ethyl acrylate, Formaldehyde, Phenol, Styrene, Vinyl chloride, Vinylidene chloride, Any other listed substances | |

| Device/Process | Types of Emissions | Specific Substances (see Note 4) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| OTHER PROCESSES, Surface Coating, continued | | | |
| | Additives - Curing agents, Surfactants, Defoamers, Thickeners, Film-control agents Plasticizers | Ammonia | |
| Wastewater Treatment | | Benzene, Chloroform, EDC, Methylene chloride, TCE, Vinyl chloride, Any other listed substances | |
| CONTROL EQUIPMENT | Emission reductions must be quantified: For each listed subst. & device | | |

## APPENDIX C-II
## FURTHER RESPONSIBILITIES FOR SPECIFIC FACILITY CLASSES

NOTHING IN THIS APPENDIX SHALL BE CONSTRUED AS REQUIRING THAT SOURCE TESTING BE CONDUCTED FOR SUBSTANCES SET FORTH IN THIS APPENDIX. FURTHER, IN CASES WHERE A SUBSTANCE SET FORTH HEREIN IS NOT PRESENT AT A PARTICULAR FACILITY, THE FACILITY OPERATOR SHALL NOT ATTEMPT TO QUANTIFY THE EMISSIONS OF SUCH SUBSTANCE, BUT SHALL PROVIDE ADEQUATE DOCUMENTATION TO DEMONSTRATE TO THE DISTRICT THAT THE POSSIBLE PRESENCE OF THE SUBSTANCE AT THE FACILITY HAS BEEN ADDRESSED AND THAT THERE ARE NO EMISSIONS OF THE SUBSTANCE FOR SPECIFIED REASONS.

Notes For APPENDIX C-II

(1) The following substance abbreviations are used throughout the index:

| | |
|---|---|
| BaP | = Benzo[a]Pyrene |
| CFC-113 | = Chlorinated fluorocarbon |
| EDB | = Ethylene dibromide |
| EDC | = Ethylene dichloride |
| ETO | = Ethylene oxide |
| PCBs | = Polychlorinated biphenyls |
| PAHs | = Polynuclear aromatic hydrocarbons |
| Perc | = Perchloroethylene, Tetrachloroethene |
| POM | = Polycyclic organic matter (other than PAHs) |
| TCA | = 1,1,1-Trichloroethane, Methyl chloroform |
| TCE | = Trichloroethylene |

(2) The following Supplemental Process Parameter Reporting Form abbreviations are used throughout the index:

| | |
|---|---|
| S-CMB | = Supplemental Combustion Form |
| S-CT | = Supplemental Cooling Tower Form |
| S-ETO | = Supplemental ETO Sterilizers Form |
| S-MP | = Supplemental Metal Plating Form |
| S-UP | = Supplemental Use/Production Form |

(3) PAHs are composed of the following substances:

| | |
|---|---|
| Acenaphthene | |
| Acenaphthylene | |
| Anthracene | |
| Benz[a]anthracene | ** |
| Benzo[b]fluoranthene | ** |
| Benzo[k]fluoranthene | ** |
| Benzo[a]pyrene | ** |
| Benzo[g,h,i]perylene | |
| Chrysene | |
| Dibenzo[a,h]anthracene | ** |
| Fluoranthene | |
| Fluorene | |
| Indeno[1,2,3,-cd]pyrene | ** |
| Naphthalene | ** |
| Phenanthrene | |
| Pyrene | |

** listed substances

(4) Substances emitted by a particular device or process may not be limited to those listed in Facility Guideline Index. ALL FACILITIES ARE RESPONSIBLE FOR IDENTIFYING AND ACCOUNTING FOR ANY LISTED SUBSTANCE USED, MANUFACTURED, FORMULATED, OR RELEASED; THIS APPENDIX IS NOT AN EXHAUSTIVE LIST.

(5) Nitrosamines refer to the following listed substances:

Dialkylnitrosamines
4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK)
N-Methyl N'-nitro-N-nitrosoguanidine
p-Nitrosodiphenylamine
N-Nitrosodi-n-butylamine
N-Nitrosodiethanolamine
N-Nitrosodiethylamine
N-Nitrosodimethylamine
N-Nitrosodi-n-propylamine
N-Nitroso-N-ethylurea
N-Nitrosomethylethylamine
N-Nitroso-N-methylurethane
N-Nitrosomethylvinylamine
N-Nitroso-N-methylurea
N-Nitrosonornicotine
N-Nitrosopiperidine
N-Nitrosopyrrolidine
N-Nitrososarcosine

(6) This Facility Guideline Index is arranged in alphabetical order. The first part of the index, Appendix C-I, lists devices common to many industries and the second part of the index, Appendix C-II, lists industry types. Extensive cross-referencing has been incorporated into the index, particularly in Appendix C-II, to identify industries and processes known by alternative names. It may be necessary to consult alternate names to locate a given industry type. Furthermore, more than one industry type may apply to a given facility. Column four of the index summarizes the Supplemental Process Parameter reporting forms that are likely to be necessary for reporting emissions from a particular industry type. (If the Industry/Emitting Process category is extensive some of the forms listed with a main category heading may not be necessary for all processes listed under the main category heading.)

## APPENDIX C-II
## FURTHER RESPONSIBILITIES FOR SPECIFIC FACILITY CLASSES

**ALL FACILITIES ARE RESPONSIBLE FOR IDENTIFYING AND ACCOUNTING FOR ANY LISTED SUBSTANCE USED, MANUFACTURED, FORMULATED, OR RELEASED; THIS APPENDIX IS NOT AN EXHAUSTIVE LIST.**

If a facility falls within one or more of the following specific industry types, the facility operator shall account for the following devices and emitting processes, fugitive releases, and their associated emissions, and shall account for ANY OTHER PROCESS EQUIPMENT THAT MAY BE A SOURCE OF RELEASE OF ANY LISTED SUBSTANCE:

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Specific Substances (see Note 4) | Supplemental Processes Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Adhesives Application - see Solvent Use and Other Processes, Appendix C-I | | | |
| Adhesives Mfg - see Chemical Mfg, Appendix C-II | | | |
| Aerospace Products Mfg. | | | |
| Research - see Chemical Mfg and Research & Development, Appendix C-II | | | |
| Surface Coating - see Solvent Use & Other Processes, Appendix C-I | | | |
| Agricultural Production | | Ammonia, Chlorine, EDB, Hydrogen Sulfide, Lead, Silica, All listed metals | S-CMB |
| Agricul Chem Mfg - see Chemical Mfg, Appendix C-II | | | |
| Cotton Ginning | | Ammonia, Arsenic | |
| Pesticide Use - see Other Processes, Appendix C-I | | | |
| Waste Burning - see Combustion, Appendix C-I | | | |
| Aircraft Mfg - see Transportation Equipment Mfg, Appendix C-II | | | |
| Airports - see Transportation Stations, Appendix C-II | | | |
| Air Stripping - see Contaminated Soil/Water Remediation, Appendix C-I | | | |
| Almond Processing | | Arsenic | S-CMB |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Apparel Mfg - see Textile Mill, Appendix C-II | | | |
| Arsenic Mining - see Mining Non-Metals, Appendix C-II | | | |
| Artificial Flower Mfg | | Toluene | |
| Asbestos Milling/Processing - see Clay, Glass, & Stone Prod, Appencix C-II | | | |
| Asbestos - see Mining Non-Metals, Appendix C-II | | | |

* See Note 3 (Notes appear at the beginning of this index.)

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Asphalt Mat'ls Mfg | | | |
| Asphalt Felts & Ctgs - see Petroleum & Coal Products, Appendix C-II | | | |
| Asphaltic Concrete Prod (Including Asphalt Paving Mat'ls Mfg) | | | S-CMB |
| Processes Including: | | | |
| Batch Plants and Continuous Plants | Particulate Phases Substances | Asbestos, Benzene, Formaldehyde, Organics, POM, PAHs*, Toluene, TCA, Xylenes, All listed metals | |
| Paving Operations | | | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Surface Coating - see Solvent Use & Other Processes, Appendix C-I | | | |
| Storage & Handling - see Liquid Storage & Transfer, Appendix C-I | | | |
| Auto Repair, Svc's & Garages - see Transportation Equipment, Appendix C-II | | | |
| Auto Parts Mfg - see Transportation Equipment, Appendix C-II | | | |
| Battery Production - see Metal Smelters, Appendix C-II | | | |
| Beryllium Mining - see Metal Smelters, Appendix C-II | | | |
| Bicycle Mfg/Rpr - see Transportation Equipment, Appendix C-II | | | |
| Boat Bldg/Rpr - see Transportation Equipment (Ship & Boat Bldg), Appendix C-II | | | |
| Box Mfg (folding paperboard type) - see Wood Product Mfg, Paper, Paperboard Containers & Boxes, Appendix C-II | | | |
| Bulk Plants and Terminals | Gaseous and aerosol releases including but not limited to: | Benzene, Gasoline vapors, Specific Stored Substances listed in Appendix A-I or A-II | |
| Barrel Breathing | From fixed roof tanks | | |
| Barrel Filling | From var. vapor sp. tanks | | |
| Barrel Standing | From floating roof tanks | | |
| Barrel Withdraw | From floating roof tanks | | |
| Valves, Vapor Collect/Control | From flanges, pumps, and tank trucks | | |
| Burial Caskets Mfg | | Toluene | |
| Burning of Solid Waste (Open) - see Combustion, Appendix C-I | | | |
| Bus Mfg/Rpr - see Transportation Equipment, Appendix C-II | | | |
| Button Mfg | | Formaldehyde, Styrene, Toluene, TCE | |
| Cadmium Plating - see Metal Plating, Appendix C-II | | | |
| Camper & Trailer Mfg - see Transportation Equipment, Appendix C-II | | | |
| Can Mfg - see Metal Product Fabrication, Appendix C-II | | | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Canned Food Product Mfg. | | | S-CMB, S-ETO |
| Can Fabrication - see Metal Product Fabrication, Metal Cans, Appendix C-II | | | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Food Processing - see Food Product Mfg, Appendix C-II | | | |
| Paper Labeling - see Wood Product Mfg, Appendix C-II | | | |
| Printing - see Printing & Publishing, Appendix C-II | | | |
| Sterilization - see Other Processes, Appendix C-I | | | |
| Surface Coating - see Solvent Use And Other Processes, Appendix C-I | | | |
| Car Mfg/Rpr - see Transportation Equipment, Appendix C-II | | | |
| Carbon Black & Charcoal Mfg - see Chemical Mfg, Carbon, Appendix C-II | | | |
| Cement Mfg - see Clay, Glass, & Stone Prod Mfg, Appendix C-II | | | |
| Ceramic Plants | | Beryllium | S-CMB |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Charcoal Mfg - see Carbon, Appendix C-II | | | |
| Chemical Mfg | Gaseous and aerosol releases including but not limited to: From process reactor vessel fugitive, storage, handling, ducted building exhaust | Any of the following types of chemicals, listed in Appendix A-I or A-II: FEEDSTOCK CHEMICAL(S) MANUFACTURED CHEMICAL(S) BY-PRODUCT CHEMICALS | S-CMB, S-CT, S-ETO, S-UP |
| Also see Combustion, Other Processes, Solvent Use, and Storage & Handling, Appendix C-I | | | |
| Miscellaneous | | Ammonia, Bis(chloromethyl) ether, Carbon tetrachloride, Chlorine, Chloroform, Copper, Cresol, ETO, Formaldehyde, Hydrogen chloride, Lead, Methylene chloride, Naphthalene, Phenol, Toluene, Toluene diisocyanate, TCA | |
| Acids Mfg | | Acetaldehyde, Acrolein, Copper, Cresols, Hydrochloric acid, Phenol, Toluene, Xylenes | |
| Adhesives & Sealants Mfg | | Ammonia, Arsenic, Asbestos, Benzene, 1,4-Dioxane, EDC, Lead, Methylene chloride, Nitrosomorpholine, Toluene, TCA, TCE, Xylenes | |
| Aerospace Chem Mfg | | Chloroform, EDC, Phosgene, Toluene | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Chemical Mfg continued | | | |
| Agricultural Chem Mfg | | | |
| Miscellaneous | | Acetaldehyde, Acrolein, Acrylonitrile, Ammonia, Arsenic, Benzene, 1,3-Butadiene, Cadmium, Carbon tetrachloride, Chlorine, Chlorobenzene, Chloroform, Copper, Cresol, 1,4-Dichlorobenzene, Dimethyl sulfate, EDC, EDB, ETO, Formaldehyde, Hexachlorobenzene, Hexachlorocyclopentadiene, Hydrazine, Hydrogen chloride, Hydrogen sulfide, Lead, Maleic anhydride, Mercury, Methyl bromide, Methyl isocyanate, Methylene chloride, Naphthalene, Phenol, Phosgene, Phthalic anhydride, Vinyl chloride, Xylenes, Zinc, Zinc oxide | |
| Alkali Mfg - see Chemical Mfg, Industrial Inorganics, Appendix C-II | | | |
| Fertilizers | | Ammonia, Hydrogen sulfide, Mercury, Metal compounds, Methanol, Phosphorus, Sodium hydroxide | |
| Nitrogenous | | Ammonia, Cadmium, Hydrogen sulfide, Lead Nickel | |
| Phosphatic | | Ammonia, Arsenic, Cadmium, Hydrogen sulfide | |
| Mixing Only | | Ammonia | |
| Sodium Arsenate | | Arsenic | |
| Aldehyde Mfg | | Aldehydes, Toluene | |
| Anti corrosives Mfg | | Cresols, Hydrazine | |
| Bases Mfg | | Ammonia, Hydrazine, Sodium hydroxide | |
| Carbon Black & Charcoal Mfg | | Ammonia, BeP & other PAHs*, Formaldehyde, Hydrogen sulfide, POM Any other listed metals | S-CMB |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Chemical Preparations | | Ammonia, Arsenic, Benzene, Cadmium, Chlorine, Chromium, Copper, Formaldehyde, Hexachlorocyclopentadiene, Hydrazine, Hydrogen chloride, Hydrogen sulfide, Lead, Maleic anhydride, Methyl isocyanate, Methyl methacrylate, Perc, Radionuclides, Styrene, Toluene, TCE, Vinyl chloride, Xylenes, Zinc, Zinc oxide | |
| Chlorine (Electrolytic) Production | From: hydrogen stream | Mercury | |
| Also see Chem Mfg, Indust Inorg, Alkalies & Chlorine, Appendix C-II | | | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Chemical Mfg continued | | | |
| Drug/Pharmaceutical Mfg | | | |
| Miscellaneous | | Acrylonitrile, Allyl chloride, Ammonia, Arsenic, Benzene, Benzyl chloride, Carbon tetrachloride, Chlorine, Chlorobenzene, Chloroform, Chromium, 1,4-Dichlorobenzene, Dimethyl sulfate, 1,4-Dioxane, Epichlorohydrin, EDB, EDC, Formaldehyde, Hydrazine, Hydrogen chloride, Lead, Mercury, Methanol, Methyl methacrylate, Methylene chloride, Perc, Phenol, Phosgene, Styrene, Toluene, TCA, TCE, Vinylidene chloride, Xylenes, Zinc, Zinc oxide | |
| Biological Products | | Arsenic, Benzene, EDC, Lead, TCA | |
| Medicinals & Botanicals | | Acrylonitrile, Ammonia, Arsenic, Benzene, Carbon tetrachloride, Chloroprene, Chlorine, EDC, Formaldehyde, Hydrogen chloride, Lead, Mercury, Methyl bromide, Methyl methacrylate, Methylene chloride, Phenol, Styrene, Toluene, Vinylidene chloride | |
| Blender | | | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Drying Ovens | | | |
| Formulator | | | |
| Other Process Reactors | | | |
| Solvents - see Solvent Use, Appendix C-I | | | |
| Sterilizers - see Sterilizers, Appendix C-I | | | |
| Tanks - see Liquid Storage & Transfer, Appendix C-I | | | |
| Dyes Mfg | | Benzene, Benzidine, Benzyl chloride, Chlorobenzenes, Chloroform, Cresols, Dichloromethane, Dimethyl sulfate, Dioxane, C.I. Direct Black 38, Hydrazine, POM, PAHs*, TCE, Vinyl chloride, Vinylidene chloride | |
| Elastomer & Surfactant Mfg | | | |
| Batch Processes | | Epichlorohydrin | |
| Ethers Mfg | | Dimethyl sulfate, Nitrobenzene, Propylene oxide | |
| Ethylene dichloride Pro | | | |
| Oxychlorination | From: vents, storage | Carbon tetrachloride, Chloroform, ethylene dichloride | |
| Air & Oxygen Proc | | | |
| Explosives | | Acetaldehyde, Ammonia, Arsenic, Formaldehyde, Lead, Mercury, Nitrobenzene, Phenol, Toluene | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Chemical Mfg continued | | | |
| Fertilizers - see Chemical Mfg (Agricultural), Appendix C-II | | | |
| Flame Retardants Mfg | | Hexachlorocyclopentadiene | |
| Fluorocarbon Mfg | | Carbon Tetrachloride, Chloroform | |
| Reactor Venting<br>Distillation<br>Storage | From: vents, storage | | |
| Indust Inorg Chem Mfg | | | |
| Miscellaneous | | Acetaldehyde, Acrolein, Acrylonitrile, Allyl chloride, Ammonia, Arsenic, Asbestos, Benzene, Benzidine, Benzyl chloride, 1,3-Butadiene, Cadmium, Carbon tetrachloride, CFC 113, Chlorine, Chlorobenzene, Chloroform, Chromium, Copper, 1,4-Dichlorobenzene, Epichlorohydrin, EDB, EDC, ETO, Formaldehyde, Freon 113, Gasoline vapors, Hexachlorobenzene, Hexachloropentadiene, Hydrogen chloride, Hydrogen sulfide, Lead, Maleic anhydride, Manganese, Mercury, Methyl isocyanate, Methyl methacrylate, Methylene chloride, Naphthalene, Nickel, Nitrobenzene, Nitrosomorpholine, Perc, Phenol, Phosgene, Phosphorus, Phthalic anhydride, PCBs, Propylene oxide, Radionuclides, Styrene, Toluene, Toluene diisocyanate, TCA, TCE, Vinyl chloride, Vinylidene chloride, Xylenes, Zinc, Zinc oxide | |
| Alkalies & Chlorine | | Ammonia, Arsenic, Asbestos, Benzene, 1,3-Butidiene, Carbon tetrachloride, Chlorine, Chlorobenzene, Chloroform, Formaldehyde, Hydrogen chloride, Mercury, Phosgene, Toluene, TCE, Vinyl chloride, Vinylidene chloride | |
| Cyclic Crudes & Intermediates | | Acetaldehyde, Acrolein, Acrylonitrile, Ammonia, Arsenic, Benzene, Benzidine, Benzyl chloride, 1,3-Butadiene, Carbon tetrachloride, Chlorine, Chlorobenzene, Chloroform, Chromium, Cresol, Dibenzofurans, ans, 1,4-Dichlorobenzene, 3,3'-Dichlorobenzidene, Dimethyl sulfate, 1,4-Dioxane, EDC, Formaldehyde, Gasoline vapors, Hexachlorobenzene, Hydrazine, Hydrogen chloride, Hydrogen sulfide, Maleic anhydride, Methyl bromide, Methyl isocyanate, Methylene chloride, Naphthalene, Nitrobenzene, | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Chemical Mfg, Cyclic Crudes, continued | | | |
| | | Nitrosomorpholine, Pentachlorophenol (Chlorophenols), Phenol, Phosgene, Phthalic anhydride, POM, PAHs*, Styrene, Toluene, Toluene diisocyanate, TCE Xylenes, Vinyl chloride | |
| Gum & Wood Chems | | Arsenic, Benzene, BaP & other PAHs*, Chromium, Formaldehyde, Naphthalene, POM, Toluene diisocyanate | |
| Wood Chem Mfg<br>Cresol<br>Cresylic Acid<br>Phenol | | Cresols, Phenol, Xylenes | |
| Industrial Gases | | Arsenic, Beryllium, Carbon tetrachloride, ETO, Hydrogen chloride, Mercury | |
| Pigments, Inorgan | | Ammonia, Arsenic, Cadmium, Chloroform, Chromium, Copper, Dimethyl sulfate, 1,4-dioxane, Hydrazine, Hydrogen chloride, Lead, Zinc, Zinc oxide | |
| Inks<br>Miscellaneous<br>Printing | | Dioxane, Toluene<br>Ammonia, Arsenic, Benzene, Cadmium, Copper, Formaldehyde, Lead, Perc, Toluene, Vinyl chloride, Xylenes, Zinc | |
| Metal Chelating Agent Mfg<br>Corrosion Inhib,<br>Metal Treatment Chems | | Cupferron, Thiourea | |
| Methionide Analogs Prod (poultry feed supp.) | | Acrolein | |
| Methyl Chloroform Prod | From: hydrochlorinated vent condenser, steam stripper vent condenser | Ethylene dichloride | |
| Military Chem Prod | | Chloroform, EDC, Phosgene, Toluene | |
| Monomers<br>Miscellaneous | | Acetaldehyde, Acrylonitrile, Ammonia, Benzene, 1,3-Butadiene, Carbon tetrachloride, Chlorine, Chlorofluorocarbons, Dioxane, Epichlorohydrin, Ethyl chloride, EDB, EDC, ETO, Formaldehyde, Glycol ethers, Hydrochloric acid, Isocyinates, Maleic anhydride, Methyl bromide, Methyl methacrylate, Methylene chloride, Naphthalene, Nitrobenzene, Perc, Phenol, Phthalic anhydride, | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Chemical Mfg, Monomers, continued | | | |
| Vinyl Chloride | From: heavy ends stream | PCBs, Propylene, Propylene oxide, Sodium hydroxide, Styrene, Toluene, TCA, TCE, Trichlorophenol, Urethane, Vinyl chloride, Vinylidene chloride, Xylenes, Zinc | |
| | | EDC | |
| Nuclear Fuel Fabricat'n | | Radionuclides | |
| Organic Chem Mfg | | Acrylamide, Acrylonitrile, Carbon tetrachloride, Chlorobenzene, Chloroform, Methylene chloride, Perc, Toluene | |
| Paints & Allied Prod's | | Acetaldehyde, Ammonia, Arsenic, Asbestos, Benzene, Butadiene, Carbon tetrachloride, Chloroform, Chlorophenols, Chromium, Copper, Cresol, 1,4-Dioxane, Epichlorohydrin, Formaldehyde, Glycol ethers, Lead, Mercury, Methyl methacrylate, Methylene chloride, Naphthalene, Nickel, Nitrobenzene, Perc, Phenol, Phthalic anhydride, Styrene, Toluene, Toluene diisocyanate, TCA, TCE, Zinc, Zinc oxide | |
| Pigment | | Benzyl chloride, Cadmium, Toluene | |
| Perfume | | Dimethyl sulfate | |
| Pesticides, Herbicides, Fungicides Mfg | | Arsenic, Benzene, Carbon tetrachloride, Chlorine, Chlorobenzene, Chloroform, Chloropicrin, Cresols, 1,4-Dichlorobenzene, Dimethyl sulfate, Dioxins, EDB, Hexachlorocyclopentadiene, Hydrazine, Hydrocyanic acid, Isocyanates, Lead arsenate, Methyl bromide, Naphthalene, N-Nitrosodimethylamine, Phenol, Phosphorus | |
| Photographic Chemicals Mfg | | Methylene chloride | |
| Pigment (metal containing) Mfg<br>Also see Chem Mfg, Inks and Paints, Appendix C-II | | Cadmium, Chromium, Copper, Lead, Nickel, Zinc | |
| Plastics Materials & Synthetics | | Acrylamide, Acrylonitrile, Acrolein, Ammonia, Arsenic, Benzene, Benzidine, Cadmium, Carbon tetrachloride, Chlorine, Chlorobenzene, Chloroform, Chromium, Cresols, Dichloromethane, Dioxins, Formaldehyde, Hydrazine, Hydrocyanic acid, Hydrochloric acid, Hydrogen fluoride, Hydrogen sulfide, Isocyanates, Mercury, Methylene chloride, Nickel, Perc, Phenol, Phosgene, POM, PAHs*, Sodium hydroxide, Toluene, TCE, Vinyl chloride, Vinylidene chloride, Zinc | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Chemical Mfg, Plastics, continued | | | |
| Cellulosic Man-Made Fibers | | Ammonia, Arsenic, Benzene, Chlorine, EDC, Hydrogen chloride | |
| Organic Fibers, noncellulosic | | Acrylonitrile, Copper, Dimethyl sulfate, EDC, Toluene diisocyanate, Vinylidene chloride | |
| Plastics/Resins | | Acetaldehyde, Acrolein, Acrylonitrile, Allyl chloride, Ammonia, Arsenic, Asbestos, Benzene, 1,3-Butadiene, Cadmium, Carbon tetrachloride, Chlorine, Chloroethane, Cresol, Epichlorohydrin, EDC, ETO, Formaldehyde, Gasoline vapors, Hydrogen chloride, Hydrogen sulfide, Lead, Maleic anhydride, Mercury, Methyl methacrylate, Methylene chloride, Nitrobenzene, Perc, Phenol, Phosgene, PCB, Propylene oxide, Styrene, Toluene, Toluene diisocyanate, TCE, Vinyl chloride, Vinylidene chloride, Xylenes, Zinc oxide | |
| Resin Mfg. | | Acrylamide, Acrylonitrile, Ammonia, Benzene, Bis(chloromethyl) ether, Cresols, Dioxins, Epichlorohydrin, Formaldehyde, Hexachlorocyclopentadiene, Maleic anhydride, Phenol, Vinylidene chloride, Xylenes | |
| Rubber Product'n & Compounding | Gaseous, Aerosol, & Particulate releases including but not limited to: | | |
| Synthetic Monomers | | Acrylonitrile, 1,3-Butadiene, Chloropyrene, Epichlorohydrin, Ethyl acrylate, EDC, ETO, Propylene, Styrene | |
| Retardants | | n-Nitrosodiphenylamine, Phthalic anhydride | |
| Catalysts | | Nickel | |
| Solvents | | Toluene | |
| Miscellaneous | | Acetaldehyde, Acrylonitrile, Allyl chloride Ammonia, Benzene, Benzidine, 1,3-Butadiene, Carbon tetrachloride, Chlorine, Chloroform, Chloroprene, 3,3-Dichlorobenzidine, Epichlorohydrin, EDC, Hydrogen chloride, Lead, Maleic anhydride, Methylene chloride, Nitrosomorpholine, Perc, Sodium hydroxide, Styrene, Toluene, Toluene diisocyanate, Vinylidene chloride | |
| Also see Chem Mfg, Monomers, Appendix C-II | | | |
| Synthetic Fibers | | Hydrogen sulfide | |
| Polish & Wax Mfg | | Chloroform, Dioxane, Nitrosomorpholine | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Chemical Mfg continued | | | |
| Preservatives, disinfectants, biocides - | | Cresols, Formaldehyde, Mercury, Phenol, 2,4,5-Trichlorophenol, Zinc Oxide | |
| Rubber, Non-Vulcanized, Mfg | | Dioxins, Formaldehyde, Phenols | |
| Rubber Compounding | Processing Aids | Zinc | |
| | Accelerators | Ethylene thiourea, n-Nitrosodimethylamine, Zinc | |
| | Age Restorers | Nickel, Phenol | |
| | Vulcanizing Agents | Lead, Selenium, Zinc | |
| | Accelerator Activators | Zinc, Lead, Ammonia | |
| Solvents Mfg | | Chloroform, Dioxins, Formaldehyde | |
| Soap, Cleaners, & Toilet Goods | | Glycol ethers, Methanol, Dioxane | |
| Soap & Detergent Mfg | | Ammonia, Chlorine, Hydrogen chloride | |
| Miscellaneous | | Benzene, EDC, ETO, Formaldehyde, Hydrogen sulfide, Methyl methacrylate, Toluene | |
| Optical Brightners | | Nitrosomorpholine | |
| Polishes & Sanitation Goods | | Ammonia, Arsenic, Benzene, Carbon tetrachloride, Chlorine, Chloroform, Cresol, 1,4-Dichlorobenzene, 1,4-Dioxane, Epichlorohydrin, Formaldehyde, Hydrogen chloride, Methylene chloride, Nitrobenzene, Perc, Toluene, TCA, TCE, Zinc, Zinc oxide | |
| Surface Active Agts | | Benzene, Benzyl chloride, 1,4-Dioxane, Propylene oxide, Toluene, Zinc, Zinc oxide | |
| Toilet Preparations | | Acetaldehyde, Acrolein, Ammonia, Arsenic, Benzene, Benzyl chloride, CFC-113, Dimethyl sulfate, 1,4-Dioxane, Formaldehyde, Methylene chloride, Perc, Toluene, TCA, TCE, Zinc, Zinc oxide | |
| Textile Chemical Mfg | | Acetamide, 2,4-Diaminoanisole, 2,4-Diaminoanisole sulfate, Urethane | |
| Varnish Mfg | | Benzene, Dioxane | |
| (High)-Vinylidene Chloride Copolymer Fabric Process | | Vinylidene Chloride | |
| Wax Mfg - see Polish Mfg, Appendix C-II | | | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Chemical Mfg continued | | | |
| Wood Chem Mfg - see Chem Mfg, Indus Inorgan, Gum & Wood, Appendix C-II | | | |
| Chemicals, Sales | | Ammonia, Benzene, 1,3-Butadiene, Hydrogen chloride, Methylene chloride, Styrene, Toluene, TCA, Vinyl chloride | |
| Storage & Handling - see Liquid Storage & Transfer, Appendix C-I | | | |
| Chrome Plating - see Metal Plating, Appendix C-II | | | |
| Clay, Glass & Stone Pro | | | |
| Miscellaneous | | Ammonia, Arsenic, Cadmium, Chlorine, Chromium, Hydrogen chloride, Lead, Mercury, Nickel, Silica, Toluene, TCA, TCE | S-CMB, S-CT |
| Abrasive Products | | Ammonia, Cadmium, Chlorine, Chromium, Formaldehyde, Hydrogen chloride, Lead, Manganese, Methylene chloride, Perc, Phenol, Styrene, Toluene, TCA, Xylenes, Zinc | |
| Asbestos Mill/Processing | | Asbestos, Benzene, Chromium, Copper, Nickel, Silica Formaldehyde, Hydrogen sulfide, Naphthalene, TCA, Xylenes | |
| Cement Products | | | |
| Floor Tile | | | |
| Friction Material | | | |
| Textiles | | | |
| Cement Mfg | Particulate, Gaseous, Aero Emis including but not limited to: From stacks, feed to mill & air separator, kiln, dryers, grinders | Asbestos, BaP, Benzene, Beryllium, Cadmium, Chromium, Copper, Formaldehyde, Hydrogen chloride, Lead, Manganese, Nickel, PCBs, POM, PAHs*, Zinc, All listed metals | S-CMB |
| Clinker Cooler | | | |
| Combustion Processes | | Benzene, Formaldehyde, Hydrogen chloride, PCBs, POM, PAHs*, All listed metals | |
| Also see Combustion, Appendix C-I | | | |
| Dry Processes | | | |
| Hydraulic | | Arsenic, Cadmium, Chlorine, Chromium, Copper, Hydrogen chloride, Lead, Mercury, Nickel, Toluene, Zinc | |
| Wet Process | | | |
| Clay Products, Structrl | | | |
| Brick & Structrl Clay Tile | | Arsenic, Beryllium, Lead | |
| Ceramic Wall & Floor Tile | | Arsenic, Beryllium, Lead | |
| Clay Refractories | | Beryllium, Chromium, Mineral fibers | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Clay, Glass & Stone Pro continued | | | |
| Concrete, Gypsum, & Plaster Products | | | |
| Concrete Block & Brick | | Chromium, Styrene | |
| Concrete Products | | Ammonia, Chromium, Gasoline vapors, Toluene, Zinc | |
| Ready-mixed Concrete | | Asbestos, Hydrogen sulfide | |
| Lime | | Mercury | |
| Cut Stone & Stone Prod | | TCE | |
| Flat Glass | | Ammonia, Arsenic, Cadmium, Chlorine, Chromium, Hydrogen, Nickel, Toluene | |
| Gaskets, Packing, & Sealing Devices | | Ammonia, Asbestos, Chlorobenzene, Gasoline vapors, Hydrogen chloride, Lead, Toluene, TCE, Zinc | |
| Glass & Glassware, Pressed & Blown | | Ammonia, Arsenic, Cadmium, Chlorine, Chromium, Formaldehyde, Hydrogen chloride, Lead, Mercury, Methylene chloride, Nickel, Perc, Styrene, Toluene, TCA | |
| Glass Container Mfg | From glass furnace | Arsenic | |
| | | Arsenic, Chlorine, Hydrogen chloride, Methylene chloride | |
| Minerals, Ground or Treated | | Chlorine, Chromium, Copper, Gasoline vapors, Hydrogen chloride | |
| Mineral Wool Prod | | Ammonia, Carbon tetrachloride, Formaldehyde, Mineral fibers, Phenol | |
| Nonclay Refractories | | Ammonia, Beryllium, Chromium, Formaldehyde, Hydrogen chloride, Mineral fibers, Phenol, Zinc, Zinc oxide | |
| Nonmetallic Mineral Prod | | Chlorine, Copper, Hydrogen chloride, Mineral fibers, Styrene, Toluene | |
| Pottery & Related Prod | | Lead, TCA | |
| Vitreous Plumbing Fixtures | | Styrene, Toluene | |
| Fine Earthen Food Utensils | | Ammonia, Beryllium, Copper, Hydrogen sulfide, Lead, Methyl bromide, Naphthalene, Perc, Toluene, TCE, Zinc | |
| Purchased Glass Products | | Ammonia, Toluene, TCE, Xylenes | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Other Processes - see Other Processes, Appendix C-I | | | |
| Coal Combustion - see Combustion, Appendix C-I | | | |
| Coal, Wholesaling | | Zinc, Zinc oxide | |
| Coke Combustion - see Combustion, Appendix C-I | | | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Coke Production<br>Also see Metal Smelters, Appendix C-II | | POM, PAHs*, Toluene | S-CMB |
| Colleges & Universities<br>Miscellaneous | | Benzene, Carbon tetrachloride, Chloroform, Methylene chloride, Dioxane, Formaldehyde, Mercury, Nitrobenzene, Phenol, Toluene, TCA, Xylenes, Any other listed substance | S-CMB, S-CT, S-ETO, S-UP |
| Also see Chem Mfg, Appendix C-II<br>Combustion, Appendix C-I<br>Research & Development, Appendix C-II<br>Solvent Use, Appendix C-I | | | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Commercial/Institutional Combustion - see Combustion, Appendix C-I | | | |
| Cooling Towers - see Other Processes, Appendix C-I | | | |
| Correctional Institutions - see Combustion, Appendix C-I | | | |
| Cotton Ginning - see Agricultural Prod, Appendix C-II | | | |
| Crop Production - see Agricultural Prod, Appendix C-II | | | |
| Dry Cleaning Operations | | Chlorinated Fluorocarbon, EDC, Perc, Toluene, TCA, TCE | |
| Dyeing of Textiles | Gaseous, aerosol, and particulate releases, including but not limited to:<br>Due to toxics in the solutions<br>Fixatives<br>Oxidizing Agents<br>Dyeing Aids | Dyes - Auramine, Direct Black 38, Copper, Chromium<br>Copper, Chromium<br>Chromium<br>Formaldehyde, Perc, Sodium hydroxide (caustic soda) | S-CMB |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Elec. or Nat'l Gas Service<br>Combustion Processes - see Combustion, Appendix C-I<br>Cooling Towers - see Other Processes, Appendix C-I | | TCA | S-CMB, S-CT |
| Electrical Assembly Cleaning - see Degreasing, Appendix C-I | | | |
| Electrical & Electronic Equip<br>Miscellaneous | | Freon 113, Methylene chloride, Perc, TCA, TCE | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Electric & Electronic Equip continued | | | |
| Communication Equipment | | | |
| Radio & TV Communication Equipment | | Ammonia, Benzene, Chlorine, Copper, Formaldehyde, Hydrogen chloride, Hydrogen sulfide, Lead, Methylene chloride, Perc, Toluene, Toluene diisocyanate, TCA, TCE, Xylenes, Zinc | S-CMB |
| Telephone & Telegraph Apparatus | | Ammonia, Copper, Formaldehyde, Hydrogen chloride, Methylene chloride, Perc, Styrene, Toluene, TCA, TCE, Xylenes | |
| Electric Distrib Equip | | Ammonia, Naphthalene, Toluene, TCA, TCE | |
| Transformers | | Ammonia, Beryllium, Hydrogen chloride, Lead, Methylene chloride, Naphthalene, Perc, PCB, Toluene, TCA, TCE, Vinyl chloride, Xylenes, Zinc oxide | |
| Switchgear & Switchboard Apparatus | | Ammonia, Formaldehyde, Hydrogen chloride, Perc, Toluene, TCA, TCE | |
| Electrical Industrial Apparatus | | Ammonia, Arsenic, BaP, Copper, Hydrogen chloride, Lead, Mercury, Perc, PCB, Toluene, TCA, TCE | |
| Motors & Generators | | Ammonia, Formaldehyde, Hydrogen chloride, Lead, Naphthalene, Phenol, Styrene, Toluene, TCA, TCE | |
| Industrial Controls | | Ammonia, Styrene, Toluene, TCA, TCE | |
| Welding Apparatus, Electric | | Nickel, Toluene | |
| Carbon & Graphite Products | | BaP, Chlorine, Hydrogen chloride, Hydrogen sulfide, Styrene | |
| Electronic Components & Accessories | | Acetaldehyde, Ammonia, Arsenic, Benzene, Benzyl chloride, Beryllium, Cadmium, Chlorine, Chloroform, Chromium, Copper, Epichlorohydrin, EDC, Formaldehyde, Gasoline vapors, Hydrazine, Hydrogen chloride, Hydrogen sulfide, Lead, Manganese, Mercury, Methylene chloride, Naphthalene, Nickel, Perc, Phenol, Phosgene, PCB, Styrene, Toluene, Toluene diisocyanate, TCA, TCE, Xylenes, Zinc, Zinc oxide | |
| Batteries | | | |
| Primary, Dry & Wet | | Cadmium, Lead, Naphthalene, Nickel, Zinc, Zinc Oxide | |
| Storage | | Beryllium, Cadmium, Lead, Manganese, Nickel, TCA, Zinc, Zinc oxide | |
| Cat'd Ray Pict'r Tubes | | Beryllium, Lead | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Electric & Electronic Equipment Prod continued | | | |
| Electron Tubes, Transmitting | | Ammonia, Benzene, Beryllium, Cadmium, Chromium, Copper, Hydrogen chloride, Lead, Nickel, Styrene, Toluene, TCE, Xylenes | |
| Electron Capacitors | | Allyl chloride, Chromium, Epichlorohydrin, Lead, Methylene chloride, TCA, TCE | |
| Integrated Circuit Board Mfg | From: developer, stripper screening-hardener | Butyl cellosolve (a Glycol ether) | |
| | | Formaldehyde, Methylene chloride | |
| Semiconductors & Related Devices | | Acetone, Ammonia, Arsene, Arsenic, Beryllium, Chlorine, Chlorobenzene, Ethylene glycol, Hydrazine, Hydrochloric acid, Hydrogen chloride, Hydrogen fluoride, Lead, Mercury, Methanol, Methylene chloride, Nickel, Perc, Phenol, Phosphene, Styrene, Toluene, Toluene diisocyanate, TCA, TCE, Xylenes, Zinc | |
| Solvent Stations - see Liquid Storage & Transfer, Appendix C-I | | | |
| Wet Chemical Stations | | | |
| Mfg Process Reactors (Siliconizing) | | | |
| Chemical Vapor Deposition | | | |
| Diffusion Furnaces - see Combustion, Appendix C-I | | | |
| Photoresist Lines | | | |
| Surface Coating/Cleaning - see Solvent Use, Appendix C-I | | | |
| Household Appliances | | | |
| Elec Housewares/Fans | | Beryllium, Toluene | |
| Household Cooking Equipment | | TCA, TCE | |
| Household Laundry Equipment | | Perc, Toluene | |
| Household Refrigerators & Freezers | | Toluene | |
| Sewing Machines | | Toluene, TCA | |
| Electric Lighting & Wiring Equipment | | Toluene, TCE | |
| Electric Lamps | | Ammonia, Cadmium, Mercury, Toluene, TCA, TCE | |
| Lighting Fixtures | | | |
| Commercial | | Toluene, TCA | |
| Residential | | Ammonia, Hydrazine, Toluene, TCA, TCE | |
| Wiring Devices | | | |
| Current-Carrying | | Ammonia, Copper, Formaldehyde, Hydrogen chloride, Manganese, Methylene chloride, Nickel, Perc, Phenol, Toluene, Toluene diisocyanate, TCA, TCE, Zinc | |
| Noncurrent-Carry | | Copper, Hydrogen chloride, Styrene, Toluene, TCE, Vinyl chloride, Zinc | |
| Radio & TV Rec'ving Sets | | Ammonia, Toluene, TCA, TCE, Xylenes | |
| Semiconductor Production - see Electric & Electronic Equip, Integrated Circuit, Appendix C-II | | | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Electric & Electronic Equip continued | | | |
| X-Ray Apparatus & Tubes | | Beryllium, Hydrogen chloride, Perc, Toluene, TCA | |
| Elec, Gas, & Sanitary Svc's | | | |
| Electric Services | | Acetaldehyde, Arsenic, Benzene, BaP, Beryllium, Cadmium, Chromium, Copper, Formaldehyde, Lead, Manganese, Mercury, Nickel, POM, PAHs*, PCBs, TCA | |
| Gas & Other Svc's | | Hydrogen sulfde | |
| Water Supply | | Arsenic, Chromium, Hydrogen chloride, Hydrogen sulfide, Mercury, Perc, TCA, TCE | |
| Sanitary Services | | Benzene, Chloroform, EDC, Methylene chloride, Perc, TCA, TCE, Vinyl chloride | |
| Refuse Systems | | Ammonia, Arsenic, Beryllium, Cadmium, Chlorine, Chromium, Copper, Hydrogen chloride, Lead, Manganese, Mercury, Nickel, POM, PAHs*, PCBs, Toluene, Vinyl chloride, Zinc | |
| Sewerage Systems | | Ammonia, Arsenic, Cadmium, Chromium, Copper, Hydrogen chloride, Lead, Mercury, Nickel, Zinc | |
| Steam Supply | | Benzene, Formaldehyde, Toluene | |
| Electroplating - see Metal Plating, Appendix C-II | | | |
| Extermination - see Other Processes, Pesticide Use, Appendix C-I | | | |
| Felt Mfg | | Asbestos | |
| Fiberboard Mfg - see Wood Product Mfg, Appendix C-II | | | |
| Floor Cover Mfg, Hard Surface | | Benzene | |
| Floor Tile Mfg. | | Asbestos | |
| Food Prod Mfg | | | |
| Miscellaneous | | Perc, Toluene | S-CMB, S-CT, S-ETO |
| Bakery Products | | Benzene, Formaldehyde, Toluene | |
| Beverages | | Ammonia, Formaldehyde, | |
| Milk (Condens & Evap) | | Ammonia, Benzene, Formaldehyde, Toluene | |
| Soft Drinks | | Arsenic, Toluene | |
| Canned Foods | | Arsenic, Benzene, Formaldehyde, Toluene | |
| Fats & Oils | | EDC, Methylene chloride | |
| Shorten & Cook Oils | | Nickel, Toluene | |
| Soybean Oil Mills | | EDC | |
| Food Preparation, Misc | | Acetaldehyde, Benzene, Benzidene, Carbon Tetrachloride, Chloroform, Dimethyl sulfate, Epichlorohydrin, ETO, Formaldehyde, Maleic Anhydride | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Food Prod Mfg continued | | | |
| Grain Mill Products | | | |
| Prepared Feeds | | | |
| Wet Corn Milling | | Acrolein, Methyl bromide | |
| Manufactured Ice | | Chlorine, Hydrochloric Acid | |
| Meat Packing Plants | | Arsenic | |
| Sausages & Other Prepared Meats | | Arsenic, Formaldehyde, Hydrochloric Acid | |
| Roasted Coffee | | Acetaldehyde, Ammonia, Arsenic, Chloroform, Formaldehyde, Phenol, Toluene, TCA | |
| Seafood, Canned & Cured | | Acetaldehyde, Acrolein, Methylene chloride, TCE | |
| Sugar & Confec Prods | | Arsenic, Hydrogen sulfide | |
| Beet Sugar | | | |
| Confectionary Prod | | Beryllium | |
| Canning - see Canned Food Prod, Appendix C-II | | Benzene, Toluene, Formaldehyde | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Solvents - see Solvent Use, Appendix C-I | | | |
| Sterilization - see Other Processes, Appendix C-I | | | |
| Food Prod Machinery Mfg | | Methylene chloride, Perc, TCA, TCE | |
| Foundries - see Metal Smelters & Foundries, Appendix C-II | | | |
| Forestry Services | | Naphthalene | |
| Also see Wood, Appendix C-II | | | |
| Furniture & Fixture Mfg | | Methylene chloride, Perc, TCE | S-CMB |
| Miscellaneous | | Methylene chloride, Phthalic anhydride, Toluene, TCE | |
| Drapery Hardware and Blinds & Shades | | Benzene, TCA | |
| Household Furniture | | Cresol, Toluene, TCE, Xylenes | |
| Metal | | Cadmium, Copper, Lead, Toluene | |
| Upholstered | | Ammonia, Methylene chloride, Naphthalene, Styrene, Toluene, TCA, TCE, Xylenes | |
| Wood | | Toluene | |
| TV & Radio Cabinets | | | |
| Office Furniture | | Ammonia, Formaldehyde, Methylene chloride, Perc, Styrene, Toluene, TCA, TCE, Xylenes, Zinc Oxide | |
| Metal | | Formaldehyde, Methylene chloride, Naphthalene, Toluene, Toluene diisocyanate, TCA, TCE, Xylenes | |
| Wood | | | |
| Partitions & Fixtures | | Methylene chloride, Perc, Toluene, TCA, TCE | |
| Metal | | Ammonia, Toluene, Toluene diisocyanate, TCE | |
| Wood | | Ammonia, Toluene, Xylenes | |
| Public Bldg & Related Furn | | | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Furniture & Fixture Mfg, continued | | | |
| | Combustion Process - see Combustion, Appendix C-I<br>Degreasing - see Solvent Use, Appendix C-I<br>Metal Working - see Metal, Appendix C-II<br>Surface Coating - see Solvent Use and Other Processes, Appendix C-I<br>Upholstery Mfg - see Textiles, Appendix C-II<br>Wood Working - see Wood, Appendix C-II | | |
| Furniture Stores | | Ammonia, Methylene chloride, Toluene, TCA | |
| | Furniture Rpr/Reupholstr | Ammonia, Lead, Methylene chloride, Toluene, Xylenes | |
| | Cleaning - see Dry Cleaning, Appendix C-II | | |
| Gas Combustion - see Combustion, Appendix C-I | | | |
| Gas Stations | | Benzene, EDB, EDC, Gasoline vapors, Toluene, Xylenes | |
| | Liquid Storage & Transfer - see Liquid Storage & Transfer, Appendix C-I<br>Vehicle Refueling - see Other Processes, Appendix C-I | | |
| Glass Products - see Clay, Glass & Stone Products, Appendix C-II | | | |
| Grain Production - see Agricultural Prod and Food Prod, Appendix C-II | | | |
| Grain Wholesaling | | Ammonia | |
| Grey Iron Foundries - see Metal Smelters & Foundries, Appendix C-II | | | |
| Hospitals | | | S-CMB, S-ETO |
| | Gen'l Medical & Surgical | ETO, Hydrogen chloride, Hydrogen sulfide, Phenol, Styrene | |
| | Medical Labs | ETO | |
| | Combustion Processes - see Combustion, Appendix C-I<br>Medical Instrument Mfg - see Instrument Mfg, Appendix C-II<br>Research - see Reasearch & Development, Appendix C-II<br>Sterilizers - see Other Processes, Appendix C-I | | |
| Incineration - see Combustion, Appendix C-I | | | |
| Industrial Combustion - see Combustion, Appendix C-I | | | |
| Industrial Wastewater Treatment - see Other Processes, Appendix C-I | | | |
| Inorganic Chemical Mfg - see Chemical Mfg, Inorganic, Appendix C-II | | | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Instruments & Related Prod's | | | |
| Engin'ring & Science Instr | | Freon 113, Toluene, TCA | S-ETO |
| | | Ammonia, Arsenic, Asbestos, Beryllium, Cadmium, Chromium, Copper, Formaldehyde, Hydrogen chloride, Lead, Methylene chloride, Perc, Phenol, Toluene, TCA, TCE, Zinc | |
| Meas & Controlling Devices | | Ammonia, ETO, Mercury, Toluene | |
| Environmental Contls | | Beryllium, Chlorine, Hydrogen chloride, Mercury, TCE | |
| Process Control Inst | | Beryllium, Cadmium, Hydrogen chloride, Toluene, Zinc, Zinc oxide | |
| Electricity Measuring Instruments | | | |
| Medical Instr & Supplies | | Beryllium, Toluene, TCA | |
| Dental Equip & Supp | | Ammonia, Hydrogen chloride, Toluene, TCE | |
| | | Ammonia, Cadmium, Chlorine, ETO, Formaldehyde, Phenol, Toluene, TCA, Zinc, Zinc oxide | |
| Opthalmic Goods | | Ammonia, TCA, TCE | |
| Photographic Equip & Supplies | | Acetaldehyde, Acrylonitrile, Ammonia, Arsenic, Asbestos, Benzene, Benzidine, Benzyl chloride, Bis(chloromethyl) ether, Cadmium, Carbon tetrachloride, Chlorine, Chlorobenzene, Chloroform, Chromium, Dimethyl sulfate, 1,4-Dioxane, Epichlorohydrin, EDC, Formaldehyde, Hydrazine, Hydrogen chloride, Lead, Mercury, Methylene chloride, Naphthalene, Nickel, Perc, Phenol, Phosgene, Propylene oxide, Styrene, Toluene, Toluene diisocyanate, TCA, TCE, Vinyl chloride, Vinylidene chloride, Xylenes, Zinc, Zinc oxide | |
| Surgical & Med Instr | | ETO, Formaldehyde, Perc, Toluene, TCA, TCE, Zinc | |
| Srg Appliances & Sup | | Ammonia, Chromium, ETO, Formaldehyde, Hydrogen chloride, Lead, Nickel, Toluene, TCA, Vinylidene chloride | |
| Optical Instr & Lenses | | Acetaldehyde, Formaldehyde, Methylene chloride, Toluene, TCA, TCE | |
| Watches/Clocks/Watchcases | | Hydrogen chloride, Toluene, TCE | |
| Plating - see Metal Plating, Appendix C-II | | | |
| Also see - Combustion, Other Processes, and Solvent Use Appendix C-I<br>Metal, Plastic, and Rubber, Appendix C-II | | | |
| Jewelry, Silverware, & Plated Ware | | | |
| Jewelry, Costume | | Ammonia, Chlorine, Hydrogen chloride, Lead, Perc, Toluene, TCE | |
| Jewelry, Precious Metal | | Ammonia, Freon 113, Hydrogen chloride, Lead, Toluene, TCA, TCE | |
| Jewlrs Matls & Lapidary Wrk | | Ammonia, Hydrogen chloride, Lead | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Jewelry, Silver & Plated Ware continued | | | |
| Silverware & Plated Ware | | Ammonia, Beryllium, Hydrogen chloride, Lead, TCE | |
| Degreasing - see Solvent Use, Appendix C-I | | | |
| Landfills | | | |
| Gas Recovery | | Benzene, Methylene chloride, Perc, TCE, Vinyl chloride, Vinylidene chloride | S-CMB |
| Refuse Landfills | | Asbestos | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Fugitives - see Liquid Storage & Transfer, Appendix C-I | | | |
| Laundry, Cleaning, & Garment Svc's - see Dry Cleaning, Appendix C-II | | | |
| Leather & Leather Products | | | |
| Leather Tanning & Finishing | | Arsenic, Chromium Copper, Formaldehyde, Lead, Naphthalene, Toluene | S-CMB |
| Footwear, not rubber | | Toluene | |
| Personal Leather Goods | | Toluene, TCE | |
| Tanning Processes | Tanning agents | Chromium, Cresols, Formaldehyde, Phenol | |
| | | Cresols, Formaldehyde, Phenol | |
| | Dyes, pigments, & coloring agents | Cadmium, Chromium, Copper, Direct Black 38, Lead, Nickel, Zinc compounds | |
| | Miscellaneous | Ammonia, Chlorine, Chloroform, 1,2-Dichlorobenzene, Glycol ethers, Hydrochloric acid, Methylene chloride, Perc, Sodium hydroxide, Toluene, TCA, TCE, Xylenes | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Liquid Storage and Transfer - see Liquid Storage & Transfer, Appendix C-I | | | |
| Surface Coating - see Solvent Use and Other Processes, Appendix C-I | | | |
| Lumber Prod Mfg - see Wood Product Mfg, Appendix C-II | | | |
| Machinery Mfg, Except Electrical | | Ammonia, Formaldehyde, Freon 113, Methylene chloride, Nickel, Phenol, Toluene, TCA, TCE | S-CMB |
| Construction & Related Machinery | | | |
| Construct'n Machin | | Carbon tetrachloride, Hydrogen chloride, Perc, Toluene | |
| Conveyors & Conveying Equipment | | Ammonia, Toluene, TCE | |
| Elevators & Moving Stairways | | Toluene | |
| Hoists, Cranes, & Monorails | | Ammonia, Cadmium, Copper, Lead, Zinc | |
| Indstl Trucks/Tractors | | Perc, Toluene | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Machinery, Construction Related continued | | | |
| Oil Field Machinery | | | |
| Engines & Turbines | | | |
| Internal Combust'n Engines | | Chromium, Lead, Nickel, TCA, Xylenes | |
| Farm Machinery & Equip | | | |
| Turbines & Turbine Generator Sets | | Ammonia, Benzene, EDB, EDC, Gasoline vapors, Hydrazine, TCA<br>Toluene | |
| General Industrial Machinery | | Ammonia, Formaldehyde, Hydrogen chloride, Maleic anyhydride, Perc, Phenol, Styrene, Toluene, Toluene diisocyanate, TCA, Xylenes<br>Ammonia, Chromium, Copper, Cresol, Epichlorohydrin, Formaldehyde, Hydrogen chloride, Lead, Nickel, Phenol, Toluene, TCA, TCE, Zinc oxide<br>Copper, Naphthalene, Toluene, TCA | |
| Bell & Roller Bearings | | Copper, Gasoline vapors, Lead, Toluene, TCA, TCE<br>Toluene | |
| Blowers & Fans | | Arsenic, Copper, Hydrogen chloride, Lead, Toluene, TCE, Zinc<br>Formaldehyde, Phenol | |
| Comprsrs, Air & Gas | | Ammonia, Copper, Hydrogen chloride | |
| Industrial Furnaces & Ovens | | Ammonia, Formaldehyde, Hydrogen chloride, Lead, Perc, Phenol, Toluene, TCA, Xylenes<br>Perc, Toluene, TCA | |
| Industrial Patterns | | Arsenic, Perc | |
| Power Transmission Equipment | | Ammonia, Beryllium, Chromium, Hydrogen chloride, Toluene, TCA, TCE | |
| Pumps & Pumping Equipment | | Ammonia, Lead, Toluene, TCE | |
| Speed Changers, Drives & Gears | | Ammonia, Benzene, Lead, Perc, Toluene, TCA, TCE | |
| Metalworking Machinery | | Cadmium, Chromium, Zinc, Zinc oxide | |
| Machine Tool Accessories | | 1,4-Dichlorobenzene, Formaldehyde, Hydrogen chloride, Methylene chloride, Naphthalene, Toluene, TCE, TCA, Zinc | |
| Machine Tools, Metal Cutting Types | | CFC-113, Hydrogen chloride, Toluene, TCA | |
| Machine Tools, Metal Forming Types | | Arsenic, Hydrogen chloride, TCA | |
| Rolling Mill Machinery | | | |
| Special Dyes, Tools, Jigs, & Fixtures | | | |
| Office & Computing Machines | | | |
| Miscellaneous | | | |
| Calculating & Accounting Machines | | | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Machinery, Office & Computing, continued | | | |
| Electronic & Computing Equipment | | Ammonia, Arsenic, Asbestos, Benzene, Benzidine, BaP, Bis(chloromethyl)ether, Chlorine, Chloroform, Chromium, Copper, Freon 113, Hydrogen chloride, Hydrogen sulfide, Lead, Methylene chloride, Naphthalene, Nickel, Nitrobenzene, Perc, Phenol, Toluene, TCA, TCE, Vinyl chloride, Zinc | |
| Also see - Electric & Electronic, Appendix C-II | | | |
| Typewriters | | Ammonia, Benzene, Beryllium, Cadmium, Formaldehyde, Hydrogen chloride, Lead, Nickel, Toluene, Xylenes | |
| Refrigrat'n & Svc Machin | | | |
| Automatic Merchandising Machines | | Toluene | |
| Commercial Laundry Equipment | | Arsenic, Perc, Toluene | |
| Measur & Dispens Pumps | | Toluene | |
| Refrig & Htg Equip | | Ammonia, Copper, Formaldehyde, Freon 113, Hydrogen sulfide, Lead, Methylene chloride, Phthalic anhydride, Toluene, TCA, TCE, Xylenes, Zinc | |
| Misc Svc Indus Mach | | Toluene | |
| Special Industry Machinery | | Ammonia, Arsenic, Benzene, Chromium, Copper, Lead, Methylene chloride, Perc, Toluene, TCA, TCE | |
| Food Prods Machinery | | Arsenic | |
| Paper Indus Machin | | Ammonia, Perc, Toluene, TCE | |
| Printing Trades Mach | | Ammonia, Chromium, Lead, Methylene chloride, Toluene, Toluene diisocyanate, TCA, Zinc oxide | |
| Textile Machinery | | Toluene, TCE, Xylenes | |
| Woodworking Machin | | Chlorine, Hydrogen chloride, Toluene | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Metal Forming - see Machining Mfg and Metal Forming, Appendix C-II | | | |
| Surface Coating/Degreasing - see Solvent Use and Other Processes, Appendix C-I | | | |
| Machining - see Metal Forming, Metal Prod Fabrication, and Metal Smelting, Appendix C-II | | | |
| Magazine (Periodical) Publishing - see Printing & Publishing, Appendix C-II | | | |
| Mechanical Assembly Cleaning - see Solvent Use, Degreasing, Appendix C-I | | | |
| Metal Forming | | | |
| Aluminum Forming | | | |
| Machining | | Chloroform, Methylene chloride, TCE TCA | S-CMB |
| Also see - Metal Product Fab and Metal Smelters, Appendix C-II | | | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Metal Furniture Mfg - see Furniture Mfg, Appendix C-II | | | |
| Metal Plating | Particulate metals including but not limited to: From electrocleaning, and plating | Cadmium, Chromium (VI), Nickel, TCA | S-CMB S-MP |
| | Gaseous and aerosol releases including but not limited to: | | |
| Electrocleaning | Alkaline cleaning agents | Sodium hydroxide | |
| Cleaning/Pickling | Acid cleaning, pickling agents | Chromic acid, Hydrochloric acid | |
| Cleaning/Plating | Chelating agents, solvents | Nitrilotriacetic acid, Theourea | |
| Storage/Handling | Plating/other process bath compon. | Ammonia, Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Sodium hydroxide, Zinc | |
| | Plating tank, Electric arc furnace | | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Degreasing Processes - see Solvent Use, Appendix C-I | | | |
| Storage and Handling - see Liquid Storage & Transfer, Appendix C-I | | | |
| Metal Product Fabrication | | Acrylonitrile, Ammonia, 1,3-Butadiene, Cadmium, Chlorine, Copper, Formaldehyde, Freon 113, Hydrazine, Hydrogen chloride, Lead, Mercury, Methylene chloride, Perc, Styrene, Toluene, TCA, TCE, Zinc | S-CMB, S-ETO, S-UP |
| Metal Cans & Shipping Containers Metal Cans | | Benzene, Lead, Perc, Toluene, TCA, TCE, Xylenes | |
| Metal Barrels, Drums & Pails | | Ammonia, Naphthalene, Toluene, TCA | |
| Metal Cutlery, Handtools & Hardware Cutlery Hand & Edge Tools | | Chromium, Lead, Toluene, TCE<br>Ammonia, Chlorine, Chromium, Hydrogen chloride, Methylene chloride, Styrene, Toluene, TCA, TCE, Zinc | |
| Hand Saws & Saw Blades Misc Hardware | | Copper, Lead, Nickel, Toluene, TCE, Zinc<br>Ammonia, Chlorine, Chromium, Copper, Hydrogen chloride, Hydrogen sulfide, Lead, Methylene chloride, Naphthalene, Perc, Phenol, Toluene, TCA, TCE, Zinc, Zinc oxide | |
| Metal Foil & Leaf | | Ammonia, Copper, Hydrogen chloride, Lead, Perc, Zinc, Zinc oxide | |
| Metal Forgings & Stamp'gs | | Hydrogen sulfide | |
| Iron & Steel Forgings | | Ammonia, Perc, Toluene | |
| Auto Stampings | | Lead | |
| Crowns & Closures | | Copper, Perc, Toluene, TCA, TCE | |
| Misc Metal Stampings | | | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Metal Prod Fabric continued | | | |
| Misc Metal Services | | | |
| Plating & Polishing | | Toluene | |
| | | Acrolein, Ammonia, Arsenic, Benzene, Cadmium, Chloride, Chlorine, Chloroform, Chromium, Copper, Formaldehyde, Hydrogen chloride, Lead, Methylene chloride, Nickel, Nitrobenzene, Perc, Toluene, TCA, TCE, Zinc, Zinc oxide | |
| Metal Coating & Allied Services | | Acetaldehyde, Arsenic, Benzene, Cadmium, Chlorine, Chromium, Copper, Formaldehyde, Hydrogen chloride, Lead, Methylene chloride, Nickel, Perc, Toluene, TCA, TCE, Xylenes, Zinc, Zinc oxide | |
| Ordnance & Accessories | | Lead | |
| Small Arms Ammunit'n | | Hydrogen sulfide, Toluene, TCE | |
| Ammun, exc sml arms | | Ammonia, Arsenic, Formaldehyde, Freon 113, Hydrogen chloride, Lead, Phenol, Toluene, Zinc oxide | |
| Small Arms | | | |
| Plumbing & Heating, except electric | | Methylene chloride, Toluene | |
| Metal Sanitary Ware | | | |
| Plumbing Fittings & Brass Goods | | Ammonia, Cadmium, Formaldehyde, Hydrogen chloride, Phenol, Toluene, TCE, Zinc oxide | |
| Heating Equipment, except electric | | Ammonia, Benzene, Chromium, Formaldehyde, Perc, Phenol, Toluene | |
| Screw Machine Products, Bolts, etc. | | | |
| Screw Machine Prod | | TCA, TCE | |
| Bolts, Nuts, Rivets, & Washers | | Cadmium, Hydrogen chloride, Methylene chloride, TCA, TCE, Zinc | |
| Steel Springs, exc wire | | Hydrogen chloride, Toluene, TCA | |
| Structural Metal Product Fabrication | | | |
| Structural Metal Fabrication | | Toluene | |
| Metal Doors, Sash, & Trim | | Copper, Toluene, Xylenes, Zinc oxide | |
| Fabricated Plate Work, boiler shops | | Ammonia, Cadmium, Formaldehyde, Perc, Toluene, TCA, Xylenes, Zinc | |
| Sheet Metal Work | | Copper, Gasoline vapors, Hydrogen chloride, Lead, Perc, Styrene, Toluene, TCA, TCE | |
| Architectural Metal Work | | Ammonia, Perc, Toluene, Toluene diisocyanate, TCA, TCE | |
| | | Ammonia, Copper, Perc, Toluene, TCA, TCE | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Metal Prod Fabric, Structural Metal, continued | | | |
| Prefabric Metal Bldgs | | Toluene, Xylenes | |
| Misc Metal Work | | Ammonia, Benzene, Toluene | |
| Valves & Pipefittings | | Copper, Phenol, Toluene, TCA, TCE, Zinc | |
| Wire Product Fabricat'n | | Ammonia, Hydrogen chloride, Nickel, Perc, Toluene, TCA, Vinyl chloride | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Degreasing - see Solvent Use, Appendix C-I | | | |
| Forming - see Metal Forming and Metal Smelters, Appendix C-II | | | |
| Surface Coating - see Solvent Use, Appendix C-I | | | |
| Metal Smelters & Foundries - (for non-metals mining see Mining, Appendix C-II) | | | S-CMB |
| For any type of metal smelter - see Combustion and Liquid Storage & Transfer, Appendix C-I | | | |
| For any type of metal smelter | | Hydrogen sulfide, All listed metals | |
| Primary Aluminum Pro | Gaseous, aerosol, partic releases including but not limited to: | | |
| Furnace Tapping | From the calciner, furnace, mat'l | Benzene, Chloroform, Cresols, | |
| Coke Quenching | crusher/mill, storage & handling, | Fluorides, Methylene chloride, | |
| Furnace Charging | service road, prebake/reduction/ | POM, PAHs*, TCE | |
| Metal Forming | soderberg stud cell | | |
| | Anode bake furnace | Benzene, Cresols, POM, PAHs* | |
| Secondary Aluminum | Gaseous, aerosol, partic releases | | |
| Furnace Tapping | including but not limited to: | Nickel | |
| Furnace Charging | From the furnace, and the service | | |
| Metal Casting | road | | |
| Metal Forming | | Chloroform, Methylene chloride, TCE | |
| Beryllium Alloys | Gaseous, aerosol, partic releases | | |
| Molding | including but not limited to: | Beryllium | |
| Primary Cadmium Pro | Gaseous, aerosol partic releases | | |
| Material Prep | including but not limited to: | Cadmium | |
| Metal Casting | From the furnace, condenser, | | |
| Mining Operations | material storage and handling | | |
| Cadmium-Nickel Battery | Gaseous, aerosol, partic releases | | |
| Material Prep | including but not limited to: | Cadmium, Lead, Nickel | |
| | From the sintering machine, and material storage and handling | | |
| Chromite Ore Refining | Gaseous, aerosol, partic releases | | |
| | including but not limited to: | Chromium | |
| | From dryer, mill, cyclone, storage | | |
| Metallurgical Coke | Gaseous, aerosol partic releases | | |
| Coke Oven Charging/ Pushing | including but not limited to: | Acetaldehyde, Benzene, Cresols, | |
| | From the coke oven, vessels, matr'l | Formaldehyde, Phenol, Toluene, Xylenes | |
| Material Prep | storage and handling, and outdoor | Ammonia, Arsenic, Beryllium, Cadmium, Hydrogen sulfide, Lead, Manganese, Mercury, | |
| Coke Quenching | storage pile | Nickel, POM, PAHs* | |
| Coke Production | | POM, PAHs*, Toluene | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Metal Smelters & Foundries continued | | | |
| Primary Copper Smelt | Gaseous, aerosol, partic releases | | |
| Converter Charging | including but not limited to: | Arsenic, Cadmium, Copper, Lead, Mercury, | |
| Furnace Tapping | From the converter, furnace, roaster | POM, PAHs*, Selenium, Zinc | |
| Furnace Charging | vessel, material storage and | | |
| Material Prep | handling, outdoor storage pile, | | |
| Metal Casting | service road | | |
| Slag Dumping | | | |
| Mining Operations | | Arsenic, Mercury, Cadmium, Copper | |
| Copper Forming | | Perchloroethylene | |
| Secondary Copper Oper | Gaseous, aerosol, partic releases | | |
| (Brass and Bronze Pro) | including but not limited to: | Cadmium, Copper, Lead, Manganese, | |
| Furnace Tapping | From the furnace, and service road | Mercury, POM, PAHs*, Selenium, Zinc | |
| Furnace Charging | | | |
| Metal Casting | | | |
| Electrometallurgical Products | | Arsenic, Cadmium, Chromium, Copper, Manganese, Nickel | |
| Ferroalloy Production | Gaseous, aerosol, partic releases | | |
| Furnace Tapping | including but not limited to: | Cadmium, Chromium, Copper, Lead, | |
| Furnace Charging | From material storage & handling, | Manganese, Nickel, POM, PAHs*, Zinc | |
| Material Prep | storage pile, furnace, decarbur- | | |
| Metal Casting | izing vessels | | |
| Mining, except V | | Nickel | |
| Slag Dumping | | | |
| Iron & Steel Foundries | | | |
| Iron and Steel Pro | Gaseous, aerosol, partic releases | | |
| Coke Oven Charging/ Pushing | including but not limited to: | Ammonia, Arsenic, Benzene, Beryllium, Cad- | |
| Furnace Tapping | From the coke oven, cupola, furnace, | mium, Chlorine, Chromium, Coke oven emis, | |
| Furnace Charging | sintering machine, storage | Copper, Formaldehyde, Hydrogen chloride, | |
| Material Preperation | & handling, storage pile, | Hydrogen sulfide, Lead, Manganese, Mer- | |
| Coke Quenching | service road | cury, Naphthalene, Nickel, POM, PAHs*, | |
| Slag Dumping | | Phenol, Toluene, TCE, Xylenes, Zinc | |
| Mining Operations | | | |
| Drying | | | |
| Crushing | | | |
| Sizing | | | |
| Weighing | | | |
| Feeding Furnace | | | |
| Also see Combustion | (Blast Furnace), Appendix C-I | | |
| Gray Iron Foundries | Gaseous, aerosol, partic releases | | |
| Furnace Tapping | including but not limited to: | Acetaldehyde, Acrolein, Ammonia, Arsenic, | |
| Furnace Charging | From the furnace, foundary mold & | Benzene, Beryllium, Cadmium, Chromium, | |
| Converter Charging | core decomposition, & service road | Copper, Formaldehyde, Hydrogen sulfide, | |
| Metal Casting | | Iron, Lead, Manganese, Mercury, | |
| Cupola | | Naphthalene, Nickel, Phenol, POM, PAHs*, | |
| | | Styrene, Toluene, TCA, Xylenes, Zinc | |
| Malleable Iron Foundries | | Ammonia, Formaldehyde, Zinc | |
| Steel Investment Fndrs | | Cadmium, Chromium | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Metal Smelters & Foundries continued | | | |
| Steel Foundries | Gaseous, aerosol, partic releases | | |
| Converter Charging | including but not limited to: | Arsenic, Beryllium, Cadmium, Chromium, | |
| Furnace Tapping | From furnace, foundry mold & core | Manganese, Nickel, Zinc | |
| Furnace Charging | decomposition, and service | | |
| Metal Casting | road | | |
| Basic Oxygen Proc | From argon oxygen decarburization vessels, coke ovens | | |
| Miscellaneous | | Ammonia, Arsenic, Cadmium, Chromium, Copper, Hydrogen chloride, Lead, Naphthalene, Nickel, Perc, Phenol, Styrene, Toluene, TCA, Xylenes, Zinc | |
| Cold Finish Steel Shapes | | Methylene chloride, Toluene | |
| Steel Pipe & Tubes | | Ammonia, Perc | |
| Steel Wire & Related Products | | Ammonia, Chlorine, Hydrogen chloride, Lead, PCB, Toluene, Zinc | |
| Primary Lead Smelting | Gaseous, aerosol, partic releases | | |
| Furnace Tapping | including but not limited to: | Arsenic, Cadmium, Copper, Lead, | |
| Furnace Charging | From the furnace, sintering machine, | POM, PAHs*, Mercury, Selenium | |
| Material Prep | material storage and handling, | | |
| Metal Casting | outdoor storage pile, and service | | |
| Slag Dumping | road | | |
| Mining Operations | | | |
| Secondary Lead Smelt | Gaseous, aerosol, partic releases | | |
| Furnace Tapping | including but not limited to: | Arsenic, Lead, Manganese, POM, PAHs*, | |
| Furnace Charging | From the furnace, service road, and | Selenium | |
| Metal Casting | outdoor storage pile | | |
| Lead Acid Battery Pro | Gaseous, aerosol, partic releases | | |
| Material Prep | including but not limited to: | Arsenic, Cadmium, Lead, Manganese | |
| Metal Casting | | Mercury | |
| Screening | | | |
| Storage & Handling | | | |
| Miscellaneous Lead Pro | Gaseous, aerosol, partic releases | | |
| Converter Charging | including but not limited to: | Arsenic, Cadmium, Lead | |
| Material Preparation | | | |
| Metal Casting | | | |
| Manganese Production | Gaseous, aerosol, partic releases | | |
| Furnace Charging | including but not limited to: | Manganese, POM, PAHs* | |
| Furnace Tapping | From the furnace, mat'l storage & | | |
| Material Crusher/ Mill | handling, storage pile, slips, casthouse, sinter discharge, | | |
| Metal Casting | windbox & discharge | | |
| Slagging | | | |
| Synthetic Mang Pro | | | |
| Roasting | | | |
| Drying | | | |
| Grinding | | | |
| Packaging/Handling | | | |
| Melting | | | |
| Refining | | | |
| Hot Metal Transfr | | | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Metal Smelters & Foundries continued | | | |
| Dry Battery Production<br>Material Prep<br>Screening<br>Storage & Handling<br>Also see Electrical & Electronic Equipment, Appendix C-II | Particulate substance releases including but not limited to: From the material crusher/mill and material storage | Manganese, Mercury | |
| Mercury Production<br>Mining<br>Prim. Ore Process<br>Secondary Prod | Particulate releases including but not limited to: From smelter, hoeing, retort | Mercury | |
| Nickel Production<br>Metal Casting<br>Mining Operations<br>Refining<br>Melting/Roasting<br>Crushing<br>Drying | Gaseous, aerosol, partic releases including but not limited to: From the calciner, furnace, material crusher/mill, roaster, material storage & handling, rotary dryers, storage pile, day bin, skip hoists | Arsenic, Cadmium, Lead, Nickel, POM, PAHs*, Selenium, Zinc | |
| Nonferrous Metal Prod<br>Super Alloys<br>Permanent Magnet Alloys<br>Electrical Alloys | Gaseous, aerosol, partic releases including but not limited to: | Nickel | |
| Secondary Processing of Nickel Scrap | Gaseous, aerosol, partic releases including but not limited to: | Nickel | |
| Radium, Uranium, & Vanadium Mining | Gaseous, aerosol, partic releases including but not limited to: | Ammonia, Gasoline vapors, Hydrogen Sulfide, Radionuclides | |
| Steel Foundries - see Metal Smelters, Iron & Steel, Appendix C-II | | | |
| Uranium Prod - see Metal Smelters, Radium, Appendix C-II | | | |
| Vanadium Prod - see Metal Smelters, Radium, Appendix C-II | | | |
| Primary Zinc Smelting<br>Material Prep<br>Slag Dumping<br>Mining Operations | Gaseous, aerosol, partic releases including but not limited to: From the condenser, furnace, roastr, retart, material storage and handling, outdoor storage pile, and service road | Arsenic, Cadmium, Copper, Mercury, POM, PAHs*, Selenium, Zinc | |
| Secondary Zinc Proces<br>Furnace Tapping<br>Furnace Charging<br>Metal Casting | Gaseous, aerosol, partic releases including but not limited to: From the furnace, condenser, retart service road, and galvanizing vessel | Cadmium, Mercury, Nickel, Selenium, Zinc | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| **Military Bases** | | | |
| Chemical Prod - see Chemical Mfg, Military Chem Mfg, Appendix C-II | | | |
| Combustion Process - see Combustion, Appendix C-I | | | |
| Degreasing - see Solvent Use, Appendix C-I | | | |
| Research - see Research & Development, Appendix C-II | | | |
| Surface Coating - see Solvent Use and Other Processes, Appendix C-I | | | |
| Vehicle Refueling - see Other Processes, Appendix C-I | | | |
| **Millworks - see Wood Product Mfg, Appendix C-II** | | | |
| **Mining of Non-Metals (for Metals Mining see Metal Smelters, Appendix C-II)** | | | S-CMB |
| Arsenic Mining | | Arsenic | |
| Anthracite Mining | | Arsenic, POM, PAHs*, Toluene diisocyanate | |
| Asbestos | | Asbestos, Silica | |
| Clay | | Arsenic, Beryllium, Lead, Toluene diisocyanate | |
| Coal (Bituminous) & Lignite | | Arsenic, Hydrogen sulfide, Toluene diisocyanate | |
| Limestone | | Nickel | |
| Minerals, Nonmetallic | | Arsenic, Asbestos, Beryllium, Cadmium, Chromium, Lead, Toluene diisocyanate | |
| Phosphate Rock | | Radionuclides | |
| Sand & Gravel | | Asbestos, Crystalline silica | |
| Construction | | Vinyl Chloride | |
| Industrial | | Arsenic, Beryllium, Lead, Phenol, Toluene diisocyanate | |
| Sulfur | | Arsenic, Hydrogen sulfide | |
| **Monofillament Fiber Mfg** | Gaseous and particulate releases | | |
| Wet Spin | including but not limited to: | Polymer constituentes - Acrylonitrile, Propylene, Vinyl chloride | S-CMB |
| Dry Spin | From: polymer and solvent storage | | |
| Filter-tow Dry Spin | dope preparation (blending), | | |
| Filament Yarn Dry Spin | filtration, spin cell, lubrication, drawing, finish application, and drying | Solvents/precipitants - Sodium hydroxide, Toluene, Zinc chloride | |
| | | Flame retardants - Vinyl bromide | |
| | | Promoters/activators - Hydrazine | |
| | | Lubricants - Ammonium salts | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Storage - see Liquid Storage & Transfer, Appendix C-I | | | |
| Surface Coating - see Solvent Use and Other Processes, Appendix C-I | | | |
| **Motor Vehicle Production - see Transportation Equipment, Appendix C-II** | | | |
| **Motorcycle Mfg - see Tranportation Equipment, Appendix C-II** | | | |
| **Musical Insrument Mfg** | | Lead, Toluene, TCE | |
| Also see - Combustion, Other Processes, and Solvent Use, Appendix C-I | | | |
| Wood Product Mfg, Appendix C-II | | | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| National Defense | | Carbon tetrachloride, CFC 113, Chromium, Dioxin, Hydrazine, Mercury, Methylene chloride, Perc, Phenol, PCBs, TCA, Xylenes | S-CMB, S-CT, S-UP |
| Also see Military Bases, Appendix C-II | | | |
| National Security | | Ammonia, Benzene, Beryllium, Cadmium, Chlorinated phenols, Chromium, ETO, Formaldehyde, Gasoline vapors, Hydrogen chloride, Hydrogen sulfide, Lead, Manganese, Methylene chloride, Nickel, Perc, Phenol, POM, PAHs*, Radionuclides, TCA, TCE, Xylenes | |
| Natural Gas Combustion - see Combustion, Appendix C-I | | | |
| Needle, Pin, & Fastener Mfg | | Formaldehyde, Hydrogen chloride, Lead, Toluene, TCE, Zinc | |
| Also see Metal Prod Fabrication, Appendix C-II | | | |
| Newspaper Publishing - see Printing & Publishing, Appendix C-II | | | |
| Nickel Plating - see Metal Plating, Appendix C-II | | | |
| Office Machine Mfg - see Machinery Mfg, Appendix C-II | | | |
| Office Supplies Mfg | | | |
| Carbon Paper & Inked Ribbons | | Toluene | |
| Lead Pencils & Art Goods | | Copper, Formaldehyde, Toluene | |
| Marking Devices | | Lead, Toluene, TCE, Zinc | |
| Pens & Mech Pencils | | Chlorine, Methylene chloride, Perc, Toluene, TCE | |
| Ink/Dye Mfg - see Chemical Mfg, Appendix C-II | | | |
| Oil Combustion - see Combustion, Appendix C-I | | | |
| Oil and Gas Extraction | | | |
| Drilling Wells | | Benzene, Phenols, POM, PAHs*, Sulfur compounds, Toluene, Xylenes | S-CMB, S-CT |
| Exploration | | Hydrogen sulfide | |
| | | Benzene, Carbon tetrachloride, Chlorobenzene, 1,4-Dichlorobenzene, EDC, Hydrogen sulfide, Toluene, TCA, Xylenes | |
| Extraction | | | |
| Natural Gas & Crude Petroleum | | Ammonia, Formaldehyde, Gasoline vapors, Hydrogen sulfide | |
| Nat'l Gas Liquids | | Ammonia, Hydrogen sulfide | |
| Field Services | | Hydrogen sulfide, Gasoline vapors | |
| Gas Stripping Fugitive Losses | Gaseous and aerosol releases From field separator | EDC | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Oil Production Fugitive Losses | Gaseous and aerosol releases from: sumps, wells, well heads, well cellars, pumps, fittings, oil pits, compressors, oil/ water separators, | | |
| Tertiary Oil Production | Gaseous and aerosol releases from: steam drive wells, cyclic wells, pseudo cyclic wells | | |
| Heavy Oil Test Stations | Gaseous and aerosol releases From test stations | | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Oil Storage - see Liquid Storage and Transfer, Appencix C-I | | | |
| Other Processes - see Other Processes & Fugitives, Appendix C-I | | | |
| Solvent Use - see Solvent Use, Appendix C-I | | | |
| Storage & Handling - see Liquid Storage & Transfer, Appendix C-I | | | |
| Organic Chemical Mfg - see Chemical Mfg, Appendix C-II | | | |
| Paint & Allied Products Mfg - see Chemical Mfg, Appendix C-II | | | |
| Paper & Paper Prod. Mfg/Treating - see Wood, Appendix C-II | | | |
| Pens & Pencils - see Office Supplies, Appendix C-II | | | |
| Petroleum Bulk Stations & Terminals | | Benzene, Benzyl chloride, Carbon Tetrachloride Chlorine, EDB, EDC, Formaldehyde, Gasoline vapors, Hydrogen chloride, Hydrogen sulfide, Methyl methacrylate, Styrene, Toluene, Xylenes | |
| Also see - Bulk Plants & Terminals, Appendix C-II | | | |
| Petroleum & Coal Products | | | |
| Miscellaneous | | Chromium, Gasoline vapors, Naphthalene | S-CMB, S-CT |
| Asphalt Felts & Ctgs | | Asbestos, Carbon tetrachloride, Chromium, Formaldehyde, POM, PAHs* | |
| Lubricating Oils & Greases | | Asbestos, Benzene, Epichlorohydrin, Formaldehyde, Hydrogen sulfide, Toluene, TCA, TCE, Xylenes | |
| Paving & Roofing Mat'ls Pav'g Mixt'rs & Blocks | | Ammonia, Asbestos, Benzene, BaP & other PAHs*, Chloroform, Chromium, Formaldehyde, Mercury, Methyl isocyanate, POM, Toluene, TCA | |
| Petroleum Refineries (1)Most Refinery Operations | Gaseous, aerosol, partic releases including but not limited to: From: boiler, cat cracker, flare, incinerator, process heater | Acetaldehyde, Ammonia, Arsenic, Benzene, BaP & other PAHs*, Beryllium, Cadmium, Carbon disulfide, Chlorine, Chromium, Cresol, Dimethyl sulfate, EDB, EDC, Formaldehyde, Gasoline vapors, Hydrogen chloride, Hydrogen sulfide, Lead, Maleic anhydride, Mercury, Naphthalene, Nickel, Phenol, POM, Toluene, Xylenes, Zinc, Zinc oxide | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Petroleum & Coal continued | | | |
| (2)Crude Separation Gas Product'n | In addition to item (1) absorber, distillation/fractionation | In addition to item (1)-Ammonia, Chlorides, Cresols, EDC, Maleic anhydride, Michler's Ketone, Phenols, POM, PAHs*, Sulfur Cmpds, Zinc | |
| (3)Light Hydrocarbon Processing | In addition to item (1): catalyst regeneration | In addition to item (1)-Nickel Carbonyl | |
| (4)Middle and Heavy Distillate Process | In addition to items (1) and (2): evaporation, stripper | In addition to item (1)-Acetaldehyde, Ammonia, Copper, Cresols, Formaldehyde, Maleic anhydride, Michler's ketone, Nickel, Phenols, POM, PAHs*, Sulfur Compounds, Xylenes, Zinc, Any other listed Aromatic amine | |
| (5)Residual Hydrocarbon Processing | In addition to items (1) and (2): visbreaker furnace, process vent, stripper | In addition to item (1)-Acetaldehyde, Ammonia, Chromates, Cresol, Formaldehyde, Lead, Maleic anhydride, Michler's Ketone, Lead, Nickel, Nickel carbonyl, Phenols, POM, PAHs*, Sulfur Cmpds, Zinc, Any other listed Aromatic amine | |
| Also see Combustion, Liquid Storage & Transfer, and Other Processes, Appendix C-I Chemical Mfg, and Oil & Gas Extraction, Appendix C-II | | | |
| Pharmaceutical Industries - see Chemical Mfg, Drugs, Appendix C-II | | | |
| Photocopying & Blueprinting | | Ammonia | |
| Photographic Chemicals Mfg - see Chemical Mfg, Appendix C-II | | | |
| Photographic Studios | | Ammonia | |
| Photofinishing Labs | | Methylene chloride, TCA | |
| Pipelines - see Other Processes and Liquid Storage & Transfer, Appendix C-I | | | |
| Plastic & Synthetics Mfg - see Chemical Manufacturing, Appendix C-II | | | |
| Plastic Products Mfg | | | |
| Plastics Forming | | TCA | S-CMB |
| Printing & Publishing | | | |
| Miscellaneous | | Toluene | S-CMB |
| Blankbooks & Bookbind'g | | | |
| Blankbooks & Loose-leaf Binders | | Ammonia, Toluene, TCA, TCE | |
| Bookbinding etc | | Toluene | |
| Books | | | |
| Printing | | Lead, TCA | |
| Publishing | | Arsenic, Lead | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Printing & Publishing continued | | | |
| Newspapers | | TCE | |
| Printing (Commercial) | | Toluene, TCA | |
| Engraving & Plate | | Benzene | |
| Gravure | | Ammonia, Benzene, Cadmium, Formaldehyde, Gasoline vapors, Methylene chloride, Nickel, Perc, Toluene, TCA, TCE, Xylenes | |
| Letterpress | | Ammonia, Benzene, Chromium, Methylene chloride, Naphthalene, Perc, Toluene, TCE | |
| Lithographic | | Ammonia, Benzene, Toluene, TCE | |
| Printing Trade Svcs | | | |
| Typesetting | | Ammonia | |
| Electrotyping & Stereotyping | | Lead | |
| Publishing (Misc) | | Toluene | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Ink Mfg - see Chemical Mfg, Appendix C-II | | | |
| Printing - see Solvent Use, Appendix C-I | | | |
| Surface Coating - see Solvent Use, Appendix C-I | | | |
| Process Gas Combustion - see Combustion, Appendix C-I | | | |
| Publicly Owned Treatment Works (POTWs) | Miscellaneous | Acrylonitrile, Benzene, Carbon tetrachloride, CFC-113, Chlorine, Chlorobenzene, Chloroform, EDC, Fluorocarbons, Hydrogen sulfide, Methylene chloride, Perc, Toluene, TCA, TCE, Vinyl chloride, Vinylidene chloride, Xylenes | S-CMB |
| | Gaseous products including but not limited to: | | |
| | From raw sewage offgases | Carbon tetrachloride, Chlorobenzene, p-Dichlorobenzene, EDC | |
| Combustion | From exhaust gases of digester gas burning engines modified to lower NOx emissions | Acrolein, 1,3-Butadiene | |
| Sludge Composting | | Ammonia, Dimethylamine | |
| | From sawdust used as bulking agent (sawdust from lumber obtained at structural demolition projects) | Asbestos | |
| Sludge Dewatering (using an aminomethylated polyacrylamide having a dimethylamine group in the polymer) | | Dimethylamine | |
| Sludge Treatment | | Chloroform | |
| Aeration Tanks - see Liquid Storage & Transfer, Appendix C-I | | | |
| Chlorinator Discharge | | | |
| Digesters | | | |
| Headworks | | | |
| Sludge Incinerators - see Combustion, Appendix C-I | | | |
| Water Treatment - see Other Processes, Appendix C-I | | | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Pulp Mills - see Wood Product Mfg, Appendix C-II | | | |
| Quarries | Particulate-phase substances including but not limited to: | Asbestos, Arsenic, Silica | |
| Railroad Equip Mfg - see Transportation Equip, Appendix C-II | | | |
| Refractory Production | | Chromium | |
| Research & Devel. Labs | | Ammonia, Cadmium, Chloride, Chromium, Copper, Formaldehyde, Hydrogen chloride, Hydrogen sulfide, Lead, Manganese, Mercury, Methylene chloride, Nickel, Perc, Phosgene, Phthalic anhydride, Styrene, Toluene, TCA, TCE, Zinc, Zinc oxide | S-CMB, S-UP |
| Commercial Testing Labs | | Epichlorohydrin, Hydrogen sulfide | |
| Chemical Mfg - see Chemical Mfg, Appendix C-II<br>Combustion Processes - see Combustion, Appendix C-I<br>Other Processes - see Other Processes, Appendix C-I<br>Solvents - see Solvent Use, Appendix C-I<br>Storage and Handling - see Liquid Storage & Transfer, Appendix C-I | | | |
| Roadway Surfacing | | Asbestos, Benzene | |
| Rubber Mfg - see Chemical Mfg, Appendix C-II | | | |
| Rubber & Misc Plastics Prod | | | |
| Fabricated Rubber Prod | | Ammonia, Benzene, Chlorine, ETO, Formaldehyde, Hydrogen chloride, Lead, Methylene chloride, Naphthalene, Perc, Styrene, Toluene, Toluene diisocyanate, TCA, Vinyl chloride, Zinc, Zinc oxide | S-CMB |
| Plastics Prod, Misc | | Acetaldehyde, Acrylonitrile, Ammonia, Benzene, Benzyl chloride, Beryllium, Chlorine, EDC, ETO, Formaldehyde, Freon 113, Gasoline vapors, Hydrogen chloride, Hydrogen sulfide, Lead, Mercury, Methyl methacrylate, Methylene chloride, Naphthalene, Phenol, Phthalic anhydride, Styrene, Toluene, Toluene diisocyanate, TCA, TCE, Vinyl chloride, Zinc oxide | |
| Reclaimed Rubber | | Benzene, Cadmium, Lead, Naphthalene, Toluene | |
| Rubber & Plastic Footwear | | Naphthalene, Toluene, TCA | |
| Rubber & Plastic Hose/Belting | | Perc, Toluene | |
| Tires & Inner Tubes | | Ammonia, Benzene, Methylene chloride, Styrene, Toluene, TCA, Zinc oxide | |
| Rubber Mfg - see Chemical Mfg, Appendix C-II<br>Surface Coating - see Solvent Use, Appendix C-I | | | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Rubber Cement Application/Manufacture<br>Application - see Solvent Use, Appendix C-I<br>Manufacture - see Solvent Use, Appendix C-I and Chemical Mfg, Appendix C-II | | | |
| Saw Mills - see Wood Product Mfg, Appendix C-II | | | |
| Semiconductor Mfg - see Electronic Equipment Mfg, Integraged Circuits, Appendix C-II | | | |
| Sewage Plants - see Combustion (Incineration), Appendix C-I | | | |
| Shingle & Siding Mfg<br>Also see Plastics, Appendix C-II | | Asbestos | S-CMB |
| Sign & Advert. Display Mfg | | Ammonia, Beryllium, Hydrogen chloride, Naphthalene, Perc, Toluene, TCA, TCE, Zinc | |
| Smelters - see Metal Smelters, Appendix C-II | | | |
| Solvent Recycling<br>Also see - Solvent Use, Appendix C-I | | Benzene, Chlorinated organics | |
| Space Research & Technology<br>Combustion Processes - see Combustion, Appendix C-I<br>Degreasing - see Solvent Use, Appendix C-I<br>Research - see Research & Development, Appendix C-II<br>Surface Coating - see Solvent Use and Other Processes, Appendix C-I<br>Vehicle Refueling - see Other Processes, Appendix C-I | | | S-CMB, S-UP |
| Sporting & Athletic Goods Mfg<br>Also see Combustion, Solvent Use, and Surface Coating, Appendix C-I<br>Chemical Mfg, Metal Product Mfg, Rubber Product Mfg, and Textiles Mfg, Appendix C-II | | Methylene chloride, TCA | S-CMB |
| Stone Products Mfg - see Clay, Glass & Stone Products, Appendix C-II | | | |
| Surface Coating Application/Manufacture<br>Application - see Solvent Use and Surface Coating, Appendix C-I<br>Manufacture - see Chemical Mfg, Appendix C-II | | | |
| Surgical & Med Supp Mfg<br>Combustion Processes - see Combustion, Appendix C-I<br>Degreasing - see Solvent Use, Appendix C-I<br>Instruments - see Instrument Mfg, Appendix C-II<br>Other Processes - see Other Processes, Appendix C-I<br>Pharmaceuticals Mfg - see Chemical Mfg, Appendix C-II<br>Sterilization - see Sterilizers, Appendix C-I<br>Surface Coating - see Solvent Use, Appendix C-1 | | | |
| TSDFs - see Transfer, Storage, & Disposal Facilities, Appendix C-II | | | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Textile Mill Product'n Mfg. | | | |
| Miscellaneous | | Asbestos, Benzene, Benzidine, Bis(chloromethyl) ether, 1,4-Dichlorobenzene, Dichloroethane, Dioxane, Ethyleneimine, Formaldehyde, Hydrazine, Methyl Bromide, Perc, Phenol, TCE | S-CMB |
| Apparel/Other Text'l Prod | | | |
| Fur Goods | | Ammonia, Arsenic, Chlorine, EDC, Toluene, TCA | |
| Apparel Belts | | Ammonia, Perc | |
| | | Ammonia, Cadmium, Copper, Toluene, Zinc Toluene | |
| House Furnishings | | Napthalene, Toluene | |
| Auto/Apparel Trimings | | Ammonia, Arsenic, Benzene, Toluene, Vinyl chloride | |
| Floor Covering Mills | | | |
| Miscellaneous | | Arsenic | |
| Woven Carpets & Rugs | | Arsenic | |
| Tufted Carpets & Rugs | | Benzene, Formaldehyde | |
| Knitting Mills | | Benzene, Benzidine | |
| Hosiery | | Acrylonitrile, Benzene | |
| Knit Outerwear Mills | | Ammonia, Arsenic, Benzene, Perc | |
| Narrow Fabric Mills | | Benzene, 1,4-Dioxane, Mineral fibers | |
| Nonwoven Industry | | Bis(chloromethyl) ether | S-CMB |
| Textile Finishing | | | |
| Miscellaneous | | Acrylonitrile, Benzene, Benzidene, 1,3-Butadiene, Formaldehyde, Hydrazine, Perc, Toluene, Vinyl chloride, Vinylidene chloride, Xylenes | |
| Finish Plants | | | |
| Cotton | | Acrylonitrile, Benzene, Chromium, 1,4-Dichlorobenzene, Toluene | |
| Synthetic | | Benzene, Copper, 1,4-Dioxane, Formaldehyde, Hydrazine, Perc, Xylenes | |
| Weaving Mills | | | |
| Cotton | | Acrylonitrile, Benzene, 1,4-Dioxane, EDC, Toluene | |
| Synthetics | | Acrylonitrile, Benzene, Chloroform, 1,4-Dioxane, EDC, Formaldehyde, Mineral fibers, Perc, Styrene, Toluene diisocyanate | |
| Wool | | Benzene, 1,4-Dioxane, Formaldehyde, Perc | |
| Woven Fabric Finishing | | 1,4-Dichlorobenzene | |
| Yarn & Thread Mills | | | |
| Yarn Mills,not wool | | Toluene diisocyanate | |
| Throwing & Winding | | Ammonia, Lead, Toluene diisocyanate | |
| Wool Yarn Mills | | Arsenic | |
| Misc Textile Goods | | | |
| Coated Fabrics, not rubberized | | Arsenic, Benzene, Cresol, Formaldehyde, Hydrogen chloride, Lead, Perc, Styrene, Toluene, Xylenes | |
| Cordage & Twine | | TCA | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Textile Mill Product'n Mfg (Misc) continued | | | |
| | Felt goods | Arsenic, TCA | |
| | Paddings & Upholstery Filling | Benzene | |
| | Processes Textile Waste | Formaldehyde | |
| | Tire Cord & Fabric | Ammonia, Asbestos, Benzene, Formaldehyde, Perc | |
| Cleaning - see Degreasing, Appendix C-I and Dry Cleaning, Appendix C-II | | | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Dyeing - see Chemical Mfg and Dyeing of Textiles, Appendix C-II | | | |
| Surface Coating/Solvent Use - see Solvent Use, Appendix C-I | | | |
| Tobacco Mfg | | | |
| | Cigarette Mfg | Benzene, Chloroform, Formaldehyde, Methylene chloride, Perc, Toluene | |
| | Tobacco Stemming & Redrying | Benzene | |
| Toy & Sporting Good Mfg | | | |
| | Dolls | Acrylonitrile, Toluene | S-CMB |
| | Games, Toys, & Children's Vehicles | Styrene, Toluene | |
| | Sport & Athletic Goods | Perc, Styrene, Toluene | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Degreasing/Surface Coating - see Solvent Use and Other Processes, Appendix C-I | | | |
| Labeling/Packaging - see Printing and Wood (Paper) Products, Appendix C-II | | | |
| Also see - Metal, Rubber, and Wood Products, Appendix C-II | | | |
| Train Mfg/Rpf - see Transportation Equipment, Appendix C-II | | | |
| Transfer, Storage, & Disposal Facil's (TSDFs) | | | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Other Processes - see Other Processes, Appendix C-I | | | |
| Solvent Recycling - see Solvent Use, Appendix C-I | | | |
| Storage - see Liquid Storage & Transfer, Appendix C-I | | | |
| Transportation Equip Mfg/Rpr | | Hydrogen chloride, Methylene chloride, Perc, Toluene, TCE | S-CMB |
| | Auto Repair/Auto Body Repair | | |
| | Gen'l Auto Repair | Ammonia, Asbestos, Formaldehyde, Toluene, TCA | |
| | Tire Retreading & Rpr | Toluene | |
| | Paint Shops | Benzene, Naphthalene, Toluene, Xylenes Zinc Oxide | |
| | Top & Body Rpr Shops | Naphthalene, Toluene | |
| | Motor Vehicles & Car Bodies | Ammonia, Cadmium, Chromium, Formaldehyde, Hydrogen chloride, Lead, Methylene chloride, Phenol, Toluene | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Transportation Equip, Auto Mfg/Rpr, continued | | | |
| Motor Vehicle Parts & Accessories | | Ammonia, Asbestos, Benzene, Cadmium, Chlorine, Chloroform, Chromium, Copper, Formaldehyde, Hydrogen chloride, Hydrogen sulfide, Lead, Manganese, Methylene chloride, Naphthalene, Perc, Toluene, Toluene diisocyanate, TCA, TCE, Zinc, Zinc oxide | |
| Truck, Camper, Trailer, & Bus Bodies | | Chromium, Methylene chloride, Nickel, Styrene, Toluene | |
| Auto Parts Mfg | | | |
| Brake lining Mfg | | Asbestos | |
| Aircraft & Parts | | Ammonia, Chromium, Hydrogen chloride, Hydrogen fluoride, Hydrogen sulfide, Lead, Methylene chloride, Nickel, Perc, Styrene, Toluene, TCA, TCE, Xylenes, Zinc, Zinc oxide | |
| Guided Missiles, Space Vehicles, & Parts | | | |
| Guid Mis'ls Spc Vehs | | Formaldehyde, Hydrazine, Perc, Toluene, TCE, Xylenes | |
| Spc Propulsion Units & Parts | | Hydrazine, TCE | |
| Spc Veh Equipment | | Ammonia, Hydrazine, Hydrogen chloride, Lead, Methylene chloride, Toluene | |
| Motorcycles, Bicycles & Parts | | Toluene | |
| Railroad Equipment | | Ammonia, Chromium, Hydrogen chloride, Methylene chloride, Nickel, Toluene, Toluene diisocyanate, TCA | |
| Ship & Boat Bld & Rpr | | Asbestos, Hydrazine, Methylene chloride, Phenol, PCBs, Styrene, TCE | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Degreasing - see Solvent Use, Appendix C-I | | | |
| Metal Forming - see Machining and Metal Smelters, Appendix C-II | | | |
| Military Transport - see Military, Appendix C-II | | | |
| Paint Preparation - see Chemical Mfg, Appendix C-II | | | |
| Research - see Research & Development, Appendix C-II | | | |
| Space Transport - see Space Research & Technology, Appendix C-II | | | |
| Storage & Handling - see Liquid Storage & Transfer, Appendix C-I | | | |
| Surface Coating/Touch-up - see Solvent Use and Other Processes, Appendix C-I | | | |
| Upholstery Mfg - see Textile Mill Prod Mfg, Appendix C-II | | | |
| Transportation Equip Sales | | | |
| Boat Dealers | | Toluene | |
| Used Car Dealers | | Toluene | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Transportation Ports/Stations | | | |
| Airports & Flying Fields | | Benzene, Dioxins, POM, PAHs*, Radionuclides, Toluene | |
| Inspection & Weighing | | EDC, Lead, Methylene chloride, Perc, Toluene, Toluene diisocyanate, TCA, TCE, Xylenes | |
| Marine Cargo Handling | | | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Degreasing/Paint Stripping - see Solvent Use, Appendix C-I | | | |
| Electroplating - see Metal Plating, Appendix C-II | | | |
| Refueling - see Other Processes, Appendix C-I | | | |
| Truck Mfg - see Transportation Equipment, Appendix C-II | | | |
| Universities - see Colleges, Appendix C-II | | | |
| Varnish Mfg - see Chemical Mfg, Appendix C-II | | | |
| Water Treatment - see Other Processes, Appendix C-I | | | |
| Wood Combustion - see Combustion, Appendix C-I | | | |
| Wood Preservation | Gaseous and aerosol releases | | S-CMB |
| Cellon Process | from: wood preserving agents | Arsenic, Benzene, Chloroform, Chromium, Copper, Cresols, Dibenzofuran, Dioxins, Hydrogen chloride, Phenol, Naphthalene, Toluene, Zinc, Zinc Oxide | |
| Chromated Copper Arsenate Process | | | |
| Dricon Process | | | |
| Diluent/Creosote Process | | | |
| Oil/Penta Process | | | |
| | vapor drying agents | various solvents | |
| | preserving carriers | various solvents | |
| | fire retardents | Formaldehyde, Zinc chloride | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Wood Chemicals Mfg - see Chemical Mfg, Appendix C-II | | | |
| Wood Products Mfg. | Miscellaneous | Cresols, Formaldehyde, Dioxins, TCE | S-CMB |
| Fiberboard Mfg. | | Chloroform | |
| Lumber | | Cresols, Formaldehyde, Dioxins, TCE, Toluene | |
| Millwork, Plywood, & Structural Members | | | |
| Millwork | | Asbestos, Carbon tetrachloride, Chlorophenols, Formaldehyde, Methylene chloride, Toluene, Xylenes | |
| Wood Kitchen Cabinets | | Methylene chloride, Naphthalene, Styrene, Toluene, TCA, Xylenes | |
| Hardwd Veneer/Plywd | | Formaldhyde, Perc | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Wood Product Mfg continued | | | |
| Paper & Allied Prod Mfg | | | |
| | Gaseous/aerosol/particulate releases including but not limited to: | | |
| | From: Sizing agents | Acrylamide, Styrene | |
| | Wet & dry-strength agents | Epichlorohydrin, Formaldehyde | |
| | Adhesives | Acrylamide, Ammonia | |
| | Dyes & pigments | Binzidine, Direct Black 38, Direct Blue 6 Lead, o-Tolidine | |
| | Binders | Styrene | |
| | Pigment fillers/coatings | Asbestos, Styrene, Zinc, Zinc Oxide | |
| | Humectants | Formaldehyde | |
| | Coatings | Ammonia, Sodium hydroxide | |
| | Oil-resistant additives | Fluorochemical chrome complex | |
| | Machine operating aids Retention aids Biocides & slime cont'l | Asbestos, Epichlorohydrin | |
| | Deinking agents | Acrolein, TCA, Trichlorophenol | |
| | Bleaching chemicals | Sodium hydroxide | |
| | | Ammonia, Chlorine, Chloroform, Chromic sulfate, Methanol, Sodium hydroxide, Zinc | |
| | From chemicals imported in waste paper: ink pigments, coating agents, binders, adhesives - | | |
| Bldg Paper & Board Mills | | Chloroform, Phenol, Toluene | |
| Deink Fine & Tissue Paper, Secondary Fiber Mills | | Ammonia, Asbestos | |
| Paper Mills Misc | | Chloroform | |
| Paperboard Containers & Boxes Mfg | | Arsenic, Cadmium, Chlorine, Chloroform, Hydrogen sulfide, Toluene, TCE | |
| Corrug. & Solid Fiber Box | | Ammonia, TCE | |
| Folding Box | | Formaldehyde | |
| Sanitary Food Containers | | Acetaldehyde, Ammonia, Toluene | |
| Fiber Cans, Drums, etc | | Ammonia, Toluene | |
| Set-Up Box | | Toluene | |
| Paperboard Mills | | Cadmium, Chloroform, Formaldehyde, Toluene | |
| Converted Paper Prod | | | |
| Die-Cut Paper & Board | | Toluene, TCE | |
| Paper Bags | | Acetaldehyde, Ammonia, Formaldehyde, Hydrogen chloride, Methylene chloride, Naphthalene, Perc, Toluene, TCA | |
| Pressed & Molded Pulp Goods | | Zinc | |
| Miscellaneous | | Ammonia, Formaldehyde, Toluene | |

| Industry/ Emitting Process | Type(s) of Emissions/ Emitting Process Points | Some Specific Substances (Including, but not limited to) | Supplemental Process Parameter Reporting Form(s) to Use |
|---|---|---|---|
| Wood Prod Mfg continued | | | |
| Pulp Mill Mfg | | | |
| Groundwood/Mechanical Pulp Mfg | | | |
| Chemical Pulp Mfg | | Ammonia, Calcium, Carbon, Caustic soda, Sodium sulfate, Sulfur dioxide | |
| Dissolving Pulp Kraft or Sulfite | | Chloroform | |
| Sulfite Papergrade Pulp | | Chloroform | |
| Deink Fine & Tissue Paper | | Chloroform | |
| Pressed & Molded Pulp Goods | | Zinc | |
| Miscellaneous | | Chlorine, Chloroform, Hydrogen sulfide | |
| Also see - Paperboard, Coarse Paper, Tissue Paper, Appendix C-II | | | |
| Plywood Mfg | | Cresols, Dioxins | |
| Presswood & Laminated Wood Products Mfg | | Phenol-formaldehyde resins - Formaldehyde, Phenol<br>Melamine-formaldehyde resins - Formaldehyde<br>Dispersion agent (during glue formulation) - Sodium hydroxide<br>Formaldehyde scavengers - Ammonia | |
| Sawmills & Planing Mills | | Acetaldehyde, Formaldehyde, Lead, POM, PAHs*, Toluene | |
| Hardwood Dimension & Flooring | | Toluene | |
| Softwood Veneer Mfg | | Cresols, Dioxins | |
| Wood Containers | | Toluene | |
| Wood Furniture Mfg | | | |
| Wood Finishing | | Chromium, Methylene chloride, TCA | |
| Combustion Processes - see Combustion, Appendix C-I | | | |
| Surface Coating - see Solvent Use and Other Processes, Appendix C-I | | | |
| Wool Fabric Mills - see Textile Mfg | | | |
| All Other Industries | Gaseous releases from combustion, storage, handling, process vessels, etc | feedstocks that are on list of substances or may contain listed substances as substances. | |
| | Particulate and aerosol releases from combustion, storage, handling, process vessels, etc | Check all materials manufactured for components that on listed substances | |
| | Process loss and fugitive releases anywhere along the process train | | |

# APPENDIX D

## SUMMARY OF REQUIREMENTS FOR MEASUREMENTS AND ALTERNATIVES

APPENDIX D

Summary of Requirements for Measurements and Alternatives

****** NOTES FOR FOLLOWING TABLE *******

(1) Each reference to a measurement requirement includes the following requirements for the substances to be tested and type of test to be performed:

(a) The test shall measure the quantities of all listed substances whose presence in detectable quantities can be determined using the ARB-adopted test method or other method specified in Section 93336 for the substance indicated. Therefore the test indicated for "dioxins" shall include measurement of all the polychlorinated dibenzodioxins and dibenzofurans to which the ARB-adopted method for dioxins and furans applies. Specifically, the test results shall include the determination of total tetra-, penta-, hexa-, hepta-, and octa- PCDD/PCDF homologue groups and all the 2,3,7,8-substituted PCDD/PCDF isomers listed in the method; and

(b) ARB-adopted test methods which are necessary to characterize associated source conditions, including stack flow rate and moisture content, shall also be performed to ensure a proper source test for the material indicated. These associated tests shall be identified in the proposed source test protocol in the inventory plan.

(2) Reference to the "full set of metals" or "all metals" herein refers to the following listed substances which are required to be measured and reported: arsenic (As), beryllium (Be), cadmium (Cd), chromium (Cr) which includes total chromium and hexavalent chromium (Cr VI), copper (Cu), lead (Pb), manganese (Mn), mercury (Hg), nickel (Ni), selenium (Se), and zinc (Zn).

(3) Fuel analysis shall include analysis for the full set of metals referred to in Note (2), chlorine content, and sulfur content.

## APPENDIX D

### Summary of Requirements for Measurements and Alternatives*

| Emitting Process, Device or Facility Activity | Substance and Type of Test | Alternative (if any) |
|---|---|---|
| **--COMBUSTION--** | | |
| 1. Incinerators | | |
| (a) Incinerators burning hazardous, municipal, or biomedical waste, or burning tires. Does not include refuse incinerators at schools, prisons, restaurants, or hotels. | a. Full set metals/stack test | Small business:Fuel analysis |
| | b. Hydrogen chloride/stack test | Small business:Fuel analysis |
| | c. PAH/stack test | - |
| | d. Dioxins/stack test | - |
| | e. Formaldehyde/stack test | Small business:Not required |
| | f. Benzene/stack test | Small business:Not required |
| | g. Vinyl chloride/stack test | Small business:Not required |
| | h. PCBs/stack test:required any time that dioxins are tested | - |
| (b) Incinerators at schools, prisons, and restaurants, and hotels. | Full set metals/stack test | - |
| (c) Metal reclamation when surface is coated with plastic material | Same as 1(a) above | Same as 1(a) above |

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* See notes preceding the table for further explanation of terms used in the table.

| | | |
|---|---|---|
| 2. Coal and coke combustion including incineration* | a. Full set metals/stack test<br>b. Hydrogen chloride/stack test<br>c. PAH/stack test<br>d. Dioxins/stack test<br>e. Formaldehyde/stack test | Small business:Fuel analysis<br>Small business:Fuel analysis<br>-<br>-<br>-<br>Requirements a-e shall not apply to universities, schools, colleges, hospitals, and correctional institutions where coal or coke combustion is used primarily for space heating. |
| 3. Residual and crude oil combustion and incineration* | a. Full set metals/stack test<br>b. Metals, chloride/fuel analy.<br>c. Benzene/stack test<br>d. PAH/stack test<br>e. Formaldehyde/stack test | Small business:Fuel analysis<br>-<br>-<br>-<br>-<br>Requirements a-e shall not apply to universities, schools, colleges, hospitals, and correctional institutions where residual or crude oil combustion is used primarily for space heating. |
| 4. Distillate and diesel combustion and incineration* | a. Metals, chloride/fuel analy.<br>b. PAH/stack test<br>c. Formaldehyde/stack test | -<br>-<br>-<br>Requirements a-c shall not apply to universities, schools, colleges, hospitals, and correctional institutions where distillate or diesel combustion is used primarily for space heating.<br><br><u>Requirements a-c shall not apply to emergency or stand-by equipment that primarily burn distillate or diesel fuel.</u> |
| 5. Waste oil combustion and incineration* (including oil containing used, recycled, reprocessed, or re-refined oil) | a. Full set metals/stack test<br>b. Halogenated organics/stack test<br>c. Benzene/stack test<br>d. PAH/stack test<br>e. Dioxins/stack test<br>f. Formaldehyde/stack test<br>g. PCBs/stack test: required any time that dioxins are tested | Small business:Fuel analysis<br>-<br>-<br>-<br>-<br>Small business:Not required<br>- |

* If co-fired with hazardous, municipal, or biomedical waste, or burning tires, then include all testing required under 1(a).

| | | |
|---|---|---|
| 6. Wood, wood waste, and agricultural waste combustion and incineration* (includes untreated and treated wood) | a. Full set metals/stack test<br>b. PAH/stack test<br>c. Dioxins/stack test<br>d. Formaldehyde/stack test | Small business:Fuel analysis<br>-<br>-<br>-<br><br>Requirements a-d shall not apply to universities, schools, colleges, hospitals, and correctional institutions where wood, wood waste, or agricultural waste combustion is used primarily for space heating. |
| 7. Natural gas combustion | a. Formaldehyde/stack test for electric utilities only | - |
| **--OTHER PROCESSES--** | | |
| 8. Waste water treatment facilities - including Publicly Owned Treatment Works (POTWs) | | |
| - Sludge incinerator | Same as Incinerators 1(a) | Same as Incinerators 1(a) |
| / Headworks | a/ Halogenated organics stack test if ducted, otherwise as applicable in method, sampling on a minimum of 15 days randomly distributed throughout the year, except that these days shall include at least two weekend days, and one day each quarter when NPDES ** liquid sampling is performed, if applicable. This sampling schedule shall be deemed to meet the sampling frequency requirements specified in subsection 93334 (b)/ | / |
| / Chlorinator discharge | a/ Halogenated organics/ducted or as applicable in method | / |

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* If co-fired with hazardous, municipal, or biomedical waste, or burning tires, then include all testing required under 1(a).

** NPDES / National Pollution Discharge Elimination System

| | | |
|---|---|---|
| 9. Agriculture-related facilities: dust | a. Metals/Lab analysis of dust representative of fugitive dust * | Small business:Not required |
| 10. Pharmaceutical mfg. | | |
| - Blender | a. Halogenated organics/ducted or as applicable in method | - |
| | b. Benzene/ducted or as applicable in method | - |
| - Drying oven | a. Halogenated organics/ ducted or as applicable in method | - |
| | b. Benzene/ducted or as applicable in method | - |
| 11. Smelters and foundries | | |
| (a) All | a. Full set metals/stack test | Small business:Metals test/ feed material analysis for As, Be, Cd, Cr(VI), Ni, Pb |
| | b. Hydrogen sulfide/stack test | Small business:Not required |
| (b) Secondary copper smelters | a. Same as 11(a) plus dioxins/stack test | - |
| 12. Petroleum refineries | | |
| - CO boilers | a. Benzene/as applicable in method | - |
| | b. Formaldehyde/as applicable in method | - |
| | c. All metals/ducted or as applicable in method | - |
| - Catalytic crackers | a. Benzene/as applicable in method | - |
| | b. Formaldehyde/as applicable in method | - |
| | c. All metals/ducted or as applicable in method | - |
| - Oil combustion | a. Same as appropriate oil combustion by fuel type | Same as oil combustion |
| 13. Asphaltic concrete production | a. Full set of metals/ducted or as applicable in method | - |
| | b. Benzene/ducted or as applicable in method | - |
| | c. PAH/ducted or as applicable in method | Small business:Not required |

* Preferably dust trapped by the particulate control equipment, if any.

| | | |
|---|---|---|
| 14. Cement mfg. | a. Full set of metals/stack test | - |
| | b. Formaldehyde/stack test | - |
| | c. Benzene/stack test | - |
| | d. Dioxins/stack test * | - |
| | e. PAH/stack test * | Small business:Not required |
| | f. Hydrogen chloride/stack test* | Small business:Fuel analysis, Including total chloride |
| 15. Pulp and Paper mfg. | | |
| - Combustion | a. All combustion, as applicable by fuel type | Same as for Combustion |
| - Bleaching | a. Formaldehyde/ducted or as applicable in method | - |
| | b. Halogenated organics/ducted or as applicable in method | - |
| 16. Textile mfg. | | |
| - Combustion | a. All combustion, as applicable by fuel type | Same as for Combustion |
| - Other processes | a. Benzene/ducted or as applicable in method | - |
| | b. Formaldehyde/ducted or as applicable in method | - |
| | c. Halogenated organics/ducted or as applicable in method | - |
| 17. Solvent recycling (re-refining) | a. Halogenated organics/ducted or as applicable in method | - |
| | b. Benzene/ducted or as applicable in method | - |
| 18. Fiberboard mfg. | a. Formaldehyde/ducted or as applicable in method | - |
| 19. Glass mfg. | a. Arsenic/stack test | - |
| | b. Cr(VI) and lead/stack test | Small business:Not required |
| 20. Bulk plant/terminal | a. Gasoline vapors/existing compliance tests must be provided | - |

* except when burning primarily natural gas; then not required

# APPENDIX E

## REQUIREMENTS FOR CLASSES OF FACILITIES EMITTING LESS THAN 10 TPY OF CRITERIA POLLUTANTS

### E-I

### CLASSES OF FACILITIES EMITTING LESS THAN 10 TPY FOR WHICH THE FACILITY OPERATORS MUST PREPARE COMPLETE PLANS AND REPORTS

### E-II

### CLASSES OF FACILITIES EMITTING LESS THAN 10 TPY FOR WHICH THE FACILITY OPERATORS MUST COMPLETE A SURVEY OF PRODUCTION, USE, OR OTHER PRESENCE

## NOTES TO APPENDIX E

a Except facilities using less than four pounds of ethylene oxide per year.

b Except facilities using solvents for cold cleaning and vapor degreasing in the following quantities:

(1) less than 55-gallon (drum) quantities per year of a listed substance which is designated as a human carcinogen or potential human carcinogen; and

(2) less than 55-gallon (drum) quantities per month of a listed substance which is not designated as a human carcinogen or potential human carcinogen.

c Any facility at which asbestos removal occurs on a routine and predictable basis for a period of at least one year.

d Any treatment, storage, disposal, and recycling facility (as defined by "hazardous waste facility" in Health and Safety Code, Section 25117.1 and in Title 22, California Code of Regulations (CCR), Section 66096) except:

(1) transfer stations (as defined in Title 22, CCR, Section 66212) that do not pump or package hazardous waste; and

(2) storage facilities (as defined in Health and Safety Code, Section 25123.3) that store only containerized waste.

e Only the described portions of the SIC are included.

f [ ] Indicates an SIC formerly used by the Executive Office of the President, Office of Management and Budget, which has been reassigned.

APPENDIX E-I

## Classes of Facilities Emitting Less Than 10 tpy of Criteria Pollutants for Which the Facility Operators Must Prepare Complete Emission Inventory Plans and Reports

| Standard Industrial Classification Code (SIC) | Description of Class |
|---|---|
| Any SIC | Metal platers using cadmium or chromium |
| Any SIC | Facilities using ethylene oxide for sterilization[a] |
| Any SIC | Facilities with cooling towers using hexavalent chromium |
| Any SIC | Facilities that perform degreasing[b] |
| Any SIC | Facilities using incinerators that burn hazardous, municipal, or biomedical waste, or burning tires |
| Any SIC | Long term asbestos removal (over one year)[c] |
| Any SIC | Treatment, storage, disposal, and recycling facilities (TSDFs; TSDR facilities)[d] |
| 2221[e],3229[e] | Fiberglass and various fiberglass materials and products manufacturing facilities within SICs 2221 and 3229 |
| 2611,2621,[2631][f] | Pulp and paper mills |
| 2711-2771, 2782 | Printing and publishing including printshops and miscellaneous commercial printing |
| 2812-2899 | Chemicals and allied products manufacturing |
| 2911-2999 | Petroleum refining and related industries |
| 3011-3089, [3293][f],[3555][f] | Rubber and miscellaneous plastics products manufacturing |
| 3471-3479 | Miscellaneous plating, polishing, coating, engraving, and allied services |
| 3674 | Semiconductors and related devices manufacturing |
| 3731-3732 | Boat and ship building and repair |
| 4952 | Wastewater treatment facilities (including publicly owned treatment works, POTWs) |
| 5171-5172 | Petroleum bulk stations and terminals and related |
| 5511-5521, [7531][f],7532, [7535][f] | Auto body shops (including new and used can dealers where body work occurs) |
| 5541 | Gasoline stations |
| 7216 | Dry cleaners |
| 7261[e] | Funeral services with crematories |

APPENDIX E-II

Classes of Facilities Emitting Less Than 10 tpy of Criteria Pollutants for Which the Facility Operators Must Complete a Survey of Production, Use, or Other Presence of Listed Substances

| Standard Industrial Classification Code (SIC) | Description of Class |
|---|---|
| 0723,[0729][f] | Crop preparation services for market |
| 0724,[0729][f] | Cotton ginning |
| 1311 | Crude petroleum and natural gas extraction |
| 1321 | Natural gas liquids plants |
| 1381 | Drilling oil and gas wells |
| 1422-1429 | Miscellaneous crushed and broken stone mining |
| 1442-1446 | Construction sand and gravel mining |
| 2033-2034 | Canned and dehydrated fruits and vegetables |
| 2041,2044,2046, 4221 | Grain mill products manufacturing and warehousing |
| 2434-2439 | Veneer, plywood, structural wood members, and related manufacturing |
| 2441-2499 | Miscellaneous wood containers, buildings, and products manufacturing |
| 2511-2599,7641 | Furniture or cabinet manufacturing and repair |
| 3241 | Hydraulic cement manufacturing |
| 3292-3296 | Asbestos and miscellaneous nonmetallic mineral products manufacturing |
| 3312-3325 | Blast furnaces and steel mills |
| 3341-3369 | Primary metal industries and secondary smelting |
| 3411-3469, 3482-3499 | Miscellaneous fabricated metal products manufacturing |
| 3511-3537 | Various industrial machinery manufacturing |
| 3612-3672, [3673][f], 3675-3699 | Electronic and other electrical equipment and components, except computer equipment |
| 3721-3728 | Aircraft and parts |
| 3761-3769 | Guided missile and space vehicle propulsion units and propulsion unit parts |
| 7218 | Industrial launderers |
| 7533-7534, 7537-7539 | General automotive repair shops and related |
| 8062 | General medical and surgical hospitals |
| 8731,8733-8734, [7391][f],[7397][f], [8922][f] | Research, development, and testing services |

# ATTACHMENT II

Copy of the Air Toxics "Hot Spots"
Information and Assessment Act of 1987

# PART 6. AIR TOXICS "HOT SPOTS" INFORMATION AND ASSESSMENT

(Part 6 added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384. Note: Sections 44380 and 44384 became operative Jan. 1, 1988.)

## CHAPTER 1. LEGISLATIVE FINDINGS AND DEFINITIONS

(Chapter 1 added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44300. This part shall be known and may be cited as the Air Toxics "Hot Spots" Information and Assessment Act of 1987.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)



44301. The Legislature finds and declares all of the following:

(a) In the wake of recent publicity surrounding planned and unplanned releases of toxic chemicals into the atmosphere, the public has become increasingly concerned about toxics in the air.

(b) The Congressional Research Service of the Library of Congress has concluded that 75 percent of the United States population lives in proximity to at least one facility that manufactures chemicals. An incomplete 1985 survey of large chemical companies conducted by the Congressional Research Service documented that nearly every chemical plant studied routinely releases into the surrounding air significant levels of substances proven to be or potentially hazardous to public health.

(c) Generalized emissions inventories compiled by air pollution control districts and air quality management districts in California confirm the findings of the Congressional Research Service survey as well as reveal that many other facilities and businesses which do not actually manufacture chemicals do use hazardous substances in sufficient quantities to expose, or in a manner that exposes, surrounding populations to toxic air releases.

(d) These releases may create localized concentrations or air toxics "hot spots" where emissions from specific sources may expose individuals and population groups to elevated risks of adverse health effects, including, but not limited to, cancer and contribute to the cumulative health risks of emissions from other sources in the area. In some cases where large populations may not be significantly affected by adverse health risks, individuals may be exposed to significant risks.

(e) Little data is currently available to accurately assess the amounts, types, and health impacts of routine toxic chemical releases into the air. As a result, there exists significant uncertainty about the amounts of potentially hazardous air pollutants which are released, the location of those releases, and the concentrations to which the public is exposed.

(f) The State of California has begun to implement a long-term program to identify, assess, and control ambient levels of hazardous air pollutants, but additional legislation is needed to provide for the collection and evaluation of information concerning the amounts, exposures, and short- and long-term health effects of hazardous substances regularly released to the surrounding atmosphere from specific sources of hazardous releases.

(g) In order to more effectively implement control strategies for those materials posing an unacceptable risk to the public health, additional information on the sources of potentially hazardous air pollutants is necessary.

(h) It is in the public interest to ascertain and measure the amounts and types of hazardous releases and potentially hazardous releases from specific sources that may be exposing people to those releases, and to assess the health risks to those who are exposed.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44302. The definitions set forth in this chapter govern the construction of this part.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44303. "Air release" or "release" means any activity that may cause the issuance of air contaminants, including the actual or potential spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing of a substance into the ambient air and that results from the routine operation of a facility or that is predictable, including, but not limited to, continuous and intermittent releases and predictable process upsets or leaks.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44304. "Facility" means every structure, appurtenance, installation, and improvement on land which is associated with a source of air releases or potential air releases of a hazardous material.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44306. "Health risk assessment" means a detailed comprehensive analysis prepared pursuant to Section 44361 to evaluate and predict the dispersion of hazardous substances in the environment and the potential for exposure of human populations and to assess and quantify both the individual and populationwide health risks associated with those levels of exposure.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44307. "Operator" means the person who owns or operates a facility or part of a facility.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44308. "Plan" means the emissions inventory plan which meets the conditions specified in Section 44342.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44309. "Report" means the emissions inventory report specified in Section 44341.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

## CHAPTER 2. FACILITIES SUBJECT TO THIS PART

(Chapter 2 added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44320. This part applies to the following:

(a) Any facility which manufactures, formulates, uses, or releases any of the substances listed pursuant to Section 44321 or any other substance which reacts to form a substance listed in Section 44321 and which releases or has the potential to release total organic gases, particulates, or oxides of nitrogen or sulfur in the amounts specified in Section 44322.

(b) Except as provided in Section 44323, any facility which is listed in any current toxics use or toxics air emission survey, inventory, or report released or compiled by a district. A district may, with the concurrence of the state board, waive the application of this part pursuant to this subdivision for any facility which the district determines will not release

any substance listed pursuant to Section 44321 due to a shutdown or a process change.

(Amended by Stats. 1989, Ch. 1254, Sec. 7.)

References at the time of publication (see page iii):

Regulations: 17, CCR, sections 90700-90703, 90704, 93303, 93306

44321. For the purposes of Section 44320, the state board shall compile and maintain a list of substances that contains, but is not limited to, all of the following:

(a) Substances identified by reference in paragraph (1) of subdivision (b) of Section 6382 of the Labor Code and substances placed on the list prepared by the National Toxicology Program issued by the United States Secretary of Health and Human Services pursuant to paragraph (4) of Section 262 of Public Law 95-622 of 1978. For the purposes of this subdivision, the state board may remove from the list any substance which meets both of the following criteria:

(1) No evidence exists that it has been detected in air.

(2) The substance is not manufactured or used in California, or, if manufactured or used in California, because of the physical or chemical characteristics of the substance or the manner in which it is manufactured or used, there is no possibility that it will become airborne.

(b) Carcinogens and reproductive toxins referenced in or compiled pursuant to Section 25249.8, except those which meet both of the criteria identified in subdivision (a).

(c) The candidate list of potential toxic air contaminants and the list of designated toxic air contaminants prepared by the state board pursuant to Article 2 (commencing with Section 39660) of Chapter 3.5 of Part 2, including, but not limited to, all substances currently under review and scheduled or nominated for review and substances identified and listed for which health effects information is limited.

(d) Substances for which an information or hazard alert has been issued by the repository of current data established pursuant to Section 147.2 of the Labor Code.

(e) Substances reviewed, under review, or scheduled for review as air toxics or potential air toxics by the Office of Air Quality Planning and Standards of the Environmental Protection Agency, including substances evaluated in all of the following categories or their equivalent: preliminary health and source screening, detailed assessment, intent to list, decision not to regulate, listed, standard proposed, and standard promulgated.

(f) Any additional substances recognized by the state board as presenting a chronic or acute threat to public health when present in the ambient air, including, but not limited to, any neurotoxins or chronic respiratory toxins not included within subdivision (a), (b), (c), (d), or (e).

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

References at the time of publication (see page iii):

Regulations: 17, CCR, sections 90700-90702, 93307, 93308, 93334, 93335

44322. This part applies to facilities specified in subdivision (a) of Section 44320 in accordance with the following schedule:

(a) For those facilities that release, or have the potential to release, 25 tons per year or greater of total organic gases, particulates, or oxides of nitrogen or sulfur, this part becomes effective on July 1, 1988.

(b) For those facilities that release, or have the potential to release, more than 10 but less than 25 tons per year of total organic gases, particulates, or oxides of nitrogen or sulfur, this part becomes effective July 1, 1989.

(c) For those facilities that release, or have the potential to release, less than 10 tons per year of total organic gases, particulates, or oxides of nitrogen or sulfur, the state board shall, on or before July 1, 1990, prepare and submit a report to the Legislature identifying the classes of those facilities to be included in this part and specifying a timetable for their inclusion.

(Amended by Stats. 1989, Ch. 1254, Sec. 8.)

References at the time of publication (see page iii):

Regulations: 17, CCR, sections 90702, 90703, 93303-93305, 93308

44323. A district may prepare an industrywide emissions inventory and health risk assessment for facilities specified in subdivision (b) of Section 44320 and subdivisions (a) and (b) of Section 44322, and shall prepare an industrywide emissions inventory for the facilities specified in subdivision (c) of Section 44322, in compliance with this part for any class of facilities that the district finds and determines meets all of the following conditions:

(a) All facilities in the class fall within one four-digit Standard Industrial Classification Code.

(b) Individual compliance with this part would impose severe economic hardships on the majority of the facilities within the class.

(c) The majority of the class is composed of small businesses.

(d) Releases from individual facilities in the class can easily and generically be characterized and calculated.

(Amended by Stats. 1989, Ch. 1254, Sec. 9.)

References at the time of publication (see page iii):

Regulations: 17, CCR, sections 93304, 93306

44324. This part does not apply to any facility where economic poisons are employed in their pesticidal use, unless that facility was subject to district permit requirements on or before August 1, 1987. As used in this section, "pesticidal use" does not include the manufacture or formulation of pesticides.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44325. Any solid waste disposal facility in compliance with Section 41805.5 is in compliance with the emissions inventory requirements of this part.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

## CHAPTER 3. AIR TOXICS EMISSION INVENTORIES

(Chapter 3 added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44340. (a) The operator of each facility subject to this part shall prepare and submit to the district a proposed comprehensive emissions inventory plan in accordance with the criteria and guidelines adopted by the state board pursuant to Section 44342.

(b) The proposed plan shall be submitted to the district on or before August 1, 1989, except that, for any facility to which subdivision (b) of Section 44322 applies, the proposed plan shall be submited to the district on or before August 1, 1990. The district shall approve, modify, and approve as modified, or return for revision and resubmission, the plan within 120 days of receipt.

(c) The district shall not approve a plan unless all of the following conditions are met:

(1) The plan meets the requirements established by the state board pursuant to Section 44342.

(2) The plan is designed to produce, from the list compiled and maintained pursuant to Section 44321, a comprehensive characterization of the full range of hazardous materials that are released, or that may be released, to the surrounding air from the facility. Air release data shall be collected at, or calculated for, the primary locations of actual and potential release for each hazardous material. Data shall be collected or calculated for all continuous, intermittent, and predictable air releases.

(3) The measurement technologies and estimation methods proposed provide state-of-the-art effectiveness and are sufficient to produce a true representation of the types and quantities of air releases from the facility.

(4) Source testing or other measurement techniques are employed wherever necessary to verify emission estimates, as determined by the state board and to the extent technologically feasible. All testing devices shall be appropriately located, as determined by the state board.

(5) Data are collected or calculated for the relevant exposure rate or rates of each hazardous material according to its characteristic toxicity and for the emission rate necessary to ensure a characterization of risk associated with exposure to releases of the hazardous material that meets the requirements of Section 44361. The source of all emissions shall be displayed or described.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

References at the time of publication (see page iii):

Regulations: 17, CCR, sections 93300, 93301, 93303-93307, 93310-93315, 93320, 93321-93324, 93330-93340, 93345-93347

44341. Within 180 days after approval of a plan by the district, the operator shall implement the plan and prepare and submit a report to the district in accordance with the plan. The district shall transmit all monitoring data contained in the approved report to the state board.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

References at the time of publication (see page iii):

Regulations: 17, CCR, sections 93300, 93301, 93303-93306, 93310-93315, 93320-93324, 93330-93340, 93345-93347

44342. The state board shall, on or before May 1, 1989, in consultation with the districts, develop criteria and guidelines for site-specific air toxics emissions inventory plans which shall be designed to comply with the conditions specified in Section 44340 and which shall include at least all of the following:

(a) For each class of facility, a designation of the hazardous materials for which emissions are to be quantified and an identification of the likely source types within that class of facility. The hazardous materials for quantification shall be chosen from among, and may include all or part of, the list specified in Section 44321.

(b) Requirements for a facility diagram identifying each actual or potential discrete emission point and the general locations where fugitive emissions may occur. The facility diagram shall include any nonpermitted and nonprocess sources of emissions and shall provide the necessary data to identify emission characteristics. An existing facility diagram which meets the requirements of this section may be submitted.

(c) Requirements for source testing and measurement. The guidelines may specify appropriate uses of estimation techniques including, but not limited to, emissions factors, modeling, mass balance analysis, and projections, except that source testing shall be required wherever necessary to verify emission estimates to the extent technologically feasible. The guidelines shall specify conditions and locations where source testing, fence-line monitoring, or other measurement techniques are to be required and the frequency of that testing and measurement.

(d) Appropriate testing methods, equipment, and procedures, including quality assurance criteria.

(e) Specifications for acceptable emissions factors, including, but not limited to, those which are acceptable for substantially similar facilities or equipment, and specification of procedures for other estimation techniques and for the appropriate use of available data.

(f) Specification of the reporting period required for each hazardous material for which emissions will be inventoried.

(g) Specifications for the collection of useful data to identify toxic air contaminants pursuant to Article 2 (commencing with Section 39660) of Chapter 3.5 of Part 2.

(h) Standardized format for preparation of reports and presentation of data.

(i) A program to coordinate and eliminate any possible overlap between the requirements of this chapter and the requirements of Section 313 of the Superfund Amendment and Reauthorization Act of 1986 ( Public Law 99-499).

The state board shall design the guidelines and criteria to ensure that, in collecting data to be used for emissions inventories, actual measurement is utilized whenever necessary to verify the accuracy of emission estimates, to the extent technologically feasible.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

References at the time of publication (see page iii):

Regulations: 17, CCR, sections 93300, 93301, 93303-93307, 93310-93315, 93320-93324, 93330-93340, 93345-93347

44343. The district shall review the reports submitted pursuant to Section 44341 and shall, within 90 days, review each report, obtain corrections and clarifications of the data, and notify the State Department of Health Services, the Department of Industrial Relations, and the city or county health department of its findings and determinations as a result of its review of the report.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44344. Emissions inventories developed pursuant to this chapter shall be updated biennially, in accordance with procedures established by the state board. These biennial updates shall take into consideration improvements in measurement techniques and advancing knowledge concerning the types and toxicity of hazardous materials released or potentially released.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

References at the time of publication (see page iii):

Regulations: 17, CCR, sections 93307, 93330

44345. (a) On or before July 1, 1989, the state board shall develop a program to compile and make available to other state and local public agencies and the public all data collected pursuant to this chapter.

(b) In addition, the state board, on or before March 1, 1990, shall compile, by district, emissions inventory data for mobile sources and area sources not subject to district permit requirements, and data on natural source emissions, and shall incorporate these data into data compiled and released pursuant to this chapter.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

References at the time of publication (see page iii):

Regulations: 17, CCR, sections 93330, 93345

44346. (a) If an operator believes that any information required in the facility diagram specified pursuant to subdivision (b) of Section 44342 involves the release of a trade secret, the operator shall nevertheless make

the disclosure to the district, and shall notify the district in writing of that belief in the report.

(b) Subject to this section, the district shall protect from disclosure any trade secret designated as such by the operator, if that trade secret is not a public record.

(c) Upon receipt of a request for the release of information to the public which includes information which the operator has notified the district is a trade secret and which is not a public record, the following procedure applies:

(1) The district shall notify the operator of the request in writing by certified mail, return receipt requested.

(2) The district shall release the information to the public, but not earlier than 30 days after the date of mailing the notice of the request for information, unless, prior to the expiration of the 30-day period, the operator obtains an action in an appropriate court for a declaratory judgment that the information is subject to protection under this section or for a preliminary injunction prohibiting disclosure of the information to the public and promptly notifies the district of that action.

(d) This section does not permit an operator to refuse to disclose the information required pursuant to this part to the district.

(e) Any information determined by a court to be a trade secret, and not a public record pursuant to this section, shall not be disclosed to anyone except an officer or employee of the district, the state, or the United States, in connection with the official duties of that officer or employee under any law for the protection of health, or to contractors with the district or the state and its employees if, in the opinion of the district or the state, disclosure is necessary and required for the satisfactory performance of a contract, for performance of work, or to protect the health and safety of the employees of the contractor.

(f) Any officer or employee of the district or former officer or employee who, by virtue of that employment or official position, has possession of, or has access to, any trade secret subject to this section, and who, knowing that disclosure of the information to the general public is prohibited by this section, knowingly and willfully discloses the information in any manner to any person not entitled to receive it is guilty of a misdemeanor. Any contractor of the district and any employee of the contractor, who has been furnished information as authorized by this section, shall be considered an employee of the district for purposes of this section.

(g) Information certified by appropriate officials of the United States as necessary to be kept secret for national defense purposes shall be accorded the full protections against disclosure as specified by those officials or in accordance with the laws of the United States

(h) As used in this section, "trade secret" and "public record" have the meanings and protections given to them by Section 6254.7 of the Government Code and Section 1060 of the Evidence Code. All information collected pursuant to this chapter, except for data used to calculate

emissions data required in the facility diagram, shall be considered "air pollution emission data," for the purposes of this section.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

References at the time of publication (see page iii):

Regulations: 17, CCR, sections 93321, 93322, 93339

## CHAPTER 4. RISK ASSESSMENT

(Chapter 4 added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44360. (a) Within 90 days of completion of the review of all emissions inventory data for facilities specified in subdivision (a) of Section 44322, but not later than December 1, 1990, the district shall, based on examination of the emissions inventory data and in consultation with the state board and the State Department of Health Services, prioritize and then categorize those facilities for the purposes of health risk assessment. The district shall designate high, intermediate, and low priority categories and shall include each facility within the appropriate category based on its individual priority. In establishing priorities pursuant to this section, the district shall consider the potency, toxicity, quantity, and volume of hazardous materials released from the facility, the proximity of the facility to potential receptors, including, but not limited to, hospitals, schools, day care centers, worksites, and residences, and any other factors that the district finds and determines may indicate that the facility may pose a significant risk to receptors. The district shall hold a public hearing prior to the final establishment of priorities and categories pursuant to this section.

(b) (1) Within 150 days of the designation of priorities and categories pursuant to subdivision (a), the operator of every facility that has been included within the highest priority category shall prepare and submit to the district a health risk assessment pursuant to Section 44361. The district may, at its discretion, grant a 30-day extension for submittal of the health risk assessment.

(2) Health risk assessments required by this chapter shall be prepared in accordance with guidelines established by the Office of Environmental Health Hazard Assessment. The office shall prepare draft guidelines which shall be circulated to the public and the regulated community and shall adopt risk assessment guidelines after consulting with the state board and the Risk Assessment Committee of the California Air Pollution Control Officers Association and after conducting at least two public workshops, one in the northern and one in the southern part of the state. The adoption of the guidelines is not subject to Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code. The scientific review panel established pursuant to Section 39670 shall evaluate the guidelines adopted under this paragraph and shall recommend changes and additional criteria to reflect new scientific data or empirical studies.

(3) The guidelines established pursuant to paragraph (2) shall impose only those requirements on facilities subject to this subdivision that are necessary to ensure that a required risk assessment is accurate and complete and shall specify the type of site-specific factors that districts may take into account in determining when a single health risk assessment may be allowed under subdivision (d). The guidelines shall, in addition, allow the operator of a facility, at the operator's option, and to the extent that valid and reliable data are available, to include for consideration by the district in the health risk assessment any or all of the following supplemental information:

(A) Information concerning the scientific basis for selecting risk parameter values that are different than those required by the guidelines and the likelihood distributions that result when alternative values are used.

(B) Data from dispersion models, microenvironment characteristics, and population distributions that may be used to estimate maximum actual exposure.

(C) Risk expressions that show the likelihood that any given risk estimate is the correct risk value.

(D) A description of the incremental reductions in risk that occur when exposure is reduced.

(4) To ensure consistency in the use of the supplemental information authorized by subparagraphs (A), (B), (C), and (D) of paragraph (3), the guidelines established pursuant to paragraph (2) shall include guidance for use by the districts in considering the supplemental information when it is included in the health risk assessment.

(c) Upon submission of emissions inventory data for facilities specified in subdivisions (b) and (c) of Section 44322, the district shall designate facilities for inclusion within the highest priority category, as appropriate, and any facility so designated shall be subject to subdivision (b). In addition, the district may require the operator of any facility to prepare and submit health risk assessments, in accordance with the priorities developed pursuant to subdivision (a).

(d) The district shall, except where site specific factors may affect the results, allow the use of a single health risk assessment for two or more substantially identical facilities operated by the same person.

(e) Nothing contained in this section, Section 44380.5, or Chapter 6 (commencing with Section 44390) shall be interpreted as requiring a facility operator to prepare a new or revised health risk assessment using the guidelines established pursuant to paragraph (2) of subdivision (a) of this section if the facility operator is required by the district to begin the preparation of a health risk assessment before those guidelines are established.

(Amended by Stats. 1992, Ch. 1162, Sec. 1. Effective January 1, 1993.)

44361. (a) Each health risk assessment shall be submitted to the district. The district shall make the health risk assessment available for public review, upon request. After preliminary review of the emissions

impact and modeling data, the district shall submit the health risk assessment to the State Department of Health Services for review and, within 180 days of receiving the health risk assessment, the State Department of Health Services shall submit to the district its comments on the data and findings relating to health effects. The district shall consult with the state board as necessary to adequately evaluate the emissions impact and modeling data contained within the risk assessment.

(b) For the purposes of complying with this section, the State Department of Health Services may select a qualified independent contractor to review the data and findings relating to health effects. The State Department of Health Services shall not select an independent contractor to review a specific health risk assessment who may have a conflict of interest with regard to the review of that health risk assessment. Any review by an independent contractor shall comply with the following requirements:

(1) Be performed in a manner consistent with guidelines provided by the State Department of Health Services.

(2) Be reviewed by the State Department of Health Services for accuracy and completeness.

(3) Be submitted by the State Department of Health Services to the district in accordance with this section.

(c) The district shall reimburse the State Department of Health Services or the qualified independent contractor designated by the State Department of Health Services pursuant to subdivision (b), within 45 days of its request, for its actual costs incurred in reviewing a health risk assessment pursuant to this section.

(d) If a district requests the State Department of Health Services to consult with the district concerning any requirement of this part, the district shall reimburse the State Department of Health Services, within 45 days of its request, for the costs incurred in the consultation.

(e) Upon designation of the high priority facilities, as specified in subdivision (a) of Section 44360, the State Department of Health Services shall evaluate the staffing requirements of this section and may submit recommendations to the Legislature, as appropriate, concerning the maximum number of health risk assessments to be reviewed each year pursuant to this section.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44362. (a) Taking the comments of the State Department of Health Services into account, the district shall approve or return for revision and resubmission and then approve, the health risk assessment within 180 days of receipt. If the health risk assessment has not been revised and resubmitted within 60 days of the district's request of the operator to do so, the district may modify the health risk assessment and approve it as modified.

(b) Upon approval of the health risk assessment, the operator of the facility shall provide notice to all exposed persons regarding the results of the health risk assessment prepared pursuant to Section 44361 if, in the

judgment of the district, the health risk assessment indicates there is a significant health risk associated with emissions from the facility. If notice is required under this subdivision, the notice shall include only information concerning significant health risks attributable to the specific facility for which the notice is required. Any notice shall be made in accordance with procedures specified by the district.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44363. (a) Commencing July 1, 1991, each district shall prepare and publish an annual report which does all of the following:

(1) Describes the priorities and categories designated pursuant to Section 44360 and summarizes the results and progress of the health risk assessment program undertaken pursuant to this part.

(2) Ranks and identifies facilities according to the degree of cancer risk posed both to individuals and to the exposed population.

(3) Identifies facilities which expose individuals or populations to any noncancer health risks.

(4) Describes the status of the development of control measures to reduce emissions of toxic air contaminants, if any.

(b) The district shall disseminate the annual report to county boards of supervisors, city councils, and local health officers and the district board shall hold one or more public hearings to present the report and discuss its content and significance.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44364. The state board shall utilize the reports and assessments developed pursuant to this part for the purposes of identifying, establishing priorities for, and controlling toxic air contaminants pursuant to Chapter 3.5 (commencing with Section 39650) of Part 2.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44365. (a) If the state board finds and determines that a district's actions pursuant to this part do not meet the requirements of this part, the state board may exercise the authority of the district pursuant to this part to approve emissions inventory plans and require the preparation of health risk assessments.

(b) This part does not prevent any district from establishing more stringent criteria and requirements than are specified in this part for approval of emissions inventories and requiring the preparation and submission of health risk assessments. Nothing in this part limits the authority of a district under any other provision of law to assess and regulate releases of hazardous substances.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44366. (a) In order to verify the accuracy of any information submitted by facilities pursuant to this part, a district or the state board may proceed in accordance with Section 41510.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

## CHAPTER 5. FEES AND REGULATIONS

(Chapter 5 added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44380. (a) The state board shall adopt a regulation which does all of the following:

(1) Sets forth the amount of revenue which the district must collect to recover the reasonable anticipated cost which will be incurred by the state board and the Office of Environmental Health Hazard Assessment to implement and administer this part.

(2) Requires each district to adopt a fee schedule which recovers the costs of the district and which assesses a fee upon the operator of every facility subject to this part. A district may request the state board to adopt a fee schedule for the district if the district's program costs are approved by the district board and transmitted to the state board by April 1 of the year in which the request is made.

(3) Requires any district that has an approved toxics emissions inventory compiled pursuant to this part by August 1 of the preceding year to adopt a fee schedule, as described in paragraph (2), which imposes on facility operators fees which are, to the maximum extent practicable, proportionate to the extent of the releases identified in the toxics emissions inventory and the level of priority assigned to that source by the district pursuant to Section 44360.

(b) Commencing August 1, 1992, and annually thereafter, the state board shall review and may amend the fee regulation.

(c) The district shall notify each person who is subject to the fee of the obligation to pay the fee. If a person fails to pay the fee within 60 days after receipt of this notice, the district, unless otherwise provided by district rules, shall require the person to pay an additional administrative civil penalty. The district shall fix the penalty at not more than 100 percent of the assessed fee, but in an amount sufficient in its determination, to pay the district's additional expenses incurred by the person's noncompliance. If a person fails to pay the fee within 120 days after receipt of this notice, the district may initiate permit revocation proceedings. If any permit is revoked, it shall be reinstated only upon full payment of the overdue fee plus any late penalty, and a reinstatement fee to cover administrative costs of reinstating the permit.

(d) Each district shall collect the fees assessed pursuant to subdivision (a). After deducting the costs to the district to implement and administer this part, the district shall transmit the remainder to the Controller for deposit in the Air Toxics Inventory and Assessment Account, which is hereby created in the General Fund. The money in the account is available, upon appropriation by the Legislature, to the state board and the Office of Environmental Health Hazard Assessment for the purposes of administering this part.

(Amended by Stats. 1992, Ch. 375, Sec. 1. Effective January 1, 1993.)

44380.5. In addition to the fee assessed pursuant to Section 44380, a supplemental fee may be assessed by the district, the state board, or the

Office of Environmental Health Hazard Assessment upon the operator of a facility that, at the operator's option, includes supplemental information authorized by paragraph (3) of subdivision (b) of Section 44360 in a health risk assessment, if the review of that supplemental information substantially increases the costs of reviewing the health risk assessment by the district, the state board, or the office. The supplemental fee shall be set by the state board in the regulation required by subdivision (a) of Section 44380 and shall be set in an amount sufficient to cover the direct costs to review the information supplied by an operator pursuant to paragraph (3) of subdivision (b) of Section 44360.

(Added by Stats. 1992, Ch. 1162, Sec. 2. Effective January 1, 1993.)

44381. (a) Any person who fails to submit any information, reports, or statements required by this part, or who fails to comply with this part or with any permit, rule, regulation, or requirement issued or adopted pursuant to this part, is subject to a civil penalty of not less than five hundred dollars ($500) or more than ten thousand dollars ($10,000) for each day that the information, report, or statement is not submitted, or that the violation continues.

(b) Any person who knowingly submits any false statement or representation in any application, report, statement, or other document filed, maintained, or used for the purposes of compliance with this part is subject to a civil penalty of not less than one thousand dollars ($1,000) or more than twenty-five thousand dollars ($25,000) per day for each day that the information remains uncorrected.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44382. Every district shall, by regulation, adopt the requirements of this part as a condition of every permit issued pursuant to Chapter 4 (commencing with Section 42300) of Part 4 for all new and modified facilities.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative July 1, 1988, pursuant to Section 44384.)

44384. Except for Section 44380 and this section, all provisions of this part shall become operative on July 1, 1988.

(Added by Stats. 1987, Ch. 1252, Sec. 1. Operative January 1, 1988, by its own provisions.)

# ATTACHMENT III

## Announcement of Public Consultation Meetings

STATE OF CALIFORNIA
AIR RESOURCES BOARD
2020 L STREET
P.O. BOX 2815
SACRAMENTO, CA 95812

PETE WILSON, Governor

October 21, 1992

Dear Madam or Sir:

Public Consultation Meetings to Discuss Proposed Amendments to the Emission Inventory Criteria and Guidelines Regulation for the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588)

This letter is to notify you of three public consultation meetings the staff of the Air Resources Board will hold to discuss proposed amendments to the Emission Inventory Criteria and Guidelines Regulation ("the regulation"; Titles 17 and 26 of the California Code of Regulations, Sections 93300 through 93354). The regulation was initially developed as a requirement of the Air Toxics "Hot Spots" Information and Assessment Act of 1987 ("the Act"; AB 2588; Health and Safety Code Sections 44300 through 44384). The regulation sets forth the information that facility operators must include in the emission inventory plans and reports required by the Act, and it contains the criteria and guidelines for preparing acceptable emission inventories. The Air Resource Board adopted the initial regulation in 1989 and amendments to the regulation in June 1990. Specific sections of the regulation were amended again in September 1990 and June 1991 to reflect updates to the Hot Spots list of substances.

The purpose of the meetings is to obtain your comments on concepts for amending the regulation as they relate to the emission inventory procedures. This workshop will not include discussion on Hot Spots fees or issues related to the risk assessment and notification procedures under this program.

The ARB staff's focus for amending the regulation will be to streamline the emission inventory reporting process to reduce the resource burden on affected facilities and the districts while maintaining the intent of the Act. Specific portions of the regulation for which proposed amendments are being considered include:

(1) changes to the procedures for the biennial updates of the emission inventories;

(2) changes to the reporting requirements for facilities that emit less than 10 tons per year of criteria pollutants;

(3) changes to other portions of the regulation to improve or clarify the reporting requirements.

The times and locations of the public consultation meetings are:

DATE: November 16, 1992

TIME: 1:30 p.m.

PLACE: San Joaquin Valley Unified APCD District Office
1999 Tuolumne Street
Third Floor Conference Room
Fresno, CA

DATE: November 18, 1992

TIME: 10:00 a.m.

PLACE: Los Angeles State Building
107 South Broadway
Auditorium, #1138
Los Angeles, CA

DATE: November 20, 1992

TIME: 10:00 a.m.

PLACE: Air Resources Board
2020 L Street
Board Hearing Room
Lower Level
Sacramento, CA

Any proposed amendments will be developed in consultation with a technical advisory committee made up of representatives of the air pollution control and air quality management districts and the Office of Environmental Health Hazard Assessment.

We encourage your comments on the three subjects to be discussed at the meetings. Oral comments can be presented at the consultation meetings. Written comments can be submitted to Linda Murchison, Chief, Stationary Source Emission Inventory Branch, Technical Support Division, P.O. Box 2815, Sacramento, California 95812. All comments will be considered in developing proposed amendments to the regulation which are tentatively scheduled to be presented to the Air Resources Board at a public hearing in June of 1993.

If you have any questions regarding the consultation meetings or the Emission Inventory Criteria and Guidelines Regulation, please call Marcelle Surovik of the Special Pollutants Emission Inventory Section at (916) 324-1842.

Sincerely,

Terry McGuire, Chief
Technical Support Division

cc: Honorable Lloyd Connelly
Technical Advisory Committee for the Emission Inventory Guidelines
All Air Pollution Control Districts

STATE OF CALIFORNIA
AIR RESOURCES BOARD
2020 L STREET
P.O. BOX 2815
SACRAMENTO, CA 95812

PETE WILSON, Governor

January 25, 1993

Dear Madam or Sir:

Public Consultation Meetings to Discuss Proposed Amendments to the Emission Inventory Criteria and Guidelines Regulation for the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588)

This letter is to notify you of a second set of public consultation meetings the staff of the Air Resources Board will hold to discuss proposed amendments to the Emission Inventory Criteria and Guidelines Regulation ("the regulation"; Titles 17 and 26 of the California Code of Regulations, Sections 93300 through 93354). The regulation was initially developed as a requirement of the Air Toxics "Hot Spots" Information and Assessment Act of 1987 ("the Act"; AB 2588; Health and Safety Code Sections 44300 through 44384). The regulation sets forth the information that facility operators must include in the air toxics emission inventory plans and reports required by the Act, and it contains the criteria and guidelines for preparing acceptable emission inventories.

In November 1992, the ARB staff held the first set of public consultation meetings to discuss conceptual amendments to the regulation that would affect the emission inventory requirements. At this second set of meetings, the ARB staff will present and discuss draft language of amendments to specific portions of the regulation. These workshops will NOT include discussion of Hot Spots fees or issues related to the risk assessment and notification procedures under this program.

The ARB staff's objective for amending the regulation is to streamline the emission inventory reporting process to reduce the burden on affected facilities and the districts while maintaining the intent of the Act. Specific portions of the regulation for which draft amendments will be presented and discussed include:

(1) changes to the procedures for the biennial updates of the emission inventories, specifically to reduce requirements for all facilities that are not determined to be significant risk; and

(2) changes to the source test procedures and the reporting forms and instructions to improve or clarify the reporting requirements.

At the November workshops, the ARB staff discussed the possibility of revising the requirements for facilities that emit less than 10 tons per year of criteria pollutants. Since that time, the ARB staff has determined that, due to the lack of available data to date, the evaluation of these facilities can not be completed in time for this year's regulatory changes. The proposal to revise these requirements will be postponed until the ARB receives and evaluates the data from these facilities. However, the ARB staff is proposing to reduce biennial update requirements for these facilities to minimal requirements until our evaluation can be completed.

The times and locations of the public consultation meetings are:

February 17, 1993
1:30 PM
Air Resources Board
2020 L Street
Board Hearing Room
Sacramento, CA

February 19, 1993
10:30 AM (see note)
San Joaquin Valley Unified APCD
1999 Tuolumne Street
Third Floor Meeting Room
Fresno, CA

February 22, 1993
10:00 AM
South Coast Air Quality Management District
21865 E. Copley Drive
Auditorium
Diamond Bar, CA

NOTE: Due to unpredictable fog conditions that may cause cancellation or delay the Fresno workshop, we recommend that people planning to attend this workshop call the district office that morning to verify the meeting time. The contact person at the district office is Sylvia Alamano at (209) 497-1088.

Preliminary draft amendments were developed in consultation with a technical advisory committee made up of representatives of the air pollution control and air quality management districts and the Office of Environmental Health Hazard Assessment. Copies of the draft amendments will be available at the meetings. If you would like to receive a copy before the meetings, please fill out the attached form and return it to the address at the top of the form.

We encourage your comments on the draft amendments to be discussed at the meetings. Oral comments can be presented at the consultation meetings. Written comments can be submitted to Richard Bode, Manager, Special Pollutants Emission Inventory Section, Technical Support Division, P.O. Box 2815, Sacramento, California 95812. All comments will be considered when developing the final proposed amendments to the regulation which are scheduled to be presented to the Air Resources Board at a public hearing in June. The staff report containing the final proposed amendments will be available for public comment at the end of April.

If you have any questions regarding the consultation meetings or the Emission Inventory Criteria and Guidelines Regulation, please call Marcelle Surovik of the Special Pollutants Emission Inventory Section at (916) 324-1842.

Sincerely,

Terry McGuire, Chief
Technical Support Division

cc: Technical Advisory Committee for the Emission Inventory Guidelines
All Air Pollution Control Officers

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| Stamp |
| Here |

Marcelle Surovik
California Air Resources Board
Technical Support Division
P.O. Box 2815
Sacramento, CA 95812

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Please fill out the requested information if you would like to receive a copy of draft amendments to the Emission Inventory Criteria and Guidelines Regulation.

Name _____

Company _____

Address _____

_____

# ATTACHMENT IV

## Cost Savings for Local and State Government

State of California

MEMORANDUM

To : Linda Grandmaison
Budget Analyst
Department of Finance
915 L Street, 9th Floor
Sacramento, CA 95814

Date : April 1, 1993

Subject : Air Toxics "Hot Spots" Criteria and Guidelines: State Costs

From : Kirk Oliver
Staff Counsel
Air Resources Board

On June 10, 1993, the Air Resources Board (ARB) will conduct a public hearing to consider the adoption of amendments to its emission inventory criteria and guidelines regulation pursuant to the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (Stats. 1987, ch. 1252; Health and Safety Code Section 44300 et seq.). This Act establishes a program to develop a statewide inventory of site-specific air toxic emissions of over 700 substances in order to assess the risk to public health from exposure to these emissions and to notify the public of any significant health risk discovered.

The existing regulation, which sets forth minimum requirements for preparing the emission inventory plans and reports, applies to any facility which manufactures, formulates, uses, or releases any of the substances or precursors to such substances referenced in the Act and adopted by the ARB (see 17 CCR, Sections 90700-90704, Attachment A), and which releases 10 tons per year or more of any one of the following four criteria pollutants; total organic gases, sulfur oxides, nitrogen oxides, and particulate matter. The regulation also applies to specific classes of facilities which release less than 10 tons per year of the four criteria pollutants and are listed in Appendix E of the regulation. Facilities are also subject to the regulation if they are listed in any current toxics survey, inventory, or report compiled by a district and set forth in Attachment B to 17 CCR, Sections 90700-90704.

The Act requires the inventories collected under this program to be updated every two years (biennially). The existing regulation includes procedures for these biennial updates. The proposed amended regulation substantially reduces the current biennial update requirements for most affected facilities. This is expected to substantially reduce costs and burdens to facilities while still maintaining the effectiveness of the program.

Government Code Section 11346.5(a)(6) requires the ARB to include in its notice of proposed adoption of the amended regulation an estimate of the cost or savings to any state agency, the cost to any local agency or school district that is required to be reimbursed pursuant to Government Code Section 17500 et seq., other nondiscretionary costs or savings to local agencies, and the cost or savings in federal funding to the state. The State Administrative Manual in turn requires the ARB to attach to the face sheet for filing administrative regulation on other governmental entities on Std. Form 399, the Fiscal Impact Statement (SAM Section 6055), and to obtain the concurrence of the Department of Finance when specified fiscal effects are anticipated (SAM Section 6056). Requests for concurrence are to be forwarded to your agency at least 30 days prior to the date when the rulemaking notice will be issued (SAM Section 6056).

Because the ARB has identified savings to state and local agencies which will occur as a result of the proposed regulation, we are forwarding our savings estimates to you for concurrence.

The proposed amended regulations will be set forth in Title 17 of the California Code of Regulations, Section 93300 et seq.

Should you wish to discuss any technical issues raised by the attached document which sets forth our cost savings, please contact Mr. Richard Bode at 322-3807. If you have any other questions, please feel free to call me at 324-4581.

Attachments

cc: Richard Bode

ATTACHMENT

## COST SAVINGS FOR LOCAL AND STATE GOVERNMENT

### A. INTRODUCTION

The proposed amendments to the Emission Inventory Criteria and Guidelines Regulation substantially reduce the biennial update reporting requirements for facilities subject to the Air Toxics Hot Spots program. For both public and private facilities subject to the program, these reduced reporting requirements will result in substantial cost savings.

The proposed amendments will no longer require that all facilities submit biennial update plans and reports to address changes that have occurred at the facility since the previous reporting year. Rather, approximately 95 percent of all facilities will be required to complete a two-page questionnaire, the Biennial Summary Form, which in most cases will satisfy their biennial update requirements.

The proposed amendments will not change the biennial update reporting requirements for facilities required to notify the public because their emissions represent significant levels of risk to public health. These significant risk facilities would still be required to report, every two years, any changes in emissions data that occurred at their facility. Significant risk facilities represent approximately five percent of all facilities.

The program requires local air pollution control districts to prioritize facilities into high, intermediate and low priority categories. Facilities in all three categories (including high priority facilities determined not to be a significant risk) will submit the Biennial Summary Form. For most facilities this will satisfy their biennial update reporting requirements. For low and intermediate facilities, local air pollution control districts may, based upon data in the Biennial Summary Form, require a facility to submit an update plan and report if the district believes the facility's previous emissions data no longer characterizes potential risk. The staff expects only a small number of low and intermediate facilities to be affected. In these cases, the facility operator can apply the information used to complete the Biennial Summary Form to the preparation of the update plan and report. Consequently, these facilities would not be expected to incur additional costs above those incurred for complying with the current update requirements.

Districts may also require high priority (non-significant risk) facilities to submit update plans and reports. In addition, these high priority facilities are automatically required to update

emissions data for any devices with significant increases in device activity by submitting an update plan and report. The amendments also reduce some of the reporting requirements for those facilities required to complete full inventory plans and reports, thus reducing the costs to prepare the plans and reports.

For those facilities that have not yet been prioritized, the proposed amendments provide substantial reductions in reporting requirements. Unprioritized facilities will only complete a portion of the Biennial Summary Form. This amendment is expected to affect the majority of the less-than-10-tons-per-year facilities subject to the Act (those facilities included in the classes identified in Appendix E to the regulation). This change is expected to substantially reduce costs to these facilities because the Biennial Summary Form can be completed in-house in a short amount of time.

## B. COST SAVINGS FOR LOCAL GOVERNMENT

### 1. COMPLIANCE COSTS

Compliance costs are the costs to local government facilities to satisfy their biennial update reporting requirements.

#### a. STATEMENT OF THE MANDATE

The current regulation requires local government facilities that are subject to the Air Toxics Hot Spots program to update their emissions inventory every two years. Facilities report any changes from their previous emissions inventory through the preparation and submittal of biennial update plans and reports. The report consists of a facility information form and three additional forms to be completed for each device showing changes. While a small number of facilities have the necessary staff to prepare the update plans and reports in-house, most facilities have relied upon consultants to do the work. The primary costs of update reporting are fees paid to consultants to prepare the update plans and reports and source testing costs to determine emissions through actual analytical measurements.

The proposed amendments will allow local government facilities to satisfy their biennial update reporting requirements by completing a two-page Biennial Summary Form. This change will result in substantial cost reductions for facilities because the Biennial Summary Form is much less comprehensive, can be completed in a much shorter time period, and usually can be prepared by facility staff rather than consultants. Also, facilities can use the results of previous valid source testing and do not need to do retesting to complete their biennial update reporting. Additional source testing should only be required if a facility substantially changes its operation, such as installing new types of equipment, and only if previously conducted source test data is not available.

Based on information from the Biennial Summary Form, local districts may still require facilities to prepare update plans and reports if they believe significant changes have occurred at the facilities. The proposed amendments also will reduce some of the requirements for update plans and reports, so facilities preparing them also will see a reduction in costs.

b. ASSUMPTIONS

Affected local government facilities are air, water and solid waste facilities, elementary and secondary schools, general government agencies, general medical/surgical hospitals, and Publicly Owned Treatment Works (POTWs). Most facilities can complete the Biennial Summary Form in-house although some may still depend on outside consultants to do the work. In either case, the requirement of the Biennial Summary Form will be a substantial reduction in cost compared to the cost of a full update plan and report. The staff estimates the average cost for facilities to prepare and submit the Biennial Summary Form will be approximately $200 per facility. The average facility cost to prepare and submit an update plan and report as required by the current regulation has been estimated to be approximately $3000 per facility if no source tests are required. Therefore, the amendments could result in savings of approximately $2800 for each facility submitting a Biennial Summary Form rather than the full update plan and report ($200 vs $3000).

Local government facilities that are less-than-10-tons-per-year sources are only required to complete a portion of the Biennial Summary Form. The staff estimates the average cost for preparing and submitting one portion of the Form will be at most one-half the cost for submitting a complete Form or $100 per facility. Therefore, the amendments should result in savings of approximately $2900 for each facility submitting a Biennial Summary Form rather than the full update plan and report ($100 vs $3000). However, because these facilities are only now submitting their original inventory reports, the staff is unable to accurately estimate the number of local government facilities that fall into this category, with the exception of POTWs.

Some facilities will still be required to submit update plans and reports for changes at the facility, either because they were high priority facilities with significant increases in activity or because local districts determined they had significant changes in their operation based on information in the Biennial Summary Form. The staff estimates the average cost for update plan and report preparation under the proposed amendments is approximately $2000 per facility, assuming additional source testing is not done. This represents a net cost savings of approximately $800 for each facility that prepares a Biennial Summary Form, then prepares an update plan and report according to the proposed amendments as compared to update plan and report preparation under the current regulation ($200 + $2000 = $2200 vs $3000).

The staff is not able to accurately estimate how many local government facilities will be required to prepare update plans and reports following an initial Biennial Summary Form submittal. For low and intermediate facilities, the number is expected to be very low and the staff based the following calculations on zero facilities. For high priority facilities, the staff estimated that after all facilities submitted Biennial Summary Forms, fifty percent of the facilities would have to prepare update plans and reports.

c. ESTIMATES OF COST SAVINGS

The following cost savings estimates are based on the assumptions above regarding the average costs for preparing update plans and reports and for preparing Biennial Summary Forms. The costs are based on the most current data for the number of facilities in each local government category, the number of high priority facilities, and the number of significant risk facilities.

(1) Air, Water and Solid Waste Facilities

There are 161 air, water and solid waste facilities in the program. Of these, 146 facilities could submit Biennial Summary Forms to satisfy all their update reporting requirements. Savings for this group would amount to $408,800.

Fifteen facilities are high priority and could have significant increases in device level activity that would require preparation of an update plan and report in addition to the Biennial Summary Form. Staff assumed fifty percent would have to prepare plans and reports. Therefore, seven facilities would save $2800 each (no further plans and reports) and eight facilities would save $800 each (plans and reports required). Savings for this group would amount to $26,000.

Total estimated savings to the air, water and solid waste facilities is $434,800.

(2) Elementary and Secondary Schools

There are 4 elementary and secondary schools in the program that would be required to submit Biennial Summary Forms at a cost of $200 per facility. None of the schools is high priority.

The total estimated savings to elementary and secondary schools is $11,200.

(3) General Government

There are 255 general government facilities in the program. Of these, 250 facilities could submit Biennial Summary Forms to satisfy all their update reporting requirements. Savings for this group would amount to $700,000.

Five facilities are high priority and could have significant increases in device level activity that would require preparation of an update plan and report in addition to the Biennial Summary Form. Staff assumed fifty percent would have to prepare plans and reports. Therefore, two facilities would save $2800 each (no further plans and reports) and three facilities would save $800 each (plans and reports required). Savings for this group would amount to $8,000.

The total estimated savings to general government facilities is $708,000.

(4) General Medical/Surgical Hospitals

There are 14 general medical/surgical hospitals in the program. Of these, 13 facilities could submit Biennial Summary Forms to satisfy all their update reporting requirements. Savings for this group would amount to $36,400.

One facility is high priority and could have significant increases in device level activity that would require it to prepare an update plan and report in addition to the Biennial Summary Form. Staff assumed this facility would have to prepare an update plan and report. Savings for this facility would amount to $800.

The total estimated savings to the general medical/surgical hospitals is $37,200.

(5) Publicly Owned Treatment Works (POTWs)

Publicly Owned Treatment Works (POTWs) are public agency-operated facilities that treat municipal wastewater. The proposed amendments eliminate two of the three source testing requirements for POTWs. Facilities can use the data collected during the initial source testing to fulfill the remaining source test requirements for the biennial updates.

Staff is currently aware of 64 POTWs in the program. Currently, 62 facilities could submit Biennial Summary Forms to satisfy all their update reporting requirements. Savings for this group would amount to $173,600.

Currently, one facility is high priority and could have significant increases in device level activity that would require it to prepare an update plan and report in addition to the Biennial Summary Form. Staff assumed this facility would have to prepare an update plan and report. Savings for this facility would amount to $800.

Currently, one facility is classified as a significant risk facility and must notify the public. This facility will have to prepare a full update plan and report. There would be no cost savings for this facility.

Staff is also estimating that there may be an additional 529 POTWs in the state that emit less than 10 tons per year of criteria pollutants. These facilities will complete only a portion of the Biennial Summary Form. Savings for these facilities would amount to $1,534,100.

The total estimated savings to POTWs is $1,708,500.

2. LOCAL AIR POLLUTION CONTROL DISTRICTS

The proposed amendments to the regulation will result in fewer plans and reports submitted to local air pollution control districts. Due to the complex and comprehensive nature of the program there is a large backlog of plans and reports for district staff to review. Therefore, these reduced reporting requirements will allow district staff to better review and approve the submitted emissions data without the need for additional resources. This reduction in submitted reports from low and intermediate facilities will allow district staff to spend more time on potentially significant risk facilities.

3. CONCLUSIONS

In general, the amended biennial update procedures will significantly reduce costs to local government facilities. These savings are reflected in the figures provided below.

**SUMMARY OF ESTIMATED COST SAVINGS TO LOCAL GOVERNMENT**

| | Local Facility | Estimated Savings |
|---|---|---|
| a. | Air, Water and Solid Waste | 434,800 |
| b. | Elementary and Secondary Schools | 11,200 |
| c. | General Government | 708,000 |
| d. | General Medical/Surgical Hospitals | 37,200 |
| e. | POTWs | 1,708,500 |
| **TOTAL ESTIMATED SAVINGS TO LOCAL GOVERNMENT** | | $2,899,700 |

Publicly Owned Treatment Works (POTWs) carry out a uniquely governmental function, as the overwhelming number of treatment works are publicly owned. Nevertheless, their costs of compliance with the proposed regulation are not reimbursable by the state within the meaning of Article XIIIB, section 6 and Government Code sections 17500 et seq., because POTWs are authorized by enabling statutes to levy service charges to cover the costs associated with the mandated program.

Elementary and secondary schools costs of compliance with the regulation are not reimbursable by the state within the meaning of Article XIIIB, section 6 and Government Code sections 17500 et seq., because the school district has the authority to levy assessments sufficient to pay for the program mandated by this act.

4. SOURCES OF WORKING DATA

Proposed Amendments to the Emission Inventory Criteria and Guidelines Regulation for the Administration of the Air Toxics "Hot Spots" Information and Assessment Act of 1987, Staff Report, ARB, April 1990.

List of risk assessment status, "All Risk Assessments = Chronological Order," OEHHA, January 13, 1993.

Emission Data System - Inventory year 1990 (as of 1-20-93).

## C. COST SAVINGS FOR STATE GOVERNMENT

1. COMPLIANCE SAVINGS

Compliance costs are the costs to state government facilities to satisfy their biennial update reporting requirements.

a. STATEMENT OF THE MANDATE

Under the current regulation, state government facilities that are subject to the Air Toxics Hot Spots program are required to update their emissions inventory every two years. The current regulation requires facilities to report any changes from their previous emissions inventory through the preparation and submittal of a biennial update plan and report. The report consists of a facility information form and three additional forms to be completed for each device showing changes. While a small number of facilities have the necessary staff to prepare the update plans and reports in-house, most facilities have relied upon consultants to do the work. The primary costs of update reporting are fees paid to consultants to prepare the update plans and reports and source testing costs to determine emissions through actual analytical measurements.

The proposed amendments will allow state government facilities to satisfy their biennial update reporting requirements by completing a two-page Biennial Summary Form. This change will result in substantial cost reductions for facilities because the Biennial Summary Form is much less comprehensive, can be completed in a much shorter time period, and usually can be prepared by facility staff rather than consultants. Also, facilities can use the results of previous valid source testing and do not need to do retesting to complete their biennial update reporting. Additional source testing should only be required if a facility substantially changes its operation, such as installing new types of equipment, and only if previously conducted source test data is not available.

Based on information from the Biennial Summary Form, local districts may still require facilities to prepare update plans and reports if they believe significant changes have occurred at the

facilities. The proposed amendments also will reduce some of the requirements for update plans and reports, so facilities preparing them also will see a reduction in costs.

b. ASSUMPTIONS

Affected state government facilities include state colleges and universities, correctional institutions, general government agencies, general medical/surgical hospitals, and psychiatric hospitals. Most facilities can complete the Biennial Summary Form in-house although some may still depend on outside consultants to do the work. In either case, the requirement of the Biennial Summary Form will be a substantial reduction in cost compared to the cost of preparing a full update plan and report. The staff estimates the average cost for facilities to prepare and submit the Biennial Summary Form will be approximately $200 per facility. The average facility cost to prepare and submit an update plan and report as required by the current regulation has been estimated to be approximately $3000 per facility if no source tests are required. Therefore, the amendments could result in savings of approximately $2800 for each facility submitting a Biennial Summary Form rather than the full update plan and report ($200 vs $3000).

Affected state government facilities that are less-than-10-tons-per-year sources are only required to complete a portion of the Biennial Summary Form. The staff estimates the average cost for preparing and submitting one portion of the Form will be at most one-half the cost for submitting a complete Form or $100 per facility. Therefore, the amendments should result in savings of approximately $2900 for each facility submitting a Biennial Summary Form rather than the full update plan and report ($100 vs $3000). However, because these facilities are only now submitting their original inventory reports, the staff is unable to accurately estimate the number of state government facilities that fall into this category.

Some facilities will still be required to submit update plans and reports, either because they were high priority facilities with significant increases in activity or because local districts determined they had significant changes in their operation based on information in the Biennial Summary Form. The staff estimates the average cost for update plan and report preparation under the proposed amendments is approximately $2000 per facility, assuming additional source testing is not done. This represents a net cost savings of approximately $800 for each facility that completes a Biennial Summary Form and then prepares an update plan and report as required under the proposed amendments as compared to update plan and report completion required under the current regulation ($2000 + $200 = $2200 vs $3000).

The staff is not able to accurately estimate how many state government facilities will be required to also prepare update plans and reports. For low and intermediate facilities, the number is expected to be very low and the staff based the following calculations on zero

facilities. For high priority facilities, the staff estimated that after submitting the Biennial Summary Form, fifty percent of the facilities would have to prepare update plans and reports.

c. ESTIMATED COST SAVINGS

The following cost savings estimates are based on the assumptions above regarding the average costs for preparing update plans and reports and for preparing Biennial Summary Forms. The costs are based on the most current data for the number of facilities in each state government category, the number of high priority facilities, and the number of significant risk facilities.

(1) University of California and California State University

There are nine campuses in the University of California system and 20 campuses in the California State University system. Currently, there are 25 campuses that could submit Biennial Summary Forms to satisfy all their update reporting requirements. Savings for this group would amount to $70,000.

Currently, there are four facilities classified as high priority and could have significant increases in device level activity that would require them to prepare an update plan and report in addition to the Biennial Summary Form. Staff assumed fifty percent would have to prepare plans and reports. Therefore, two facilities would save $2800 each (no further plans and reports) and two facilities would save $800 each (plans and reports required). Savings for this group would amount to $7,200.

The total estimated savings to colleges and universities is $77,200.

(2) State Hospitals (Dept. of Developmental Services, Dept. of Mental Health)

There are eleven hospitals in the state system that could submit Biennial Summary Forms to satisfy all their update reporting requirements. None of the hospitals are high priority.

The total estimated savings to state hospitals is $30,800.

(3) Department of Corrections

There are 13 correctional institutions in the program. ARB staff discussed the costs of completing the amended biennial update procedures for state correctional facilities with the Department of Corrections staff and concluded that correctional facilities would not experience any substantial change in their biennial update costs. Consequently, cost savings would be minimal for these facilities.

3. CONCLUSIONS

In general, discussions with the staff of other state agencies indicate that the amended biennial update procedures will significantly reduce costs. These savings are reflected in the figures provided below.

**SUMMARY OF ESTIMATED STATE COST SAVINGS**

| | State Facility | Estimated Savings |
|---|---|---|
| a. | Universities and Colleges | $77,200 |
| b. | State Hospitals | $30,800 |
| **TOTAL ESTIMATED STATE SAVINGS** | | $108,000 |

4. SOURCES OF WORKING DATA

List of risk assessment status, "All Risk Assessments = Chronological Order," OEHHA, January 13, 1993.

Emission Data System - Inventory year 1990 (as of 1-20-93).

Phone conversations with health and safety officers administrators, University of California. March '93.

Phone conversations with health and safety officers administrators, California State University. March '93.

Phone conversation with Doug Yee, Dept. of Developmental Services, Dept. of Mental Health. March '93.

Phone conversation with Mike Sovol, Dept. of Corrections. March '93.

**FISCAL IMPACT STATEMENT** (REGULATIONS AND ORDERS)

STATE OF CALIFORNIA

STD 399 (5/86)

*SEE SAM SECTION 6055 FOR INSTRUCTIONS*

| DEPARTMENT | CONTACT PERSON | PHONE NUMBER |
|---|---|---|
| Air Resources | Kirk Oliver | (916) 324-4581 |

TITLE/DESCRIPTION OF REGULATION/ORDER Titles 17 & 26 Section 93300 et. seq. - Amendments to the Air Toxics Hot Spots Emission Inventory Criteria and Guidelines Regulation.

**A. FISCAL EFFECT ON LOCAL GOVERNMENT** (Indicate appropriate boxes 1 through 6 and complete if necessary)

☐ 1. Additional expenditures of approximately $ _____ annually which are reimbursable by the State pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code. Funding for this reimbursement:

☐ a. is provided in (Item _____, Budget Act of _____) or (Chapter _____, Statutes of _____)

☐ b. will be requested in the _____ (FISCAL YEAR) Governor's Budget for appropriation in Budget Act of _____.

☐ 2. Additional expenditures of approximately $ _____ annually which are not reimbursable by the State pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code because this regulation:

☐ a. implements the Federal mandate contained in _____;

☐ b. implements the court mandate set forth by the _____

court in the case of _____ vs. _____;

☐ c. implements a mandate of the people of this State expressed in their approval of Proposition No. _____ at the _____ (DATE) election;

☐ d. is issued only in response to a specific request from the _____, which is/are the only local entity(s) affected;

☐ e. is more appropriately financed from the _____ (FEES, REVENUE, ETC.) authorized by Section _____ of the _____ Code;

☐ f. provides for savings to each affected unit of local government which will, at a minimum, offset any additional costs to each such unit.

☒ 3. Savings of approximately $ 2,899,700 ~~XXXXX~~ biennially for affected local government facilities

☐ 4. No additional costs or savings because this regulation makes only technical, nonsubstantive or clarifying changes to current law and regulations.

☐ 5. No fiscal impact exists because this regulation does not affect any local entity or program.

☐ 6. Other

**B. FISCAL EFFECT ON STATE GOVERNMENT** (Indicate appropriate boxes 1 through 4 and complete if necessary)

☐ 1. Additional expenditures of approximately $ _____, annually. It is anticipated that State agencies will:

☐ a. be able to absorb these additional costs within their existing budgets and resources.

☐ b. request supplemental funding by means of "Budget Change Proposals" for the _____ fiscal year.

☒ 2. Savings of approximately $ 108,000 ~~XXXXX~~ biennially for affected state facilities

☐ 3. No fiscal impact exists because this regulation does not affect any State agency or program.

☐ 4. Other

**C. FISCAL EFFECT ON FEDERAL FUNDING OF STATE PROGRAMS** (Indicate appropriate boxes 1 through 4 and complete if necessary)

☐ 1. Additional expenditures of approximately $ _____ annually.

☐ 2. Savings of approximately $ _____ annually.

☐ 3 No fiscal impact exists because this regulation does not affect any federally funded State program or agency.

☐ 4. Other

| SIGNATURE | TITLE |
|---|---|
| [signature] | Sr. Staff Counsel |

| | | DATE |
|---|---|---|
| AGENCY SECRETARY APPROVAL/CONCURRENCE | | |
| DEPARTMENT OF FINANCE APPROVAL/CONCURRENCE | PROGRAM BUDGET MANAGER - DOF | DATE |