California Environmental Protection Agency

Air Resources Board

Notice of Public Availability of
Modified Text:
Proposed Amendments to the
Emission Inventory Criteria and Guidelines Report
Adopted Pursuant to the
Air Toxics "Hot Spots" Information and
Assessment Act of 1987

February 1997

State of California
AIR RESOURCES BOARD

Notice of Public Availability of Modified Text
and Additional Supporting Documents

PUBLIC HEARING TO CONSIDER THE ADOPTION AND AMENDMENTS TO THE EMISSION INVENTORY CRITERIA AND GUIDELINES REPORT ADOPTED PURSUANT TO THE AIR TOXICS "HOT SPOTS" INFORMATION AND ASSESSMENT ACT OF 1987

Public Hearing Date: July 25, 1996
Public Availability Date: February 6, 1997
Deadline for Public Comment: February 21, 1997

At a public hearing held July 25, 1996, the Air Resources Board (ARB or Board) considered the adoption and amendments to section 93300.5, Title 17, California Code of Regulations (CCR), and the Emission Inventory Criteria and Guidelines Report (Report or Guidelines), which is incorporated by reference into the CCR. The Guidelines are required by the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (Health and Safety Code sections 44300-44394, the Act) for the preparation of site-specific air toxics emission inventory plans and reports by specified facilities. The Guidelines specify: (1) types of facilities that must report and update their emissions inventory; (2) emission data to submit; (3) methods for quantifying emissions; and (4) toxic substances for which emissions must be reported.

The proposed amendments would streamline the program by focusing update reporting on the facilities and substances that pose the greatest health risks, and exempting low-risk facilities from further reporting. This is a part of the second phase of a two-phased streamlining effort. The first phase was the Board's adoption in January 1996 of the Hot Spots 1995-96 Fee Regulation, which reduced many facility fees and eliminated fees for certain low-risk facilities.

The proposed regulatory action presented to ARB at the July 25, 1996 public hearing is described in detail in the Staff Report: Initial Statement of Reasons for Proposed Rulemaking: Proposed Amendments to the Emission Inventory Criteria and Guidelines Report published in accordance with the Air Toxics "Hot Spots" Information and Assessment Act of 1987, released June 7, 1996.

At the public hearing, after considering the ARB's staff recommendation and the public testimony, the Board approved the proposed adoption and amendments to section 93300.5, Title 17, CCR, and the Emission Inventory Criteria and Guidelines Report, incorporated by reference therein, with modifications presented for consideration at the hearing and with additional modifications as might be appropriate in light of comments received and to conform to statutory changes. These modifications are summarized as follows:

Modifications to Section 93300.5, Title 17, CCR: Update the date of the Emission Inventory Criteria and Guidelines Report to be incorporated by reference and include public availability information. Add references to Health and Safety Code sections added or amended by AB 564.

Modifications to the Format and Date of the Emission Inventory Criteria and Guidelines Report (including appendices): Update the date of the Report to reflect the date of the finally adopted version. Include Appendix B-II and Appendix C, previously under separate cover and incorporated by reference, in the main Report; delete provisions pertaining to their separate incorporation by reference and delete obsolete cover and header pages.

Modifications to the Reporting Forms and Instructions: In Appendix B, make minor changes to increase the width of data fields for device ID, stack ID, and a district-use process description field, to accommodate district needs. Make a minor change to the name and instructions for the additional/optional field for Fraction VOC/PM2.5 to ensure consistency with the merged toxics and criteria pollutant data reporting system. Insert the inadvertently omitted Table B-III for Method of Estimate Codes. In Table B-I, correct the district code entry for Riverside County in the Salton Sea Air Basin to be South Coast AQMD, consistent with recent Board-adopted boundaries. Clarify the provisions pertaining to confidential and trade secret data on the forms, formats, and the instructions in Appendix B and in section VII.B.(3). In Appendix B-I, make two corrections to conform with the merged toxics and criteria pollutant data reporting system: insert the inadvertently omitted data field for "Mailing State" on "I. Facility Information;" and correct the units for "Maximum Hourly Emissions" for radionuclides to be milliCuries/hr (not milliCuries/yr) on "V. Emission Information."

Modifications to the Applicability Provision Regarding Facilities Identified by the District: Clarify that section II.(E)(3) pertains to facilities posing a health concern and refer to specific levels consistent with other sections of the Guidelines. Remove the optional list of factors the districts may use to evaluate facilities.

Modifications to Conform to Amended Statute: Assembly Bill 564, chaptered on September 19, 1996, amended the Air Toxics "Hot Spots" Information and Assessment Act (Health and Safety Code sections 44300 et seq.) to exempt specified facilities from further compliance with the Hot Spots Program, to reinstate exempted facilities if changes occur, to address facilities through permit evaluations, and to make other revisions. At the July 25, 1996, public hearing, the Board directed the staff to make conforming amendments to the Emission Inventory Criteria and Guidelines Report to reflect the amended Statute. Amendments are proposed to the applicability, update, and definition sections of the Report (sections II, III, IV, V and X), to conform with the revised Statute.

Modifications to the List of Substances (Appendix A): Move Saccharin from Appendix A-II to Appendix A-III, to require reporting of the substance only if manufactured by the facility. In Appendix A-I, add individual entries for several substances that are currently reported only as a part of the totals under the chemical groups for Chlorophenols, Fluorocarbons, and Hexachlorocyclohexanes to ensure that the quantities of these individual substances, which have specific health effects values, will be reported separately and properly accounted for in health risk assessments.

Make minor corrections as follows: In Appendix A-I, add the standard annotation for [PAH, POM] and [POM], respectively, to the group total

entries for PAHs and (polychlorinated) Dioxins, for consistency with other substances which are annotated in this way to show that they are substances within the broader classes of Polycyclic Aromatic Hydrocarbons [PAH] and Polycyclic Organic Matter [POM]. In Appendix A-III, correct the spelling of "steroids" on substance 1010 Androgenic (anabolic) steroids. Add asterisk after 7/96 date to clearly indicate new substances added since the last regulation update.

Update Versions of Test Methods for Fuel and Material Analysis: Update the version numbers and dates of several EPA and ASTM source test methods used for fuel and material analysis and incorporated by reference, to reflect the more recent method versions.

Incorporation by Reference: Under section X and Appendix F, incorporate by reference additional documents: (1) Standard Industrial Classification Manual (1987); (2) specified portions of the United States Environmental Protection Agency Integrated Risk Information System (IRIS) database (software version 1.0, 1992), 1996; (3) California Air Pollution Control Officers' Association (CAPCOA) Air Toxics "Hot Spots" Program Revised 1992 Risk Assessment Guidelines, October 1993; and (4) CAPCOA Air Toxics "Hot Spots" Program Facility Prioritization Guidelines, July 1990. In Appendix F, update the reference for another document incorporated by reference, the California Environmental Protection Agency, Standards and Criteria Working Group document entitled "California Cancer Potency Factors: Update," memo dated 1994, with attachment updated as of April 4, 1995. Add Appendix G, List of Documents Incorporated by Reference.

Clarifications and Minor Corrections:

- Clarify that appropriate health effects values to be used are those as specified in section E(7) of Appendix F (section II.C.(2)(c)(ii), sections IV.A.(3)(a)(i) and (iii), section IV.A.(4)(c)(ii), and sections V.H.(3)(f) and (g)).

- In Appendix F, clarify the incorporation by reference of Cal/EPA and U.S. EPA IRIS health values, and clarify OEHHA health values.

- In Section I, add and update Table 2, previously in the staff report only, to assist in following the section numbering between prior regulation formats and the current Report.

- Clarify the title of section II.A. to include all facilities affected by the section.

- Clarify in sections II.C., II.E., and IV.A. that alternative evaluation applies to facilities subject to district permit programs and clarify resulting reporting requirements.

- In section II.E. update reference to plan and report submittal date.

- Correct section numbering in section IV.F.

- In section IV, add explanatory text to introduction, clarify language regarding conditions and qualifications to meet *de minimis* thresholds, clarify provisions regarding Hazardous Air Pollutant (HAP) emissions, clarify language regarding update of emission data, and clarify language regarding district notification of facility designations.

- In section V.E., add clarifying language regarding update requirements for unprioritized facilities.

- In section V.G., add language clarifying requirements for updated and revised emission inventory data.

- In section X, add several definitions for clarity.

- Correct obsolete term "subchapter" in section V.I.(4).

- Correct cross-references in sections IV.A.(1)(b), IV.F.(5), V.A., V.I.(6), V.J.(2)(b), V.L.(g) and (h), and VII.D.(1).

- Use lower case on the word "section" consistently throughout when referring to Health and Safety Code, California Code of Regulations, and the Emission Inventory Criteria and Guidelines Report sections. Also use complete section numbering for clarity throughout, omitting the term "subsection" and partial section numbering.

- Correct typographical grammar error in section IX.D.(3), and correct other minor typographical errors, adjust page numbering and table of contents, and other nonsubstantive changes.

Appended to this Notice as Attachment A is a copy, without attachments, of Board Resolution 96-41, approving the above described regulatory action. Attachment B to this Notice contains the approved language of section 93300.5, with additions to the regulatory text shown by underline and deletions shown by strikeout. Attachment C to this Notice contains the approved Emission Inventory Criteria and Guidelines Report, with additions to the originally proposed text shown by underline and deletions shown by strikeout.

The material described above and all other documentation relied upon in this regulatory action are available for public inspection at the ARB's Public Information Office, 2020 L Street, Sacramento, California, 95814, (916) 322-2990. For further information regarding the proposed amendments, please contact Linda Murchison, Chief of the Stationary Source Emission Inventory Branch, at (916) 322-6021.

In accordance with section 11346.8 of the Government Code, the Board directed the Executive Officer to adopt section 93300.5 and the Report, as approved, after making the modified regulatory language available to the public for comment for a period of at least 15 days, provided that the Executive Officer considers such written comments as may be submitted during this period, makes such modifications as may be appropriate in light of the comments received, and presents the regulation to the Board for further consideration if he determines that this is warranted.

Written comments on the proposed modifications shown in Attachments B and C must be submitted to the Clerk of the Board, Air Resources Board, P.O. Box 2815, Sacramento, California 95812, no later than February 21, 1997, for consideration by the Executive Officer prior to final action. Only comments relating to the modifications described in this Notice will be considered by the Executive Officer.

Attachments

ATTACHMENT A

State of California
AIR RESOURCES BOARD

Resolution 96-41

July 25, 1996

Agenda Item No.: 96-6-1

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (Board) to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, the Legislature found in the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (Act, AB 2588, Connelly, Chapter 1252, Statutes of 1987, Health and Safety Code Section 44300 et seq., including subsequent amendments) that facilities manufacturing or using hazardous substances may be exposing nearby populations to toxic air releases on a routine basis and that it is in the public interest to ascertain the nature and quantity of hazardous releases from specific sources which may create air toxics "hot spots";

WHEREAS, the Act sets forth a program (Program or Air Toxics Hot Spots Program) to develop air toxics emission inventories and to assess the risk to public health from exposure to air toxics;

WHEREAS, in accordance with Health and Safety Code Section 44342, the Board approved criteria and guidelines for site-specific air toxics emission inventory plans and reports on April 14, 1989;

WHEREAS, in accordance with Health and Safety Code Section 44344, the Board approved procedures for the update of the emission inventories on June 14, 1990;

WHEREAS, in accordance with Health and Safety Code Section 44322(c), the Board identified classes of facilities that emit less than 10 tons per year of criteria pollutants to be included in the Air Toxics Hot Spots Program and specified a timetable for their inclusion on June 14, 1990;

WHEREAS, in accordance with Health and Safety Code sections 44344, 44320, and 44322, the Board adopted amendments to streamline the update reporting procedures, allow facilities to be removed from the program that no longer meet applicability requirements, and clarify and improve the criteria and guidelines on June 10, 1993;

WHEREAS, in accordance with the Governor's Executive Order No. W-127-95 (Regulatory Improvement Initiative) which ordered all California state agencies to identify regulatory reforms that will reduce the regulatory burden of the regulated community, the Board, on May 30, 1996, repealed sections 93301 through 93355 and Appendices A through E, Title 17, California Code of

Regulations and adopted section 93300.5, Title 17, California Code of Regulations, and the Emission Inventory Criteria and Guidelines Report and appendices incorporated by reference therein (Report);

WHEREAS, the Board staff, in consultation with representatives of the air pollution control and air quality management districts (districts) and the Office of Environmental Health Hazard Assessment, and in response to comments from affected industry representatives and other interested persons, has proposed a number of amendments to the Report, which have been discussed with the public at nine consultation meetings, and at other meetings and teleconferences with industry, health and environmental groups, and district representatives;

WHEREAS, legislation is pending which, if passed, could necessitate further modifications to the Report, to ensure consistency with statute;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with section 11340), Part 1, Division 3, Title 2 of the Government Code;

WHEREAS, changes have been proposed to the originally-noticed text of the Regulation based on the need for clarifications and based on information presented by districts regarding reporting formats, among other things;

WHEREAS, based upon the information presented by the staff and the comments received prior to and at the hearing, the Board finds that:

1. The proposed amendments to the Report for site-specific air toxics emission inventory plans comply with Health and Safety Code Section 44342 and improve the regulation by:

   a) restructuring the list of substances (Appendix A) to simplify reporting and updating emissions;

   b) revising the degree of accuracy values in Appendix A-I to reflect relative toxicity of the substances;

   c) modifying the reporting formats and instructions (Appendix B) to allow greater flexibility in reporting data and to allow alternative reporting through combined toxics and criteria pollutant inventory submittals;

   d) consolidating classes of facilities that emit less than 10 tons per year of criteria pollutants that are included in the Air Toxics Hot Spots Program (Appendix E) to

require emission reporting from only those facilities of concern and excluding the remainder, and to set a threshold for excluding low level facilities from requirements in Appendix E; and

e) clarifying the definitions, structure, and language in the Report.

2. The proposed amendments to specify categories and threshold criteria (including addition of a new Appendix F) for update reporting and to streamline procedures for the updates to the emission inventories comply with Health and Safety Code Section 44344, and ensure:

a) that facilities which pose or have the potential to pose significant risk to public health will continue to be tracked and updated, while streamlining their update requirements and allowing flexibility and integration with other reporting programs wherever possible;

b) that low risk facilities will be exempted from further update reporting requirements, subject to provisions for district review of the exemption and for reinstatement if subsequently warranted; and

c) that facility information collected under the Program adequately reflects the health risk the current facility emissions may pose to the public, and includes information on any new operations at the facilities and emissions of any additional listed substances.

3. The proposed amendments will result in elimination of costs and requirements to exempted facilities, and will reduce costs and streamline requirements for most remaining facilities.

4. This regulatory action will not have a significant adverse impact on the environment and may benefit air quality by stimulating a reduction in emissions of both toxic and criteria pollutants and by providing information which will be used by the Board and others for control purposes.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves amendments to section 93300.5, Title 17, California Code of Regulations, as set forth in Attachment A hereto, and approves the amendments to the Emission Inventory Criteria and Guidelines Report, including appendices, which is incorporated by reference therein.

BE IT FURTHER RESOLVED that, in accordance with its comments, the Board directs the Executive Officer to clarify and revise as appropriate the proposed Guideline Report procedures regarding district determinations for identification or exemption of facilities.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt the Emission Inventory Criteria and Guidelines Report, including appendices, after making any changes necessitated by the passage of pending legislation or clarification regarding district determinations and after making the modified language available for public comment for a period of 15 days, provided that the Executive Officer shall consider such written comments regarding

the modification as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

I hereby certify that the above is a true and correct copy of Resolution 96-41, as adopted by the Air Resources Board.

Pat Hutchens

Pat Hutchens, Board Secretary

Resolution 96-41

July 25, 1996

Identification of Attachments to the Resolution

Attachment A: Amendments to Title 17, California Code of Regulations, section 93300.5 and Report incorporated by reference therein, and appended to the Staff Report released June 7, 1996, and including staff's suggested changes distributed at the July 25, 1996, hearing.

ATTACHMENT B

Amend section 93300.5, Title 17, California Code of Regulations, to read as follows:

93300.5. Incorporation by Reference. This subchapter shall apply to any facility subject to the Air Toxics "Hot Spots" Information and Assessment Act of 1987, Health and Safety Code sections 44300-44394. Subject facilities shall comply with the provisions of the "Emission Inventory Criteria and Guidelines Report" including its appendices, adopted by the Air Resources Board on ~~May 30, 1996~~ [insert date of adoption by ARB], which is incorporated by reference herein. The "Emission Inventory Criteria and Guidelines Report" including appendices is available upon request from the Air Resources Board's Public Information Office, 2020 L Street, Sacramento, California, 95814, telephone (916) 322-2990. The Air Resources Board may also be contacted via its Internet home page at: http://www.arb.ca.gov. The "Emission Inventory Criteria and Guidelines Report" including appendices is available on the Internet under the directory http://www.arb.ca.gov/ab2588/ab2588.htm.

Note: Authority cited: Sections 39600, 39601 and 44342, Health and Safety Code. Reference: Sections 41805.5, 44320, 44321, 44322, 44323, 44324, 44325, 44340, 44341, 44342, 44343, 44344, 44344.4, 44344.5, 44344.7, 44346, 44360 and 44365, Health and Safety Code; Section 6254.7, Government Code; and 17, CCR, Sections 90700-90705, Appendix A.

Note: Proposed modifications are shown by underline to indicate additions to and ~~strikeout~~ to indicate deletions from existing regulatory text.
Section 93300.5. became operative September 21, 1996.
This page was added after the July 25, 1996 hearing.

ATTACHMENT C

California Environmental Protection Agency
Air Resources Board

EMISSION INVENTORY

CRITERIA AND GUIDELINES REPORT

FOR THE AIR TOXICS "HOT SPOTS" PROGRAM

~~MAY 1996~~ [Insert Date of Adoption by ARB]

~~**Issue Date: June 7, 1996**~~

California Environmental Protection Agency

Air Resources Board

EMISSION INVENTORY

CRITERIA AND GUIDELINES REPORT

FOR THE AIR TOXICS "HOT SPOTS" PROGRAM

~~MAY 1996~~ [Insert Date of Adoption by ARB]

~~**Issue Date: June 7, 1996**~~

State of California
Air Resources Board
Technical Support Division

EMISSION INVENTORY CRITERIA AND GUIDELINES REPORT

Table of Contents

	Page
Section I. Purpose and How to Use This Report	1
A. Purpose.	1
B. How to Use This Report.	1
Section II. Applicability: Who Must Comply and When?	~~6~~ 10
A. Facilities Whose Criteria Pollutant Emissions Are 25 Tons Per Year or More and Facilities Listed in a District Air Toxics Inventory, Report, or Survey.	~~6~~ 10
B. Facilities Whose Criteria Pollutant Emissions Are 10 Tons Per Year or More.	~~6~~ 10
C. New Facilities and Facilities Whose Criteria Pollutant Emissions Increase.	~~6~~ 10
(1) Requirements for New Facilities and Facilities Whose Criteria Pollutant Emissions Increase.	~~6~~ 10
(2) Alternative Evaluation for ~~New or Modified Sources~~ Facilities Subject to District Permit Program.	~~7~~ 11
D. Facilities Added to District Surveys.	~~8~~ 13
E. Facilities Emitting Less Than 10 Tons Per Year of Criteria Pollutants.	~~9~~ 13
(1) Facilities in a Class Listed in Appendix E.	~~9~~ 13
(2) Facilities in a Classes Added to Appendix E.	~~9~~ 14
(3) Facilities Emitting Less Than 10 Tons Per Year of Criteria Pollutants and Identified By the District As Posing Concern to Public Health.	~~10~~ 14
F. Solid Waste Disposal Facilities.	~~11~~ 15
G. Change in Ownership or Company Name.	~~11~~ 16
H. Updates to the List of Substances.	~~11~~ 16
I. Submittal of Emission Inventory Reports.	~~12~~ 16
J. Exemption From Further Compliance Based on Prioritization Score.	16
(1) Conditions.	16
(2) Designation.	17
(3) Reinstatement.	17
(4) Reinstatement Date.	18
(5) Reprioritization.	18
Section III. Removal of Facilities That No Longer Meet Applicability Criteria	~~13~~ 19
A. Facilities Whose Emissions Decrease Below 10 Tons Per Year of Criteria Pollutants.	~~13~~ 19
(1) Conditions.	~~13~~ 19
(2) Reinstatement.	~~13~~ 19
B. Facilities Removed from District Surveys.	~~14~~ 20
(1) Conditions.	~~14~~ 20
(2) Reinstatement.	~~14~~ 20
C. 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.	~~14~~ 20
(1) Conditions.	~~14~~ 20
(2) Reinstatement.	~~15~~ 21

	Page
Section IV. Update Categories and Exemptions From Update Reporting	~~16~~ 22
A. "Low Level" Facilities Exempted From Update Reporting.	~~16~~ 22
(1) Conditions.~~:~~	~~16~~ 22
(2) Designation.	24
(~~2~~ 3) Reinstatement.	~~18~~ 25
(~~3~~ 4) Alternative Permit Evaluation for ~~Modified Sources~~ Facilities Subject to District Permit Program.	~~20~~ 26
(4 5) District Determination Regarding Exemption.	~~21~~ 27
B. "Intermediate Level" Facilities For Update Reporting.	~~21~~ 28
(1) Conditions.~~:~~	~~21~~ 28
(2) Designation.	29
(~~2~~ 3) Facilities Emitting Specified Quantities of HAPs.	~~23~~ 29
C. "High Level" Facilities For Update Reporting.	~~23~~ 30
(1) Conditions.	30
(2) Designation.	30
D. Facilities Not Yet Prioritized.	~~24~~ 30
E. Timing for Designation of Update Categories.	~~24~~ 30
F. ~~Re-Designation~~ Redesignation ~~i~~If Facility is ~~Re-Prioritized~~ Reprioritized.	~~24~~ 31
Section V. Update Reporting Requirements	~~25~~ 32
A. General Update Reporting Requirements.	~~25~~ 32
B. Update Reporting Requirements for "High Level" Facilities.	~~25~~ 32
(1) Continue to Update Reports on the Risk-Driving Devices or All Devices.	~~25~~ 32
(2) Alternative: Update Reporting Through Risk Reduction Audit and Plan.	~~25~~ 32
C. Update Reporting Requirements for "Intermediate Level" Facilities.	~~26~~ 33
(1) Track Activity Changes and Update Reports if Significant Increases.	~~26~~ 33
(2) Alternative: Track Through Combined Criteria/Toxics Inventory Reporting.	~~27~~ 34
D. Update Reporting Requirements for "Low Level" Facilities.	~~27~~ 34
E. Update Reporting Requirements for Facilities Not Yet Prioritized.~~:~~	~~27~~ 34
(1) If the Facility's Emission Inventory Report Has Been Approved.~~:~~	~~27~~ 34
(2) If the Facility's Emission Inventory Report Has Not Been Approved.~~:~~	~~28~~ 35
F. Voluntary Updates.	~~28~~ 35
G. Data Revised for Prioritizations or Risk Assessments.	~~28~~ 36
H. Update Summary Form.	~~29~~ 36
I. Update Plans and Update Reports.	~~29~~ 36
J. Use of Previously Submitted Information.	~~30~~ 37
K. Update Reporting Year.	~~31~~ 39
L. Schedule for Update Submittal.	~~32~~ 39
M. Schedule for Update Summary Form Review.	~~33~~ 40

	Page
Section VI. Requirements for Preparing Emission Inventory Plans	~~34~~ 41
A. General.	~~34~~ 41
B. Flow Diagram.	~~34~~ 41
C. Trade Secrets.	~~35~~ 42
D. Numbering.	~~35~~ 42
E. Specification of Emission Quantification Methods.	~~36~~ 43
F. Source Test Protocol and Other Required Information.	~~36~~ 43
Section VII. Requirements for Emission Inventory Reports	~~37~~ 44
A. General.	~~37~~ 44
B. Facility Diagram.	~~37~~ 44
C. Reporting Formats and Forms.	~~38~~ 45
(1) Required Data Elements and Formats.	~~38~~ 45
(2) Acceptable Forms.	~~38~~ 45
(3) General Reporting Form Procedures.	~~38~~ 45
D. Other Required Data.	~~39~~ 46
E. Format for Reports and Presentation of Data.	~~40~~ 47
F. Plot Plan.	~~40~~ 47
G. Other Procedures.	~~40~~ 47
Section VIII. Other Requirements	~~41~~ 48
A. Instructions for Record Keeping.	~~41~~ 48
B. Specification of Reporting Period and Averaging Intervals for Each Substance.	~~41~~ 48
C. Specifications for Identifying Emission Points and Substances Emitted.	~~42~~ 49
D. Exempted Uses.	~~42~~ 49
E. Emission Quantification and Degree of Accuracy.	~~43~~ 50
F. Reporting Mixtures and Trade Name Products.	~~44~~ 51
Section IX. Source Testing and Emission Factors	~~46~~ 53
A. Source Testing and Measurement.	~~46~~ 53
B. Pooled Source Testing.	~~47~~ 54
C. Alternatives to Required Source Testing.	~~48~~ 55
D. ARB-Approved Emission Factors Derived From Hot Spots Source Tests.	~~49~~ 56
(1) Proposal to Use ARB-Approved Emission Factors.	~~49~~ 56
(2) Review Process.	~~50~~ 58
(3) Approval Involving Potent Substances.	~~51~~ 58
(4) Approval Involving Other Substances.	~~51~~ 58
E. Source Test Protocol and Source Test Report.	~~51~~ 58
F. Converting Source Test Results to Emission Rates.	~~53~~ 60
G. Specifications for Acceptable Estimation Methods and Emission Factors.	~~53~~ 60
Section X. Definitions.	~~55~~ 62

APPENDICES

		~~Location Included~~
Appendix A	List of Substances	
Appendix A-I	Substances for Which Emissions Must Be Quantified	
Appendix A-II	Substances for Which Use, Production, or Other Presence Must Be Reported	
Appendix A-III	Substances Which Need Not Be Reported Unless Manufactured By the Facility	
Appendix B	Reporting Formats and Instructions	
Appendix B-I	Data Elements and Formats	~~Included~~
Appendix B-II	Reporting Forms and Instructions	~~Separate Cover~~
Appendix C	Facility Guideline Index (Facility "Look-Up" Table)	~~Separate Cover~~
Appendix C-I	Responsibilities of All Facilities	
Appendix C-II	Further Responsibilities for Specific Facility Classes	
Appendix D	Source Testing: Summary of Requirements for ~~Testing and~~ Measurements and Alternatives	~~Included~~
Appendix E	Requirements for Classes of Facilities Emitting Less Than 10 Tons Per Year of Criteria Pollutants	~~Included~~
Appendix F	Criteria for Inputs for Risk Assessment Using Screening Air Dispersion Modeling	~~Included~~
Appendix G	List of Documents Incorporated by Reference	

EMISSION INVENTORY
CRITERIA AND GUIDELINES REPORT

Section I. Purpose and How to Use This Report.

A. Purpose.

This report 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 44300-44394, as amended). The requirements in this report are enforceable as regulations because this report is incorporated by reference into Title 17 of the California Code of Regulations, section 93300.5.

This Emission Inventory Criteria and Guidelines Report does the following: 1) specifies which facilities are subject to air toxics emission inventory reporting and update reporting; 2) specifies information a facility operator must include in a facility's air toxics emission inventory plan and inventory report; 3) identifies specific classes of facilities that emit less than ten tons per year of criteria pollutants that are subject to the Hot Spots program and specifies their emission inventory reporting requirements; 4) specifies source testing requirements, acceptable emission estimation methods, and the reporting formats to be used; 5) establishes groups of the substances to be inventoried; 6) designates facilities into levels for purposes of update reporting, based on prioritization scores, risk assessment results, or *de minimis* thresholds; 7) exempts "low level" facilities from further update reporting unless specified reinstatement criteria are met, and specifies the update reporting requirements for other facilities; 8) specifies information a facility operator must include in a facility's update to ~~their~~ the facility emission inventory; and 9) includes provisions for integrating Hot Spots reporting with other district programs if specified criteria are met.

B. How to Use This Report.

This report is organized into sections which address related requirements. Table 1 provides a guide to locating information in this report, such as requirements for new facilities and update reporting requirements for facilities which completed previous reporting. Table 2 provides a comparison of section numbers for the Emission Inventory Criteria and Guidelines Regulation (last amended January 31, 1994); the Regulatory Improvement Initiative (operative September 21, 1996); and the current Emission Inventory Criteria and Guidelines Report.

Figures 1 and 2 , respectively, provide a graphical summary of the designations of facilities as "low level", "intermediate level", or "high level" facilities for purposes of update reporting, and the types of update requirements and acceptable alternatives corresponding to each of these levels.

For definitions of terms, see section X.

TABLE 1
How to Locate Information in this Regulatory Report

*A. If you are a **new facility**....*	**Refer to:**
1. Is the facility subject to Hot Spots reporting requirements?	Section II. Applicability. Also see Appendix E for classes of smaller facilities.
- Could a permit evaluation qualify facility for exemption as a "low level" facility?	Section II. C.
- Is your facility covered by an industrywide inventory prepared by the district?	Section II. C.
2. If you are required to prepare an emission inventory plan and report:	Section VI. Requirements for Preparing Emission Inventory Plans. Section VII. Requirements for Emission Inventory Reports. Section VIII. Other Requirements.
- Is any source testing required? What emission factors and estimation methods are acceptable?	Appendix D and Section IX. Source Testing and Emission Factors.
- What substances are covered?	Appendix A: List of Substances
- If you need help identifying some likely substances from your facility's operation:	Appendix C: Facility "Look-Up" Table.
- What data must be reported and in what form?	Appendix B: Reporting Formats and Forms
- Where are terms defined?	Section X. Definitions.

TABLE 1 (continued)

B. If your facility ***has reported at least once...***	**Refer to:**
1. Has your facility changed so it no longer meets the applicability criteria?	Section III. Removal of Facilities That No Longer Meet Applicability Criteria.
2. Is your facility exempt from further compliance based on prioritization score?	Section II. J.
~~2~~ 3. What is the update category of your facility?	Section IV. Update Categories and Exemptions From Update Reporting.
- "Low level": exempt from update reporting, unless changes trigger reinstatement criteria.	Section IV. A.
- "Intermediate level".	Section IV. B.
- "High level".	Section IV. C.
~~3~~ 4. What update reporting is required? Can other reporting programs substitute?	Section V. Update Reporting Requirements.
- "Low level" facilities: exempt from updates.	Section V. D.
- "Intermediate level" facilities: track activity. May be able to substitute merged toxics/criteria inventory reporting for Hot Spots update requirement.	Section V. C.
- "High level" facilities: update risk-driving devices. May be able to substitute Risk Reduction Audit and Plan update (if required) for Hot Spots update requirement.	Section V. B.
- Facilities not yet prioritized.	Section V. E.
- Voluntary updates.	Section V. F.
- If revised emissions were used in a risk assessment.	Section V. G.
4 5. What data must be updated and in what format? Can previous information be used?	Sections V. H. - V. M.

Table 2
Emission Inventory Criteria and Guidelines
Format/Section Changes

EIC & G Regulation (Last Amended January 31, 1994)	Regulatory Improvement Initiative (Operative Sept. 21, 1996)	EIC & G Report [Insert Date of ARB Adoption]
	93300.5 (CCR)	93300.5 (CCR)
Article 1	Article 1	Section I
93300	300	I. A
		I. B (new)
93301	301	Section X
Article 2	Article 2	Section II
93303 (a) - (b)	303 (a) - (b)	II. A - B
93303 (c)	303 (c)	II. F
93304 (a)	304 (a)	II. A
93304 (b)	304 (b)	II. B
93305 (a) - (b)	305 (a) - (b)	II. C (1)
		II. C (2) (new)
93305.5 (a) - (c)	305.5 (a) - (c)	III. A (1) - (2)
93306	306	II. D
93306.5 (a) - (c)	306.5 (a) - (c)	III. B (1) - (2)
93307	307	II. H
93308 (a) -(c), (e)	308 (a) - (c), (e)	II. E (1), (2)
93308 (d)	308 (d)	deleted*
		II. E (3) (new)
93309 (a) - (c)	309 (a) - (c)	III. C (1) - (2)
		II. I (new)
		II. J (1) - (5) (new)

Table 2 (continued)

EIC & G Regulation (Last Amended January 31, 1994)	Regulatory Improvement Initiative (Operative Sept. 21, 1996)	EIC & G Report [Insert Date of ARB Adoption]
Article 2	Article 2	Section III
93305.5 (a) - (c)	305.5 (a) - (c)	III. A (1) - (2)
93306.5 (a) - (c)	306.5 (a) - (c)	III. B (1) - (2)
93309 (a) - (c)	309 (a) - (c)	III. C (1) - (2)
		Section IV (new)
See Article 6	See Article 6	Section V
Article 3	Article 3	Section VI
93310	310	VI. A
93311 (a) - (f)	311 (a) -(f)	VI. B (1) - (6)
93312	312	VI. C
93313	313	VI. D
93314	314	VI. E
93315	315	VI. F
Article 4	Article 4	Section VII
93320	320	VII. A
93321 (a) - (c)	321 (a) - (c)	VII. B (1) - (3)
93322 (a) - (e)	322 (a) -(e)	VII. C (1) - (5)
93323 (a) - (d)	323 (a) - (d)	VII. D (1) - (4)
93324	324	VII. F
Article 5	Article 5	Section VIII
93330 (a) - (g)	330 (a) - (g)	VIII. A (1) - (7)
93331 (a) - (b)	331 (a) - (b)	VIII. B (1) - (2)
93332 (a) - (d)	332 (a) -(d)	VIII. C (1) - (4)

Table 2 (continued)

EIC & G Regulation (Last Amended January 31, 1994)	Regulatory Improvement Initiative (Operative Sept. 21, 1996)	EIC & G Report [Insert Date of ARB Adoption]
93333 (a) - (h)	333 (a) - (h)	VIII. D (1) - (8)
93334 (a) - (e)	334 (a) - (e)	VIII. E (1) - (6)
93335 (a) - (j)	335 (a) - (j)	VIII. F (1) - (10)
See 93336 - 93347	See 336 - 347	Section IX
93336 (a) - (d)	336 (a) - (d)	IX. A (1) - (4)
93337 (a) - (d)	337 (a) -(d)	IX. B (1) - (4)
93338 (a) - (d)	338 (a) - (d)	IX. C (1) - (4)
		IX. D (new)
93339 (a) - (w)	339 (a) - (w)	IX. E (1) - (~~23~~ 24)
93340 (a) - (d)	340 (a) - (d)	IX. F (1) - (4)
93345 (a) - (c)	345 (a) - (c)	IX. G (1) - (3)
93346	346	VII. E
93347	347	VII. G
Article 6	Article 6	Section V
93348 (a) - (g)	348 (a) - (g)	V. A - G
93349 (a) - (c)	349 (a) - (c)	V. H (1) - (3)
93350 (a) - (f)	350 (a) - (f)	V. I (1) - (6)
93351 (a) - (d)	351 (a) - (d)	V. J (1) - (4)
93352 (a) - (b)	352 (a) - (b)	V. K (1) - (2)
93353 (a) - (c)	353 (a) - (c)	V. L (1) - (3)
93354 (a) - (b)	354 (a) - (b)	V. M (1) - (2)
93355	355	II. G
See 93336 - 93347	See 336 - 347	Section IX
See 93301	See 301	Section X

Table 2 (continued)

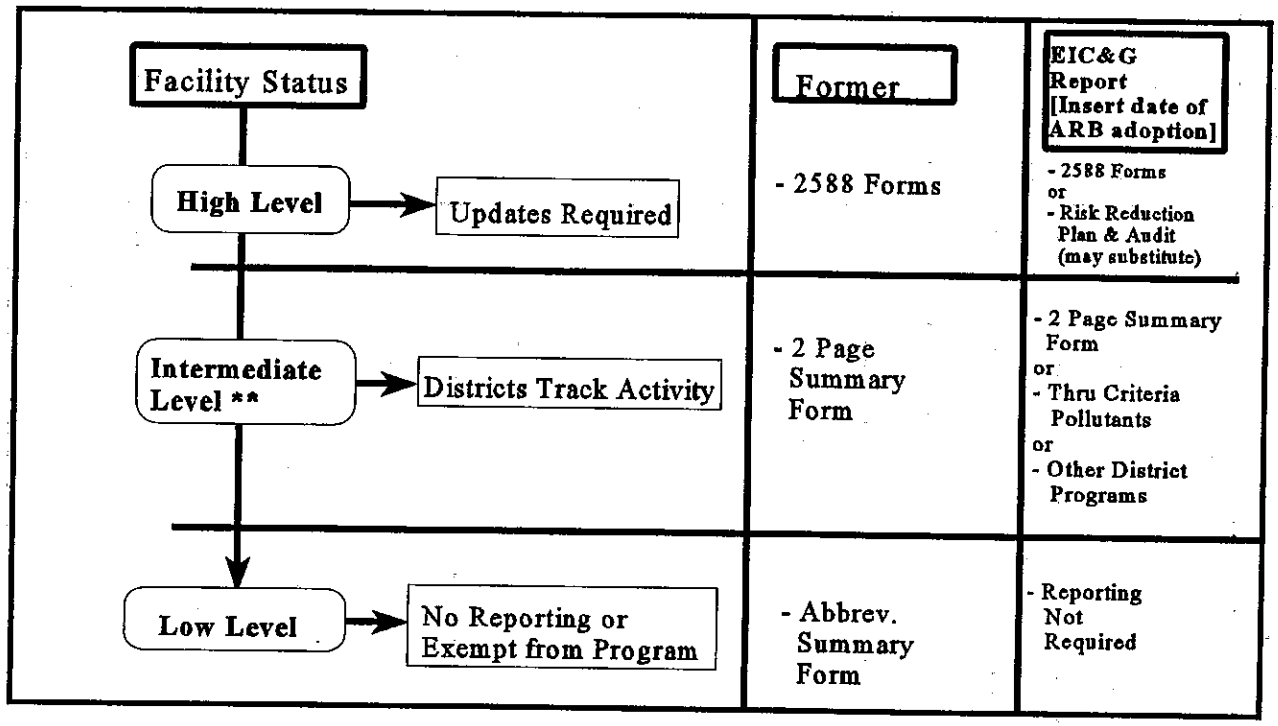
EIC & G Regulation (Last Amended January 31, 1994)	Regulatory Improvement Initiative (Operative Sept. 21, 1996)	EIC & G Report [Insert Date of ARB Adoption]
Appendix A	**Appendix A**	**Appendix A**
Appendix A-I	Appendix A-I	Appendix A-I
Appendix A-II	Appendix A-II	Appendix A-II
		Appendix A-III (new)
Appendix B	**Appendix B**	**Appendix B**
		Appendix B-I (new)
Table B-I	Table B-I	Appendix B-II : Table B-I
Table B-II	Table B-II	deleted
Table B-III	Table B-III	Appendix B-II : Table B-III
Table B-IV	Table B-IV	Appendix B-II : Table B-II
		Appendix B-II : Table B-IV (new)
Appendix C	**Appendix C**	**Appendix C**
Appendix C-I	Appendix C-I	Appendix C-I
Appendix C-II	Appendix C-II	Appendix C-II
Appendix D	**Appendix D**	**Appendix D**
Appendix E	**Appendix E**	**Appendix E**
Appendix E-I	Appendix E-I	Appendix E
Appendix E-II	Appendix E-II	deleted
		Appendix F (new)
		Appendix G (new)

* Section 93308 (d) and section 308 (d) specified reporting requirements for Appendix E-II facilities that no longer apply.

[NOTE: Table 2 was added after the July 25, 1996 public hearing.]

Figure 1

Reporting Requirements



**Includes facilities emitting specified quantities of Hazardous Air Pollutants (HAPs)

Note: If there is any inconsistency between this figure and the text of this Report, text language takes precedence.

Figure 2

Exemption & Reporting Levels

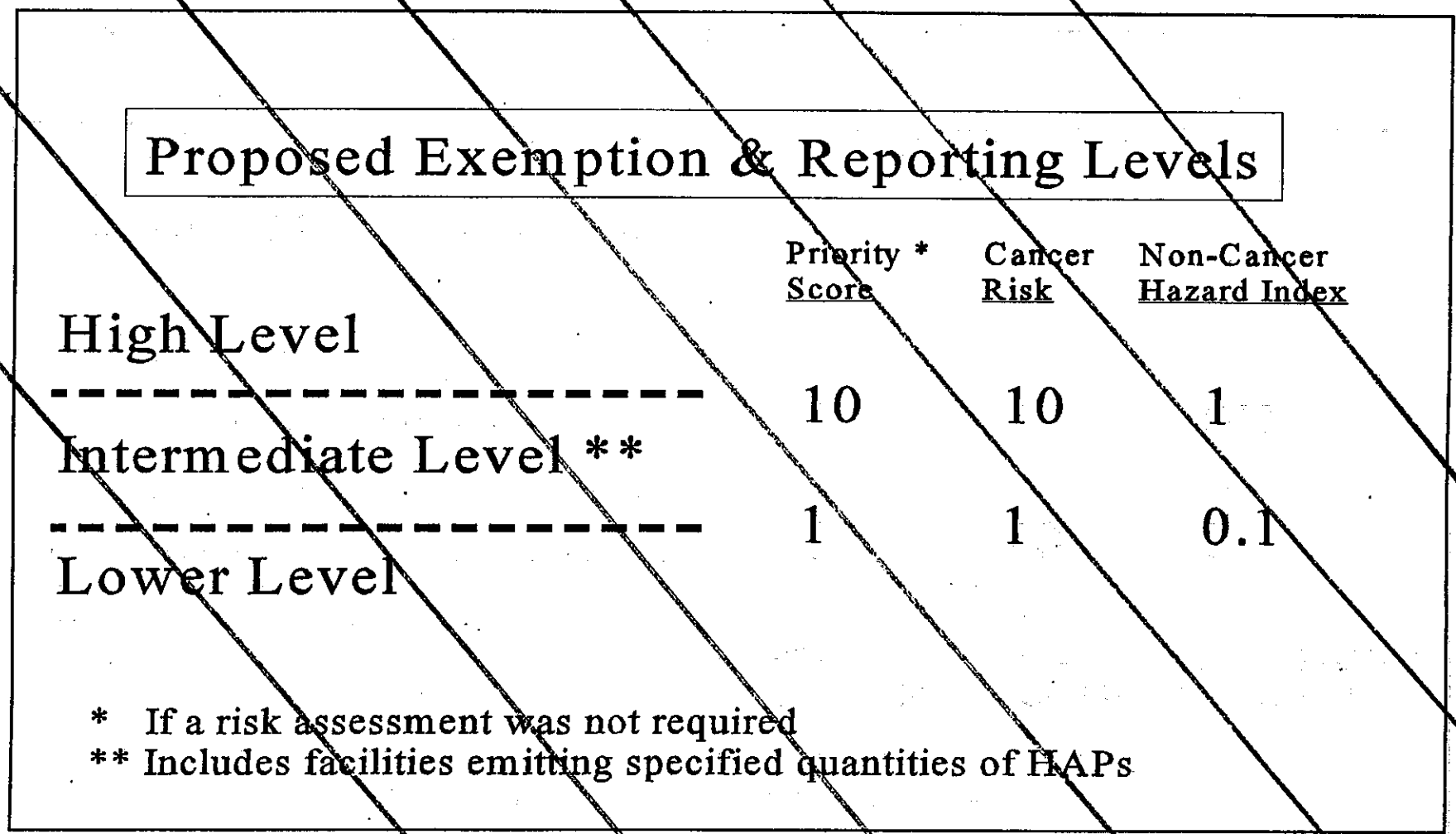
	Prioritization Score*	Cancer Risk	Non-Cancer Hazard Index
High Level			
----------	10	10	1
Intermediate Level **			
----------	1	1	0.1
Low Level			

* If a risk assessment was not required

** Includes facilities emitting specified quantities of Hazardous Air Pollutants (HAPs) (See section IV.A.(1) (e) and IV.B.(3))

Note: If there is any inconsistency between this figure and the text of this Report, text language takes precedence.

Figure 1

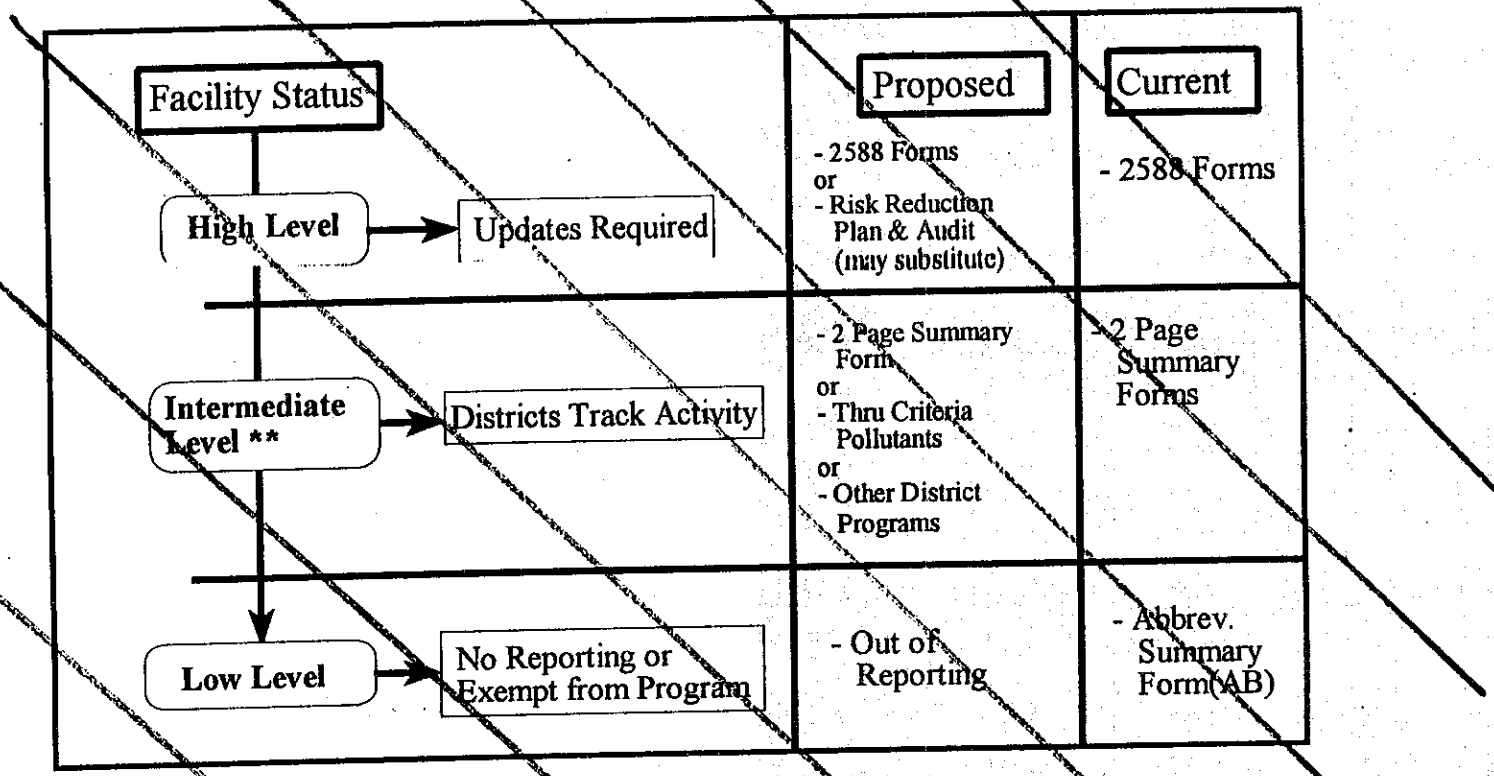


Note: If there is any inconsistency between this figure and the text of this report, text language takes precedence.

May 28, 1996

Figure 2

Reporting Requirements



** Includes facilities emitting specified quantities of HAPs

Note: If there is any inconsistency between this figure and the text of this report, text language takes precedence.

May 28, 1996

Section II. Applicability: Who Must Comply and When?

A. Facilities Whose Criteria Pollutant Emissions Are 25 Tons Per Year or More and Facilities Listed in a District Air Toxics Inventory, Report, or Survey.

Except for facilities or activities exempted by Health and Safety Code sections 44324, ~~and~~ 44325, and 44344.4, as further defined in sections III and IV, this regulation applies ~~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 the list of "Air Pollution Control District Air Toxic Inventories, Reports, or Surveys" in Appendix A of Title 17 California Code of Regulations, sections 90700 through 90705.

Plan Submittal Date: Every facility included in section II.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 in accordance with Health and Safety Code section 44323.

B. Facilities Whose Criteria Pollutant Emissions Are 10 Tons Per Year or More.

Effective July 1, 1989, this regulation applies 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.

Plan Submittal Date: Every facility included in section II.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.

C. New Facilities and Facilities Whose Criteria Pollutant Emissions Increase.

(1) Requirements for New Facilities and Facilities Whose Criteria Pollutant Emissions Increase:

This regulation applies 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 II.A. or II.B.

Plan Submittal Date: 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) **Covered by Industrywide:** 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;

(b) **Earlier Submission:** The facility is subject to earlier submission of an inventory plan in accordance with district requirements adopted in accordance with Health and Safety Code sections 44365(b); or

(c) **Assessed Under District Permit Program ~~Evaluation for New or Modified Sources~~:** The entire new facility, or all of the modified facility's physical changes or changes in activities or operations which cause the facility's criteria pollutant emissions to increase so that ~~they~~ the facility's emissions are above the levels specified in ~~S~~section II.A. or II.B., are subject to a district permit program ~~for new and modified sources~~ established in accordance with Health and Safety Code section 42300, the district conducts an assessment which meets all the criteria specified in the following ~~sub~~section II.C.(2), ~~and~~ the facility qualifies under ~~sub~~section II.C.(2)(a) or II.C.(2)(b), and the district issues a permit for the physical change or change in activities or operations or, for a new facility, a permit authorizing construction or operation of the facility.

(2) Alternative Evaluation for ~~New or Modified Sources~~ Facilities Subject to District Permit Program: The following alternative may be used, at district option, to determine whether a new or modified facility included in section II.C. must submit an emission inventory plan or comply with reporting requirements for "intermediate level" or "high level" facilities under section V.

(a) **New facility**: If the entire new facility is subject to a district permit program ~~for new sources~~ established in accordance with Health and Safety Code section 42300, and the district conducts an assessment ~~which~~ that meets all the criteria specified in ~~sub~~section II.C.(2)(c), below, ~~and~~ the district designates the entire new facility a "low level" facility in accordance with ~~S~~section IV.A., and the district issues a permit authorizing construction or operation of the new facility, then the new facility shall not be required to submit an emission inventory plan under ~~sub~~section II.C.(1) and shall not be required to submit an emission inventory report under section II.J. If the facility is determined by the district to meet the criteria for an "intermediate level" or "high level" facility, then the facility must comply with reporting requirements for "intermediate level" or "high level" facilities, respectively, under section V.

(b) **Modified facility:** If all of the modified facility's physical changes or changes in activities or operations which cause the facility's criteria pollutant emissions to increase above the levels specified in ~~S~~section II.A. or II.B. are subject to a district permit program ~~for modified sources~~ established in accordance with Health and Safety Code section 42300, ~~and~~ the district conducts an assessment which meets all the criteria specified in ~~sub~~section II.C.(2)(c), below, ~~and~~ the district designates the modified facility a "low level" facility in accordance with ~~S~~section IV.A., and the district issues a permit for all of the modified facility's physical changes or changes in activities or operations, then the modified facility shall not be required to submit an emission inventory plan under ~~sub~~section II.C.(1) and shall not be required to submit an emission

inventory report under section II.J. If the facility is determined by the district to meet the criteria for an "intermediate level" or "high level" facility, then the facility must comply with reporting requirements for "intermediate level" or "high level" facilities, respectively, under section V.

(c) **Criteria:** The district assessment must include an evaluation of all the emissions and potential emissions of listed substances, ~~and~~ or their associated risks, or both, whichever the district determines to be appropriate, from the new or modified facility. A risk assessment conducted to meet the requirements of this section shall comply with Health and Safety Code section 44360(b)(2). The district assessment must meet all of the following criteria:

(i) The assessment evaluates all substances listed under Appendix A-I, herein, that are emitted or could potentially be emitted under the permitted conditions from the new or modified facility;

(ii) The assessment includes appropriate ~~any new or revised~~ health effects values as specified in section E(7) of Appendix F ~~approved by the Office of Environmental Health Hazard Assessment (OEHHA) since either the facility's permit was last revised or the district conducted an assessment, whichever is earlier,~~;

(iii) The assessment evaluates the aggregate effect of changes on the entire facility, both from multiple sources within the facility, and from the aggregate effect over time of multiple changes;

(iv) The assessment evaluates the receptor distance for the facility;

(v) The assessment evaluates the total quantity of emissions of each listed substance that could potentially be allowed to be emitted under the enforceable level of the permit;

(vi) The district finds that the new or modified facility meets the criteria for a "low level" facility as specified in section IV.A., herein;

(vii) The district issues an enforceable permit or permits, which limit the emissions of listed substances for the entire facility including any emissions from the facility as modified by the physical changes or changes in activities or operations, to not exceed the levels evaluated in the assessment;

(viii) The assessment meets equivalent provisions for the elements of a plan as specified in Health and Safety Code sections 44340 and 44342, including but not limited to producing a comprehensive characterization of the full range of pollutants; collecting or calculating data for all releases; ensuring that the collected data will ensure the ability to characterize risk, if needed under Health and Safety Code section 44361; that the source of all emissions is displayed or described; and that a facility diagram be available which meets the requirements of Health and Safety Code section 44342(b). A facility-total summary of the emissions may be used to comply with these provisions as long as the totals are calculated based on all releases; and

(ix) The facility operator complies with all other applicable requirements of the Hot Spots program specified in Health and Safety Code sections 44300 - 44394.

D. Facilities Added to District Surveys.

This regulation applies 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 A of Title 17, California Code of Regulations, sections ~~90700~~ through 90705.

Plan Submittal Date: The operator of a facility added to Appendix A of Title 17, CCR, ~~S~~sections 90700 through 90705 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.

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

(1) Facilities in a Class Listed in Appendix E.

This regulation applies 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 belongs to any class listed in Appendix E.

The operator of any facility subject to this section which belongs to any class listed in Appendix E shall submit to the appropriate district an emission inventory plan and emission inventory report which meet all the requirements of this regulation, 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 in accordance with Health and Safety Code section 44323;

(b) The facility is subject to earlier submission of an inventory plan in accordance with sections II.A., II.B., II.C., or II.D., or in accordance with district requirements adopted in accordance with Health and Safety Code section 44365(b); or

(c) The facility meets the general exclusion provision for ~~individual~~ facilities as specified in Note (1) to Appendix E.

Plan and Report Submittal ~~Date~~: The inventory plan shall be due August 1, 1994 ~~of the year following the effective date of this section~~ for any facility subject to this section and in operation on or before January 31, 1994. ~~at the time of the effective date of this section.~~ For any facility subject to this section commencing operation after January 31, 1994 ~~the effective date of this section~~ and on or before January 1 of a given year, the operator shall submit an emission inventory plan to the appropriate district by the following August 1, except as provided in section II.E.(1)(a), ~~or~~ (b), or (c) above. The schedule specified in Health and Safety Code sections 44340(b), 44341, and 44343, and in section II.A and section

VII.G herein shall apply to the review, approval, and implementation of the plan and submittal of the report.

(2) Facilities in a Classes Added to Appendix E.

This regulation applies to any facility subject to this section which belongs to any class subsequently added to Appendix E of this regulation.

Plan Submittal Date: The operator of any facility which belongs to a class added to Appendix E on or before April 1 of a given year shall submit the required emission inventory plan to the appropriate district by the following August 1, unless:

(a) **Covered by Industrywide:** 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 in accordance with Health and Safety Code section 44323;

(b) **Earlier Submission:** The facility is subject to earlier submission of an inventory plan in accordance with sections II.A., II.B., II.C., or II.D., or in accordance with district requirements adopted in accordance with Health and Safety Code section 44365(b);

(c) **Meets the General Exclusion Provisions in Appendix E:** The facility meets the general exclusion provision for ~~individual~~ facilities ~~as~~ specified in Note (1) to Appendix E; or

(d) **Assessed Under District Permit Program ~~Evaluation for New or Modified Sources:~~** The entire facility, or all of the facility's processes which cause the facility to be subject to the requirements in Appendix E for an "Any SIC" class or a class limited to specified portions of an SIC, are subject to a district permit program ~~for new or modified sources~~ established in accordance with Health and Safety Code section 42300, ~~and~~ the district conducts an assessment which meets all the criteria specified in section II.C.(2), herein, ~~and~~ the district designates the facility a "low level" facility in accordance with the criteria in section IV.A., and the district issues a permit for the physical change or change in activities or operations or, for a new facility, a permit authorizing construction or operation of the facility. If the facility meets the requirements ~~for exclusion~~ under this ~~sub~~section, II.E.(2), the facility shall not be required to submit an emission inventory plan or report under ~~sub~~section II.E.(1).

(3) Facilities Emitting Less Than 10 Tons Per Year of Criteria Pollutants and Identified By the District As Posing Concern to Public Health.

(a) This regulation applies to any facility which does not otherwise belong to a class of facilities listed in Appendix E, but is a facility in any SIC that is identified by the district in accordance with this section and for which the district has made an initial assessment of the emissions from the facility, and the district has made a written determination that:

(i) ~~in the judgment of the district,~~ there is a reasonable basis for determining that the facility may individually or in combination with other facilities pose a potential ~~threat~~ risk to public health exceeding the levels for prioritization score, cancer or non-cancer risk, or *de minimis* levels specified in section IV.A. for "low level" facilities, or the district has identified the emissions from the facility as being of ~~particular~~ health concern to the community, and

(ii) detailed toxics emission data are needed by the district to completely evaluate potential health risk to surrounding receptors.

~~At district option, in making the determination, the district may take into account any of the following factors: estimates of the quantity of toxic emissions from the facility; potency or toxicity of the substances released from the facility; nature of the release characteristics of the emissions; proximity of receptors; level of uncertainty in the estimated quantity or toxicity of the emissions; presence of one or more substances for which there is no approved, quantitative health effects value but for which there is quantitative or qualitative data indicating adverse health effects; control equipment affecting the emissions; anticipated or permitted levels of operation of the facility; comparison of anticipated operations and releases from the facility relative to other facilities which have been found to exceed the criteria for "low level" facilities, as specified in Section IV; proximity of other facilities and sources of toxic emissions; other factors affecting the release, toxicity, dispersion, or potential risk of the likely emissions from the facility; and any other factor the district considers relevant.~~

(b) **Plan Submittal Date:** The operator of any facility identified by the district under section II.E.(3)(a) of this section, and notified by the district on or before April 1 of a given year, shall submit an emission inventory plan that meets the requirements of this regulation to the appropriate district by the following August 1, unless:

(i) 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 in accordance with Health and Safety Code ~~S~~section 44323; or

(ii) The facility is subject to earlier submission of an inventory plan in accordance with ~~S~~sections II.A., II.B., II.C., or II.D, or in accordance with district requirements adopted in accordance with Health and Safety Code ~~S~~sections 44365(b).

(c) Any facility that meets the requirements of section II.E.(3)(a) belongs to the class of facilities listed in Appendix E as "Facilities identified by districts under section II.E.(3)(a)."

F. Solid Waste Disposal Facilities.

For purposes of this regulation, 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 regulation. A facility shall be 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. A facility in compliance with Health and Safety Code section 41805.5 may use information collected under the Calderon testing program to satisfy the emission inventory requirements of this regulation for pollutants and activities subject to the Calderon testing program only.

G. Change in Ownership or Company Name.

The update requirements in section V apply to any facility subject to this regulation under the provisions of Health and Safety Code sections 44320 and 44322, which subsequently changes ownership or company name. Change in ownership or company name does not affect update reporting requirements or schedule.

H. 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 under this regulation, or in the next update of the emission inventory required under Health and Safety Code section 44344 and section V, herein, unless the district notifies the facility in writing that the facility's emissions of the added substance are or will be included in an industrywide emission inventory prepared by the district.

I. Submittal of Emission Inventory Reports.

The operator of any facility subject to this regulation shall implement the facility's emission inventory plan as approved by the district and prepare and submit a report to the district in accordance with Health and Safety Code section 44341.

If the operator notifies the district in writing in the report that the operator believes specified information required in the facility diagram under ~~S~~section VII.B. involves the release of a trade secret, the district shall protect from disclosure any trade secret designated as such by the operator, if that trade secret is not a public record. The district shall notify the state board if an operator designates information as trade secret information in writing in the report.

J. Exemption From Further Compliance Based on Prioritization Score.

(1) Conditions: Except as specified in section II.J.(3), below, if a facility has submitted an emission inventory plan and an emission inventory report in accordance with this section and the district finds, and the state board concurs, that the facility's district-approved prioritization score for cancer and non-cancer health effects, based on the facility's most recent emission inventory or emission inventory update, are both equal to or less than 1.0, the facility is exempt from further compliance with the requirements of this regulation, unless the district denies the exemption for that facility based on the following criteria:

(a) the district has good cause to believe the facility may pose a potential threat to public health and the facility therefore does not qualify for an exemption; and

(b) the district requires the facility to document the facility's emissions and health impacts and the documentation does not support an exemption.

Any exempt facility that satisfies these conditions on or before January 1 of a given year is not

required to submit any report to the district or the state board under this regulation for that or any subsequent year.

(2) Designation: Concurrence of the state board with the designation of an exempt facility will be presumed if the state board does not respond to the district within 45 days of the state board's receipt of the district's notification of its finding.

(3) Reinstatement: Except as specified in section II.J.(3)(c) below, a facility exempted from further compliance under this section II.J. shall again be subject to requirements under this regulation if either of the following occurs:

(a) A facility exempted from further compliance under this section II.J. shall, upon receipt of a notice from the district, again be subject to the requirements of this regulation and the operator shall submit an emission inventory update for those sources and substances for which a physical change in the facility or a change in activities or operations has occurred as follows:

(i) The facility emits a substance newly listed in Appendix A; or

(ii) A sensitive receptor has been established or constructed within 500 meters of the facility after the facility became exempt; or

(iii) The facility emits a substance for which the health effects value used for cancer or non-cancer health effects, as specified in section E(7) of Appendix F, has increased in potency.

(b) The operator of a facility exempted from further compliance under this section II.J. shall submit an emission inventory update under section V for those sources and substances for which a particular physical change in the facility or a change in activities or operations occurs, if as a result of the particular change, either of the following has occurred:

(i) The facility has begun emitting a substance listed in Appendix A that was not included in the facility's previous emission inventory; or

(ii) The facility has increased its emissions of a substance listed in Appendix A to a level greater than the level previously reported for that substance, and the increase exceeds 100 percent of the previously reported level.

(c) Notwithstanding section II.J.(3)(b), above, a physical change or change in activities or operations at a facility shall not cause the facility to again be subject to the requirements of this regulation if all of the following conditions are met:

(i) The physical change or change in activities or operations is subject to a district permit program established pursuant to Health and Safety Code section 42300; and

(ii) The district conducts an assessment of the potential changes in emissions or their associated risks, whichever the district determines to be appropriate, attributable to the physical change or change in activities or operations and finds that the changes in emissions will not result in a significant risk from the facility's total emissions. A risk assessment conducted pursuant to

this paragraph shall comply with Health and Safety Code section 44360(b)(2); and

(iii) The district issues a permit for the physical change or change in activities or operations.

(4) Reinstatement Date. An exempted facility that again becomes subject to requirements under this regulation on or before January 1 of a given year shall comply with the updating requirements of section V that would be due on or after August 1 of that year.

(5) Reprioritization. For purposes of section H.J.(3), above, a district shall redetermine a facility's prioritization score, or evaluate the prioritization score as calculated and submitted by the facility, within 90 days from the date of receipt of the facility's emission inventory update submitted under section V.

Section III. Removal of Facilities That No Longer Meet Applicability Criteria

A. Facilities Whose Emissions Decrease Below 10 Tons Per Year of Criteria Pollutants.

(1) Conditions.

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 II.A. and II.B. *[these sections address facilities emitting 25 or more, or 10 or more, tons per year, respectively, of criteria pollutants]** , if the facility demonstrates to the district, and the district finds and the state board concurs that the following criteria are satisfied.

(a) The facility does not satisfy the conditions specified in sections II.A.(2) or II.E. *[these sections address, respectively, facilities on district toxics survey lists and facilities emitting less than 10 tons per year of criteria pollutants]*;

(b) The emission reductions are permanent and enforceable; and

(c) The facility poses no significant risk to public health.

Concurrence of the state board will be presumed if the state board does not respond to the district within 45 days of the state board's receipt of the district's notification of its finding.

The operator of any facility that satisfies these criteria 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 update requirements under section V. for that or any subsequent year.

(2) Reinstatement.

If at any time a facility ceases to satisfy any of the criteria specified in section III.A.(1), the facility is subject to the requirements of this regulation, including update requirements. The operator of a facility shall notify the district immediately if the facility ceases to satisfy any of the criteria specified in section III.A.(1).

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* NOTE: Explanatory notes in italic type and enclosed in brackets ("[ ]") are included to assist the reader in following section cross references. If there is any inconsistency or incompleteness between the main text and an italicized note, the main text takes precedence.

B. Facilities Removed from District Surveys.

(1) Conditions.

This regulation shall cease to apply to any facility removed from a district's toxics use or toxics air emission survey, inventory, or report referenced in Appendix A of Title 17, California Code of Regulations, section 90700 through 90705, if the facility demonstrates to the district, and the district finds and the state board concurs that the following criteria are satisfied.

(a) The facility does not satisfy the conditions specified in sections II.A., B., or E. *[these sections address facilities emitting 25 or more, 10 or more, or less than 10 tons per year of criteria pollutants, respectively]*; and

(b) The facility poses no significant risk to public health.

Concurrence of the state board will be presumed if the state board does not respond to the district within 45 days of the state board's receipt of the district's notification of its finding.

The operator of any facility that satisfies these criteria and is deleted from a reference in Appendix A of Title 17, California Code of Regulations, sections 90700 through 90705, on or before April 1 of a given year shall not be required to comply with update requirements under section V for that or any subsequent year.

(2) Reinstatement.

If at any time a facility ceases to satisfy any of the criteria specified in section III.B.(1), the facility is subject to the requirements of this regulation, including update requirements. The operator of a facility shall notify the district immediately if the facility fails to satisfy the criteria specified in section III.B.(1).

C. 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.

(1) Conditions.

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

(a) the facility does not satisfy the conditions specified in sections II.A., II.B., or any other condition specified in section II.E. *[these sections address facilities emitting 25 or more, 10 or more, or less than 10 tons per year of criteria pollutants, respectively]*;

(b) the process is discontinued permanently; and

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

Concurrence of the state board will be presumed if the state board does not respond to the district within 45 days of the state board's receipt of the district's notification of its finding.

The operator of any facility that satisfies these criteria 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 update requirements under section V for that or any subsequent year.

(2) Reinstatement.

If at any time a facility ceases to satisfy any of the criteria specified in section III.C.(1), the facility is subject to the requirements of this regulation, including update requirements. The operator of a facility shall notify the district immediately if the facility ceases to satisfy the criteria specified in section III.C.(1).

Section IV. Update Categories and Exemptions From Update Reporting

The update categories of facilities meeting the criteria specified in this section, as designated by the district, are "low level", "intermediate level", "high level", or "not yet prioritized".

A. "Low Level" Facilities Exempted From Update Reporting.

(1) Conditions:

Facilities exempt from further compliance with this regulation under section II.J. are exempt from update requirements under section V. Facilities that are not exempt under section II.J. may qualify to be designated "low level" facilities for update reporting purposes if they meet the following conditions.

Except as specified in ~~subdivision (e)~~ section IV.A.(1)(e), for facilities which emit federal Hazardous Air Pollutants (HAPs) ~~as specified in Section IV.B.(2),~~ and section IV.A.(5), below, a facility that has completed and obtained district approval of its emission inventory or emission inventory update, and that has completed all other applicable requirements, will be ~~excluded~~ exempted from update reporting requirements under this regulation, if the district finds and the state board concurs that any of the following criteria are satisfied:

(a) **Prioritization Score:** the facility was not required to conduct a risk assessment under Health and Safety Code section 44360(b), and the facility has been prioritized by its district in accordance with Health and Safety Code ~~S~~section 44360(a) using procedures that have undergone public review, and, based on the most recent district-approved toxics emission inventory, the facility's prioritization score is less than or equal to 1.0 for cancer health effects and is less than or equal to 1.0 for non-cancer health effects. Some appropriate procedures for estimating prioritization scores are presented in the California Air Pollution Control Officers' Association (CAPCOA) "Air Toxics 'Hot Spots' Program Facility Prioritization Guidelines, July 1990", which is incorporated by reference herein; or

(b) **Approved Risk Assessment Result:** the facility was required to conduct a risk assessment under Health and Safety Code section 44360(a b), and the facility has had its risk assessment approved by the district in accordance with Health and Safety Code ~~S~~section 44362 and has been notified in writing by the district that the risk assessment results show a total potential cancer risk at an actual receptor, summed across all pathways of exposure and all compounds, of less than one (1.0) case per one million persons and a total hazard index (H.I.) for each toxicological endpoint of less than 0.1. Some appropriate procedures for determining potential cancer risk and total hazard index are presented in the CAPCOA "Air Toxics 'Hot Spots' Program Revised 1992 Risk Assessment Guidelines, October 1993", which is incorporated by reference herein; or

(c) ***De Minimis* Thresholds For Specified Classes of Facilities:** ~~the facility was not required to conduct a risk assessment under Health and Safety Code section 44360(b), and~~ the facility's primary activity falls into one of the following classes and the facility meets the specified criteria:

(i) the facility primarily performs printing as described by Standard Industrial Classification (SIC) Codes 2711 through 2771 or 2782, and the facility uses an annual average of two

gallons per day or less (or 17 pounds per day or less) of all graphic arts materials (deducting the amount of any water or acetone)~~.~~ , unless the district required a health risk assessment and results show the facility would not qualify under section IV.A.(1)(b); or

(ii) the facility is a wastewater treatment plant as described by SIC Code 4952 which does not have a sludge incinerator, and the facility's maximum throughput does not exceed 10,000,000 gallons per day~~.~~ , unless the district required a health risk assessment and results show the facility would not qualify under section IV.A.(1)(b); or

(iii) the facility is a crematorium for humans or animals, as described by SIC Code 7261 or any SIC Code that describes a facility using an incinerator to burn biomedical waste (animals), the facility uses only propane or natural gas as fuel, and the facility annually cremates no more than 300 human bodies or 43,200 pounds of remains (human or animal), unless the district required a health risk assessment and results show the facility would not qualify under section IV.A.(1)(b). Facilities using incinerators that burn biomedical waste other than cremating humans or animals do not qualify for this exemption~~.~~ ; or

(iv) the facility is primarily a boat building and repair facility or the facility is primarily a ship building and repair facility, as described by SIC Codes 3731 or 3732, respectively, and the facility uses 20 gallons per year or less of coatings or is a coating operation using hand-held nonrefillable aerosol cans only, unless the district required a health risk assessment and results show the facility would not qualify under section IV.A.(1)(b); or

(v) the facility is a hospital or veterinary clinic building that is in compliance with the control requirements specified in the Ethylene Oxide Control Measure for Sterilizers and Aerators, section 93108 of Title 17, California Code of Regulations, and has an annual usage of ethylene oxide of less than 100 pounds per year if it is housed in a single story building, or has an annual usage of ethylene oxide of less than 600 pounds per year if it is housed in a multi-story building, unless the district required a health risk assessment and results show the facility would not qualify under section IV.A.(1)(b).

(d) Results of Approved Screening Risk Assessment: the facility was not required to conduct a risk assessment under Health and Safety Code section 44360(b), and if the facility's prioritization score is greater than ~~or equal to~~ 1.0, the district, or the facility with the concurrence of the district, ~~may~~ conducted, at district option, a worst-case, health conservative risk assessment using screening air dispersion modeling, as described below, to demonstrate that the facility's screening risk levels qualify the facility for a "low level" exemption under this section.

(i) Screening Criteria: the facility must use a worst-case, health conservative methodology, and must obtain written concurrence from the district and the Office of Environmental Health Hazard Assessment (OEHHA) that the methodology meets all of the criteria specified in Appendix F of this regulation, and conforms to acceptable procedures for calculating cancer risk and hazard index. Some appropriate procedures for determining potential cancer risk and total hazard index are presented in the CAPCOA "Air Toxics 'Hot Spots' Program Revised 1992 Risk Assessment Guidelines, October 1993", which is incorporated by reference herein.

(ii) **Approval Process:** upon receipt of a proposal for use of a screening risk assessment, the district shall ensure that all components of information required under this section are included and that the methodology meets all state and district criteria for appropriate procedures. If the district determines that the proposal is not complete, the district will identify components that need to be included and will notify the facility. The facility may revise its proposal and resubmit it to the district. Once the proposal and risk assessment are complete, the district shall immediately submit the assessment to OEHHA for technical review and comment. To the extent practicable, OEHHA will determine whether the proposed screening risk assessment is acceptable and will note any deficiencies in the ~~assessment, and will respond within 45 days of receipt of the~~ assessment. OEHHA's approval of the assessment will be presumed if OEHHA does not respond to the district within 45 days of OEHHA's receipt of the assessment. The facility operator shall correct any deficiencies identified by OEHHA. The district may approve the assessment only if both the district and OEHHA find the assessment acceptable.

(iii) **Screening Threshold:** the facility qualifies as a "low level" facility for purposes of this section and is exempted from update reporting requirements under section V, if the approved screening risk assessment shows a total potential cancer risk at the point of maximum off-site impact, summed across all pathways of exposure and all compounds, of less than one (1.0) case per one million persons and a total hazard index for each toxicological endpoint of less than 0.1.

(iv) **Screening Assessment Date:** if the screening risk assessment is completed and approved on or before April 1 of a given year, the results may be used to qualify the facility for an exemption from update reporting requirements under section V that would be due ~~in~~ on or after August 1 of that year.

(e) **Exemption Does Not Apply to Facilities Emitting Specified Quantities of HAPs:** Notwithstanding ~~subdivisions~~ sections IV.A.(1)(a) through (d), above, a facility that emits ~~specified quantities of federal Hazardous Air Pollutants (HAPs) as specified in section IV.B.(2), will not qualify as~~ the following quantities of any listed substances which are designated by the United States Environmental Protection Agency as a Hazardous Air Pollutant (federal HAP, or HAP) under Title III of the federal Clean Air Act Amendments of 1990 (42 U.S.C. 7412(b)), shall not be designated a "low level" facility for purposes of this section and ~~will~~ shall not be exempted from update reporting under section V:

(i) Five or more tons per year of any individual HAP substance, or

(ii) A combined total of 12.5 or more tons per year of HAP substances.

(2) **Designation:** Concurrence of the state board with the designation of a "low level" facility will be presumed if the state board does not respond to the district within 45 days of the state board's receipt of the district's notification of its finding.

A facility designated by the district as "low level" on or before April 1 of a given year shall be exempt from update requirements under section V that would be due ~~in~~ on or after August 1 of that year.

~~(2~~ 3) Reinstatement.

(a) A facility exempted from update reporting under section IV.A.(1) shall, upon receipt of a notice from the district, again be subject to the update requirements in ~~S~~section V of this regulation and the operator shall submit an emission inventory update, within 180 days or on an alternative schedule specified in writing by the district, for those sources and substances for which a physical change affecting the facility, a change in facility activities or operations, or a change in other factors has occurred, as follows:

(i) The ~~facility emits a substance which has been~~ added to the list of substances in accordance with Health and Safety Code ~~S~~section 44321 and for which there is an appropriate ~~a~~ health effects value as specified in section E(7) of Appendix F ~~has been approved by the Office of Environmental Health Hazard Assessment (OEHHA)~~ ; or

(ii) The district determines that a sensitive receptor has been established or constructed within 500 meters of the facility after the facility became exempt ~~the receptor distance for the facility decreased after the district determined the facility's prioritization score or risk, to such an extent that the facility no longer qualifies for an exemption as a "low level" facility under section IV.A.(1)~~; or

(iii) The facility emits a substance for which there is an appropriate ~~a new~~ health effects value ~~has been established by OEHHA such that~~ as specified in section E(7) of Appendix F and the district determines the health effects value indicates the facility no longer qualifies as a "low level" facility under section IV.A.(1), ~~or for which the health effects value has changed so that the potential health impact has increased such that the facility no longer qualifies as a "low level" facility under section IV.A.(1)~~; or

(iv) The district determines that the approved source test method or emission estimation method used by the facility to calculate its emissions changed after the district determined the facility's prioritization score or risk, to such an extent that the facility no longer qualifies for an exemption as a "low level" facility under section IV.A.(1) using the new method to estimate or calculate the facility's emissions; or

(v) The district determines there is good cause to expect the facility no longer qualifies for an exemption as a "low level" facility under section IV.A.(1).

At district option, in making the determination under this section IV.A.(3)(v), the district may take into account any of the following factors: estimates of the quantity of toxic emissions from the facility; potency or toxicity of the substances released from the facility; nature of the release characteristics of the emissions; proximity of receptors; level of uncertainty in the estimated quantity or toxicity of the emissions; presence of one or more substances for which there is no approved, quantitative health effects value but for which there is quantitative or qualitative data indicating adverse health effects; control equipment affecting the emissions; anticipated or permitted levels of operation of the facility; comparison of anticipated operations and releases from the facility relative to other facilities which have been found to exceed the criteria for "low level" facilities, as specified in ~~S~~section IV; proximity of other facilities and sources of toxic emissions; other factors affecting the release, toxicity, dispersion, or potential risk of the likely emissions from the

facility; and any other factor the district considers relevant.

(b) A facility exempted from update reporting under section IV.A.(1) shall again be subject to update requirements of ~~S~~section V, as follows~~:~~ : If a physical change or a change in facility activities or operations affecting the facility has occurred so that the facility no longer satisfies the exemption criteria of section IV.A.(1) that qualified the facility to be a "low level" facility, the operator shall submit an emission inventory update, within 180 days or on an alternative schedule specified in writing by the district.

(c) If a substantial ~~decrease in the receptor~~ distance occurred for the facility, and the facility operator could reasonably be expected to estimate the decreased distance, so that the facility no longer qualifies for an exemption as a "low level" facility under section IV.A.(1), the facility operator shall notify the district immediately unless the facility has received a notice from the district in accordance with ~~subdivision~~ section IV.A.(3)(a)(ii), above.

(~~3~~ 4) Alternative Permit Evaluation for ~~Modified Sources~~ Facilities Subject to District Permit Program.

Notwithstanding section IV.A.(2), a physical change affecting the facility or a change in facility activities or operations shall not cause the facility to again be subject to the update reporting requirements in ~~S~~section V if the district determines that all the following conditions are met:

(a) The physical change or change in activities or operations is subject to a district permit program established in accordance with Health and Safety Code ~~S~~section 42300;

(b) The district conducts an assessment of the potential changes in toxics emissions or their associated risks, whichever the district determines to be appropriate, attributable to the physical change or change in activities or operations of the facility, and finds that the changes in emissions will not cause the facility to cease to satisfy the exemption criteria specified in section IV.A.(1) which qualify the facility to be a "low level" facility;

(c) The district assessment meets all of the following criteria:

(i) The assessment evaluates all substances listed under Appendix A;

(ii) The assessment evaluates appropriate ~~any new or revised~~ health effects values ~~approved by OEHHA after the facility's most recent district assessment~~ as specified in section E(7) of Appendix F;

(iii) The assessment evaluates the aggregate effect of changes on the entire facility, both from multiple sources within the facility, and from the aggregate effect over time of multiple changes;

(iv) The assessment evaluates any decreases in receptor distance;

(v) The assessment evaluates any significant improvements in emission quantification methods applicable to the substances emitted from the facility;

(vi) The assessment evaluates the total quantity of emissions of each listed substances that could potentially be allowed to be emitted under the enforceable level of the permit; and

(vii) If the proposed modification is only for replacement of existing equipment with identical newer equipment, the district may streamline the evaluation to make only the following determinations: that the new equipment will have emissions of listed toxic substances equivalent to those emitted by the existing equipment; that the substances have had no changes in health effects values and no significant improvements in quantification method since the facility's most recent district assessment; and the receptor distance has not decreased since the facility's most recent district assessment.

(d) The district issues an enforceable permit for the physical change or change in facility activities or operations, which limits the toxic emissions to within the levels included in the evaluation; and

(e) The facility operator complies with all other applicable requirements of the Hot Spots program specified in Health and Safety Code Ssections 44300 - 44394 , including but not limited to health risk assessment, public notification, and risk reduction audit and plan requirements if applicable to the facility.

(f) **Update of emission data:** If, as a result of the evaluation for the permitted change, ~~a previously "low level" or "intermediate level"~~ the facility still qualifies as a "low level" ~~or "intermediate level"~~ facility, ~~respectively,~~ then the district need not transmit updated emission data to the state board. If, as a result of the evaluation for the permitted change, ~~a~~ the facility meets the criteria for an "intermediate level" or a "high level" facility, as specified in sections IV.B. and C., ~~or the facility meets the criteria for a higher category level than it did previously,~~ the facility shall, within 180 days of district request or from the commencement of operation under the permit, whichever is later, submit to the district the updated emission data for "intermediate level" or "high level" facilities, in the applicable format for updates as specified in section V or in an alternative format approved by the district. The district shall transmit the data for the updated emissions to the state board, in the format for updates specified in section V, or an alternative format approved by the state board.

(4 5) District Determination Regarding Exemption.

If a district has good cause to believe that a facility may individually or in combination with other facilities pose a potential threat to public health and that a facility therefore does not qualify for an exemption claimed by the facility from the reporting requirements of this regulation, the district may require the facility to document, in a format specified by the district, the facility's emissions and health impacts, or the changes in emissions expected to occur as a result of a particular physical change, a change in activities or operations at the facility, or a change in other factors. The district may deny the exemption if the documentation does not support the claim for exemption.

At district option, in making the determination, the district may take into account any of the following factors: estimates of the quantity of toxic emissions from the facility; potency or toxicity of the substances released from the facility; nature of the release characteristics of the emissions; proximity of receptors; level of uncertainty in the estimated quantity or toxicity of the emissions; presence of one or more substances for which there is no approved, quantitative health effects value but for which there is quantitative or qualitative data indicating adverse health effects; control equipment affecting the emissions;

anticipated or permitted levels of operation of the facility; comparison of anticipated operations and releases from the facility relative to other facilities which have been found to exceed the criteria for "low level" facilities, as specified in ~~S~~section IV; proximity of other facilities and sources of toxic emissions; other factors affecting the release, toxicity, dispersion, or potential risk of the likely emissions from the facility; and any other factor the district considers relevant.

B. "Intermediate Level" Facilities For Update Reporting.

(1) Conditions:

If a facility has completed and obtained district approval of its emission inventory and completed all other applicable requirements, ~~and the facility~~ does not qualify as a "low level" facility under section IV.A.(1), and meets any one or more of the criteria of this section IV.B.(1), the facility shall be designated as an "intermediate level" facility for update reporting purposes. The facility shall comply with the update requirements for "intermediate level" facilities as specified in section V.C. ~~of this regulation~~, if the district finds and the state board concurs that any one or more of the following criteria are satisfied.

(a) Prioritization Score: the facility was not required to conduct a risk assessment under Health and Safety Code section 44360(b), and the facility has been prioritized by its district in accordance with Health and Safety Code ~~S~~section 44360(a) using procedures as described in section IV.A.(1), and the facility's prioritization score is less than or equal to 10 for cancer health effects and is less than or equal to 10 for non-cancer health effects; or

(b) Approved Risk Assessment Result: the facility was required to conduct a risk assessment under Health and Safety Code section 44360(b), and the facility has had its risk assessment approved by the district in accordance with Health and Safety Code ~~S~~section 44362, as described in section IV.A.(1), and has been notified in writing by the district that the risk assessment results show a total potential cancer risk at an actual receptor, summed across all pathways of exposure and all compounds, of less than ten (10) cases per one million persons and a total hazard index (H.I.) for each toxicological endpoint of less than or equal to 1.0; or

(c) Results of Approved Screening Risk Assessment: if the facility was not required to conduct a risk assessment under Health and Safety Code section 44360(b), and the facility's prioritization score for cancer health effects or for non-cancer health effects is greater than ~~or equal to~~ 10, the district, or the facility with the concurrence of the district, may conduct a worst-case, health conservative risk assessment using screening air dispersion modeling, as described below, to demonstrate that the facility's screening risk levels qualify the facility for the "intermediate level" for purposes of update reporting.

(i) Screening Criteria: the facility must use a worst-case, health conservative methodology, and must obtain written concurrence from the district and the Office of Environmental Health Hazard Assessment (OEHHA) that the methodology meets all of the criteria specified in Appendix F of this regulation, and conforms to acceptable procedures for calculating cancer risk and hazard index. Some appropriate procedures for determining potential cancer risk and total hazard index are presented in the CAPCOA "Air Toxics 'Hot Spots' Program Revised 1992 Risk Assessment Guidelines, October 1993", which is incorporated by reference herein.

(ii) **Approval Process:** upon receipt of a proposal for use of a screening risk assessment, the district shall ensure that all required components of information are included and that the methodology meets all state and district criteria for appropriate procedures. If the district determines that the proposal is not complete, the district will identify components that need to be included and will notify the facility. The facility may revise its proposal and resubmit it to the district. Once the proposal and assessment are complete, the district shall immediately submit the assessment to OEHHA for technical review and comment. To the extent practicable, OEHHA will determine whether the proposed screening risk assessment is acceptable and will note any deficiencies in the assessment, and will respond within 45 days of receipt of the assessment. OEHHA's approval of the assessment will be presumed if OEHHA does not respond to the district within 45 days of OEHHA's receipt of the assessment. The facility operator shall correct any deficiencies identified by OEHHA. The district may approve the assessment only if both the district and OEHHA find the assessment acceptable.

(iii) **Screening Threshold:** the facility qualifies as an "intermediate level" facility for purposes of update reporting requirements, if the approved screening risk assessment results show a total potential cancer risk at the point of maximum off-site impact, summed across all pathways of exposure and all compounds, of less than ten (10) cases per one million persons and a total hazard index for each toxicological endpoint of less than or equal to 1.0.

(iv) **Screening Assessment Date:** if the screening risk assessment is completed and approved on or before April 1 of a given year, the results may be used to qualify the facility as an "intermediate level" facility regarding update requirements under section V that would be due ~~in~~ on or after August 1 of that year.

(2) Designation: Concurrence of the state board with the designation of an "intermediate facility" will be presumed if the state board does not respond to the district within 45 days of the state board's receipt of the district's notification of its finding.

A facility designated by the district as "intermediate level" on or before April 1 of a given year shall comply with update requirements for "intermediate level" facilities that would be due ~~in~~ on or after August 1 of that year.

(~~2~~ 3) Facilities Emitting Specified Quantities of HAPs: ~~notwithstanding the exemption criteria in section IV.A.(1), a facility shall not be designated as a "low level" facility and shall not be exempted from the update reporting requirements i~~ If, based on the most recent district-approved toxics emission inventory report, a facility's prioritization score is greater than 1.0 for either cancer or non-cancer health effects and the facility emits the following quantities of any listed substances which are designated by the United States Environmental Protection Agency (U.S. EPA) as a Hazardous Air Pollutant (HAP) ~~under Title III of the federal Clean Air Act Amendments of 1990 (42 U.S. Code, 7412(b))~~:

(a) Five or more tons per year of any individual HAP substance, or

(b) A combined total of 12.5 or more tons per year of HAP substances. ~~:~~

~~A facility meeting these criteria shall be designated a "high level" facility if it exceeds any of the~~

~~criteria specified in subsections (1)(a), (b), or (c), above, or otherwise~~ the facility shall be designated an "intermediate level" facility and shall comply with the update reporting requirements specified in ~~S~~section V. for ~~"high level" or~~ "intermediate level" facilities, ~~respectively.~~ unless the facility exceeds any of the criteria in section IV.B.(1). A facility exceeding the criteria specified in section IV.B.(1) shall be designated a "high level" facility and shall comply with the update reporting requirements specified in section V for "high level" facilities.

C. "High Level" Facilities For Update Reporting.

(1) **Conditions:** All facilities exceeding any one of the criteria specified in section IV.B shall be designated by the district, with the concurrence of the state board, as "high level" facilities for update reporting purposes and shall comply with the update requirements specified in section V for "high level" facilities.

(2) **Designation:** Concurrence of the state board with the designation of a "high level" facility will be presumed if the state board does not respond to the district within 45 days of the state board's receipt of the district's notification of its ~~finding~~ designation.

A facility ~~that has been~~ designated by the district as "high level" on or before April 1 of a given year shall comply with update reporting requirements for "high level" facilities that would be due ~~in~~ on or after August 1 of that year.

D. Facilities Not Yet Prioritized.

The operator of any facility that has not been prioritized by the district in accordance with Health and Safety Code section 44360(a) shall comply with the update reporting requirements specified in section V.E.

E. Timing for Designation of Update Categories.

If a facility has completed all applicable requirements and has been designated by the district into the appropriate update category on or before April 1 of a given year, the results of the district's categorization may be applied to the facility's applicable update reporting requirements under section V that would be due ~~in~~ on or after August 1 of that year.

F. ~~Re-Designation~~ Redesignation If Facility is ~~Re-Prioritized~~ Reprioritized.

The district shall ~~re-evaluate~~ reevaluate and may ~~re-designate~~ redesignate a facility's update category if the district ~~re-prioritizes~~ reprioritizes a facility subsequent to the original designation of the facility's update category. If a facility has been ~~re-designated~~ redesignated by the district on or before April 1 of a given year, ~~the results of the district's categorization may be applied to~~ the facility shall comply with the facility's applicable update reporting requirements under section V that would be due ~~for any update requirement due~~ on or after ~~August 1~~ of that year.

The district may ~~re-designate~~ redesignate a facility to a lower update category than previously only if the facility demonstrates to the district, and the district finds and the state board concurs that all of the following criteria are satisfied.

(~~a~~ 1) The ~~re-designation~~ redesignation must be based on the most recent district-approved emission inventory;

(~~b~~ 2) The emission and risk reductions are permanent and enforceable;

(~~c~~ 3) The facility meets the criteria specified in ~~S~~section IV for the applicable lower update category;

(~~d~~ 4) The district has determined that the facility poses no significant risk to public health; and

(~~e~~ 5) If the facility was required to conduct a risk assessment under Health and Safety Code section 44360(~~a~~ b) based on a previous emission inventory report, the facility must demonstrate to the satisfaction of the district and the state board that using the most recent district-approved emission inventory results in revised risk assessment values which meet the risk assessment criteria specified in ~~S~~section IV for the applicable update category.

Concurrence of the state board will be presumed if the state board does not respond to the district within 45 days of the state board's receipt of the district's notification of its finding.

Section V. Update Reporting Requirements

A. General Update Reporting Requirements.

Facility operators required to report under section II are subject to update reporting requirements as specified in section V, unless: (1) the facility is exempted under section II.J. or III, (2) the facility is designated as a "low level" facility and exempted from update reporting requirements under section IV.A. ~~in accordance with sections IV.A and V.D~~, or (3) the district notifies the facility in advance in writing that the facility's emissions will be included in an industrywide emission inventory prepared by the district in accordance with Health and Safety Code section 44323.

Every facility operator subject to update reporting requirements shall submit either an Update Summary Form or an update plan and report, as specified in sections V.B. through V.M.~~G~~, below. Facility operators shall comply with these requirements in accordance with the schedule specified in section V.L. In ~~sub~~sections V.B through V.M ~~of this section~~ the terms "high level", "intermediate level", and "low level" mean the same as specified in section IV of this regulation, and shall be based on emissions from the most recent facility emission inventory approved by the district.

B. Update Reporting Requirements for "High Level" Facilities.

(1) Continue to Update Reports on the Risk-Driving Devices or All Devices.

Every four years the operator of any facility which is categorized by the district as a "high level" facility under section IV.C., shall submit to the district an update plan and report, as specified in section V.I., unless the facility meets the criteria for alternative update reporting as specified in ~~sub~~section V.B.(2). Operators subject to this section 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 0.1, in the judgment of the district. Devices shall be identified with the concurrence of the district. Alternatively, facility operators subject to this section may, at their option, submit update plans and reports which show all changes to all devices at the facility.

(2) Alternative: Update Reporting Through Risk Reduction Audit and Plan.

If the facility is required to prepare a risk reduction audit and plan under Health and Safety Code ~~S~~section 44391, and the facility submits an emission inventory update in accordance with Health and Safety Code ~~S~~section 44391(h) which the district determines to contain equivalent information as required for update reporting for "high level" facilities under ~~sub~~section V.B.(1), the facility may submit the risk reduction emission inventory update to the district to comply with the update requirement for "high level" facilities. The district shall redetermine the facility's prioritization score, or evaluate the prioritization score as calculated and submitted by the facility, within 90 days from the date of receiving notice that the facility has completed the implementation of a risk reduction plan prepared pursuant to Health and Safety Code section 44392. The district shall transmit the updated emission inventory data to the state board in a format approved by the state board as specified in ~~S~~section VII.C.

C. Update Reporting Requirements for "Intermediate Level" Facilities.

(1) Track Activity Changes and Update Reports if Significant Increases.

Every four years the operator of any facility which is categorized by a district as an "intermediate level" facility under section IV.B., shall complete and submit to the district for review the Update Summary Form in Appendix B, as specified in section V.H. Based on data reported on Part C of the Update 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 section V.I. The update plan and report shall include updated information for devices that experience significant increases in activity.

(a) Significant Increases. For facility operators subject to section C (1), 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 ~~sub~~section V.C.(1)(a)(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 0.1, in the judgment of the district. Devices shall be identified with the concurrence of the district. Facility operators shall provide updated data in an 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).

(b) Consolidated Device Data: At their option, facility operators may consolidate devices for the purpose of quantifying increases in device activity when reporting on the Update Summary Form in Appendix B. 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 Information and Emission Information Form must be submitted by the facility operator for any individual device or grouped devices (reported on the same Process Information Form) whose activity increases by 10 percent or more.

(c) Other Criteria: Based upon data reported in Part B of the Update 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 section V.I.

(2) Alternative: Track Through Combined Criteria/Toxics Inventory Reporting.

The facility shall be exempted from the activity tracking and update requirements in section V.C.(1) if the district notifies the facility in advance in writing that the facility's toxics emissions are included by the district in a combined district emission inventory program that includes criteria pollutants and toxic substances, and if the facility provides throughput and other data requested by the district in accordance with the combined program. The district shall report the updated emission inventory to the state board with its combined emission inventory updates.

D. Update Reporting Requirements for "Low Level" Facilities.

Facilities categorized by the district as "low level" facilities under section IV.A. are not subject to the update reporting requirements of this section.

E. Update Reporting Requirements for Facilities Not Yet Prioritized:

(1) If the Facility's Emission Inventory Report Has Been Approved:

If a facility whose emission inventory report has been approved by the district has not been prioritized by the district under Health and Safety Code section 44360(a), the facility is an "intermediate level" facility for purposes of update reporting, and the facility shall comply with the activity tracking and update requirements in section V.C. for "intermediate level" facilities, unless one or more of the following ~~criteria are satisfied~~ occurs:

(a) If t~~T~~he facility operator ~~may~~ requests in writing that the district, within 90 days of receipt of the request, prioritize the facility and designate ~~its~~ the facility's update category in accordance with section IV herein~~.~~, t~~T~~he district shall, within 90 days of receipt of the request, prioritize the facility in accordance with Health and Safety Code section 44360(a) using procedures that have undergone public review, and designate the facility's update category. The district shall notify the facility operator of the prioritization and designation results, if requested by the operator to do so.

(b) If the district prioritizes and designates the update category of the facility within 90 days of the request or within 90 days following the effective date of this regulation, whichever comes later, the designated facility shall comply with the applicable update reporting requirements specified in this section for "low level", "intermediate level", or "high level" facilities, unless the facility qualifies for exemption under section II.J.

(c) If the district does not prioritize and designate the update category of the facility within 90 days as specified in ~~sub~~section V.E.(1)(b), above, the facility must complete Part A of the Update Summary Form in Appendix B, as specified in section V.H.

For any facility prioritized by August 1 of a given year, section V.E.(1) no longer applies to the facility for that year or for any subsequent year.

(2) If the Facility's Emission Inventory Report Has Not Been Approved:

If a facility with an emission inventory plan (or update plan) approved by the district has submitted a complete emission inventory report (or update report) within 180 days after district approval of the plan, but has not been prioritized by the district in accordance with Health and Safety Code section 44360(a), and has not been notified by the district regarding either (a) approval of the report, (b) the need for corrections or modifications to the report, or (c) that the facility will be included in an industrywide inventory prepared by the district, then the facility is an "intermediate level" facility for purposes of update reporting, and shall comply with the activity tracking and update requirements in section V.C. for "intermediate level" facilities, unless ~~all~~ one or more of the following ~~criteria are satisfied~~ occurs:

(a) If t~~T~~he facility operator ~~may~~ requests in writing that the district, within 120 days of receipt of the request (90 days for an update report), review and approve its emission inventory report and determine the facility's prioritization score, or notify the facility of needed corrections~~.~~, t~~T~~he district shall, within 120 days of receipt (90 days for an update report), either (i) approve the report and provide the facility's prioritization and update categorization results, (ii) notify the facility of needed corrections to the report, or (iii) notify the facility that it will be included in an industrywide inventory prepared by the district.

(b) If the district notifies the facility within 120 days of the request or within 120 days of the effective date of this regulation (90 days for an update report), whichever comes later, that corrections are needed to the emission inventory report, the facility shall revise the report according to the timeframe specified by the district and return it to the district for review and approval. If corrections are not needed to the emission inventory report and the district prioritizes and designates the update category of the facility within 120 days (90 days for an update report), the facility shall comply with the applicable update reporting requirements specified in section V for "low level", "intermediate level", or "high level" facilities as appropriate.

(c) If the district does not prioritize the facility or notify the facility operator of needed corrections within 120 days as specified in ~~sub~~section V.E.(2) (b), above, the facility shall comply with the following update reporting requirements: ~~every four years,~~ the operator shall complete and submit to the district Part A of the Update Summary Form in Appendix B, as specified in section V.H.

For any facility prioritized by August 1 of a given year, section V.E.(2) no longer applies to the facility for that year or for any subsequent year. Districts shall redetermine a facility's prioritization score, or evaluate the prioritization score as calculated and submitted by the facility, within 90 days from the date of receipt of an emission inventory update submitted under section V.

F. Voluntary Updates.

Any facility operator may voluntarily submit an update plan and report to satisfy the requirements of section V, following approval and scheduling by the district.

G. Data Revised for Prioritizations or Risk Assessments.

If a facility's previous emission inventory report has been approved by the district and the 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 state board.

H. Update Summary Form

(1) Operators of facilities identified in sections V.C., V.E.(1)(c), and V.E.(2)(c) shall complete and submit the Update Summary Form, included in Appendix B, for the applicable update reporting year based on the schedule specified in section V.L.

(2) Districts shall review the Update Summary Form and respond to the facility operator as specified in section V.M. The Update Summary Form shall satisfy a facility's update requirements for facilities specified in section V.C., V.E.(1)(c), and V.E.(2)(c) unless the operator is notified by the district that an update plan and report is required as specified in section V.

(3) In reviewing Update 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:

(a) increases in throughput, fuel usage, process rate changes, or emissions;
(b) changes in types of fuels or substances used at the facility;
(c) determinations that previous source test data are inadequate;
(d) addition of new processes or equipment to the facility which cause increases in emissions;
(e) issuance of new permits or changes in permit conditions;
(f) emissions of any listed substances not previously reported, including newly listed substances, for which there is an appropriate health effects value as specified in section E(7) of Appendix F, that may cause the facility to exceed the criteria specified in ~~S~~section IV for the facility's current update category;
(g) emissions of listed substances for which there is an appropriate ~~a new or revised~~ health effects value as specified in section E(7) of Appendix F ~~has been established by OEHHA~~, such that the facility may exceed the criteria specified in ~~S~~section IV for the current update category;
(h) facility status as it pertains to current or future air pollution control measures;
(i) reductions in the distance from the facility to the nearest receptor;
(j) changes in emission factors;
(k) other factors the district considers relevant.

I. Update Plans and Update Reports.

(1) The operator of any facility subject to the plan and report update requirements of this section shall submit to the district any required update plan and update report according to the schedules specified in section V.L. The update plan and report need only update changes in 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 the information required under sections VI through IX and Appendices A through F. Such information includes but is not limited to any applicable substances added to Appendix A in accordance with section II.H., which have not previously been addressed in the plan or report.

(2) Except as provided in section V.J., at least the following updated information shall be submitted as part of the update plan and report:

(a) For those facilities subject to section V.I. under section V.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 under section V.B.

(b) For facilities subject to section V.I. under section V.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 under section V.C.

(3) 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.

(4) As required, updated information shall be provided for each applicable component of a plan and report to address any new operation, process, or listed substance at the facility, and to account for any revised or additional requirements under this ~~subchapter~~ regulation which apply to the facility, including but not limited to any applicable substances added to Appendix A under section II.H.

(5) For any revision proposed in 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.

(6) An update report shall include all applicable report components as required under section VII, 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 VII.~~E~~D, including any new or updated source test results under section VII.~~E~~D(2) where such tests have been performed prior to the date of submittal of the update report.

J. Use of Previously Submitted Information.

(1) Except as specified for previous source test results in ~~sub~~sections V.J.(2), J.(3), and J.(4), the facility operator may propose in an 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:

(a) no change has occurred since the last update which would affect the accuracy of the previously reported information; or

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

(2) Except as specified in ~~subsection~~ V.J.(3), the facility operator may propose in the update plan to use the results of a previous source test conducted in accordance with section IX. to fulfill the update requirements for a source test required under section IX.A. and Appendix D provided that:

(a) the test meets the requirements for use of previous source tests specified in section IX.A.(4); and

(b) the test meets all other applicable requirements specified in sections IX.A through ~~C~~ IX.D.

Such a proposal to use the "results of a previous source test" may include a proposal to calculate a revised emission result by applying the site-specific emission factor developed under section IX.F., together with current values of the applicable "usage units" as specified in section IX.F., 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 ~~sub~~sections V.J.(2) and J.(3) are met.

(3) Unless exempted by the district, the results of a previous source test shall not be used to fulfill update requirements for a source test required under section IX.A. and Appendix D if:

(a) a major change, including but not limited to: long-term shutdown of equipment, startup of new or modified 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,

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

(c) 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).

(4) 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 ~~sub~~sections V.J.(2) and J.(3) 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.

K. Update Reporting Year.

(1) Information required on the Update Summary Form shall reflect facility operations for the calendar year (the update year) prior to the year the Update Summary Form is due. Information required on the Update 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.

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

L. Schedule for Update Submittal.

(1) Update submittals shall be due according to the following schedule unless the district specifies in writing in advance an alternative schedule within the required four-year update period.

(a) For any facility subject to the requirements of this regulation under sections II.A. and V.B., the update plan shall be due by August 1, 1994, and every four years thereafter.

(b) For any facility subject to the requirements of this regulation under sections II.A. and either V.C. or V.E. , the Update Summary Form shall be due by February 1, 1994, and every four years thereafter. If the district requires that the facility prepare an update plan, such plan shall be due August 1 of the year the Update Summary Form is due.

(c) For any facility subject to the requirements of this regulation under sections II.B. and V.B., the update plan shall be due by August 1, 1995, and every four years thereafter.

(d) For any facility subject to the requirements of this regulation under sections II.B. and either V.C. or V.E., the Update Summary Form shall be due by February 1, 1995, and every four years thereafter. If the district requires that the facility prepare an update plan, such plan shall be due August 1 of the year the Update Summary Form is due.

(e) For any facility subject to the requirements of this regulation under either section II.C. or II.D. and section V.B., the update plan shall be due by August 1 of the year which is four years after the year the initial plan submittal was required, and every four years thereafter.

(f) For any facility subject to the requirements of this regulation under either section II.C. or II.D. and either section V.C. or V.E., the Update Summary Form shall be due by February 1 of the year which is four years after the year the initial plan submittal was required and every four years thereafter. If the Update Summary Form indicates that the facility must prepare an update plan, such plan shall be due August 1 of the same year the Update Summary Form is due.

(g) For any facility subject to the requirements of this regulation under any of section II.E.(1)~~(a)~~ or II.E.(2) or II.E.(3) and section V.B., the update plan shall be due by August 1, 1994 and every four years thereafter.

(h) For any facility subject to the requirements of this regulation under any of section II.E.(1)~~(a)~~ or II.E.(2) or II.E.(3) and either section V.C. or V.E., the Update Summary Form shall be due by February 1, 1994, and every four years thereafter. If the district requires that the facility prepare an update plan, such plan shall be due August 1 of the year the Update Summary Form is due.

(2) Except as provided in ~~sub~~section V.L.(3), the schedule specified for the inventory plan and report in Health and Safety Code sections 44340(b), 44341, and 44343, and in section VII.A. and VII.G. of this regulation shall apply to the review, approval, and implementation of the update plan and update report.

(3) Nothing in ~~sub~~section V.L.(2) 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.

M. Schedule for Update Summary Form Review.

(1) Districts shall review facility Update 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 section V.I. Districts shall notify facilities of the requirement to perform an update by May 1 of the year the Update Summary Form was submitted, or within 90 days of receipt of the form if an alternative submittal schedule was specified by the district.

(2) If the district does not respond to the facility operator as specified in section V.M.(1), the Update Summary Form shall meet the facility's 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 Update Summary Form is erroneous, incomplete, or the existing facility emissions inventory does not adequately characterize facility emissions.

Section VI. Requirements for Preparing Emission Inventory Plans

A. General.

The emission inventory plan submitted in accordance with the requirements of section II 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.

B. Flow Diagram.

Each inventory plan shall include a flow diagram consisting of a comprehensive schematic drawing of the process flows that 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 that 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:

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

(a) Boilers
(b) IC Engines
(c) Incinerators
(d) Flares
(e) Furnaces
(f) Kilns
(g) Process Heaters
(h) Control Devices (including hoods)
(i) Storage or Process Tanks or Enclosures
(j) 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.

(2) 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.

(3) 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 VIII.E. The estimate of such components may be indicated as an aggregation at a general location.

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

(5) 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.

(6) 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.

C. 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.

D. 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.

E. 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 section IX, as appropriate. Each method shall result in an accurate and comprehensive characterization of releases.

F. Source Test Protocol and Other Required Information.

The emission 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 under section IX.A. and Appendix D. The emission inventory plan shall propose values for the effectiveness of air pollution control equipment in accordance with the requirements of section IX.G(3) and shall include any other documentation required to be cited under section VIII.

Section VII. Requirements for Emission Inventory Reports

A. General.

The emission inventory report shall be submitted to the district within 180 days after approval of the emission inventory plan submitted under Ssection II. The emission inventory reports 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 the S-UP Form, which are included in Appendix B, 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 state board where applicable, shall be corrected.

B. Facility Diagram.

(1) The facility diagram shall include all the information presented in the flow diagram and in the equivalent format. The emission inventory report shall identify any specific required information which the facility chooses to designate as trade secret.

(2) 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 the following data fields: annual process rate, maximum hourly process rate, controlled and uncontrolled emission factors, method of estimation code, process description field, and the following data fields which are not required to be reported under this regulation but which may be reported under combined toxics and criteria pollutant inventory reporting: equipment size, maximum design rate, percent sulfur content, and emission factor origin code.

"Necessary data to calculate emissions" which may be designated trade secret shall not include (a) information previously disclosed or easily discernable; (b) all information which the district requires any applicant to provide before such applicant builds, alters, replaces, or operates a facility, device, or emitting process; (c) information on the Facility Information Form or the Stack Information Form in Appendix B; and (d) all other information on the Device Information Form, Process Information Form, and Emission Information Form in Appendix B that was not defined in the preceding paragraph as "necessary data to calculate emissions."

(3) For standardization purposes, information claimed to be a trade secret should, but is not required to, 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. Any information claimed to be a trade secret in writing in the report will be protected from disclosure by the district as specified in Ssection II.I.

C. Reporting Formats and Forms.

(1) Required Data Elements and Formats:

The operator of each facility subject to the emission inventory report requirements of this regulation shall provide complete information for each required core and supplemental data element in the specified field formats. The data elements (or data fields) that are required to be reported, and the associated field formats for each, are specified in Appendix B-I, for each of the five **core** components of the emission inventory report: Facility Information, Stack Information, Device Information, Process Information, and Emission Information, and for the **supplemental** component, the Supplemental Use and Production (S-UP) Information. The operator shall complete one entry for Facility Information, one entry of Stack Information for each stack or vent from which a listed substance may be released, one entry of Device Information for each device associated with a release of a listed substance, one entry of Process Information for each emitting process associated with the release of a listed substance within each device, and one entry of Emission Information for each listed substance within each process. The operator shall submit one entry of S-UP information for each substance for which it is required.

The Update Summary Form (US Form) required under Ssection V.C. and V.E. for update summary information is also included in Appendix B.

(2) Acceptable Forms:

The operator of each facility subject to emission inventory report requirements of Ssection II shall submit the required **core** and **S-UP** data elements, in the formats specified in subsection VII.C.(1), above, via electronic or paper media, using the state board's reporting forms and instructions, as specified in Appendix B-II to this regulation, except that the required information shall be submitted in an alternative format as approved by the district and which meets the state board's specifications in Appendix B-I.

The Update Summary Form information shall be submitted using the US Form and instructions in Appendix B, except that the required information may be submitted in an alternative format as approved by the district and which meets the state board's specifications in Appendix B-I.

(3) General Reporting Form Procedures:

(a) **Core Forms:** The operator of each facility submitting an emission inventory report in accordance with subsection VII.C.(2), shall complete the following: one **Facility Information Form** , an entry on a **Stack Information Form** for each stack or vent from which a listed substance may be released, an entry on a **Device Information Form** for each device associated with a release of a listed substance, a **Process Information Form** for each emitting process within each device, and an **Emission Information Form** for each listed substance which is emitted from each process. A Device Information Form, a Process Information Form, and an Emission Information Form shall be completed for each general location of fugitive emissions.

(b) **Form S-UP**:

(i) Form S-UP shall be completed for all substances listed 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.

(ii) Form S-UP shall also be completed for all substances listed in Appendix A-I when required under section VIII. E.(5).

(c) Designation of Trade Secrets: Information designated as trade secret on the facility diagram or in the emission inventory report should be identified on the reporting forms according to the instructions set forth in Appendix B.

(d) Availability of Forms: The state board's reporting forms, or the alternative forms as approved by the district, shall be available at the district office and shall be provided to facility operators upon request.

D. Other Required Data.

(1) Each emission 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 under section VIII and section IX.

(2) The emission inventory report shall include the results of any source tests performed in accordance with district regulations implementing an airborne toxic control measure which was adopted under 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 emission inventory report.

(3) If so required by the district, the facility operator shall include with the emission inventory report a facility-wide emissions summary which lists for each reported substance the total of the annual emissions and maximum hourly emissions from the facility. The totals for each reported substance shall match the sums of the annual and maximum hourly emissions, respectively, which are reported for the substance on the Process Information Form and Emission Information Form for all applicable emitting processes at the facility. If such a summary is required by the district, the district shall, upon the facility operator's request, specify a standardized format for the summary data.

(4) If so required by the district, the facility operator shall include, in the emission 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, upon the facility operator's request, specify a standardized format for the information.

E. Format for Reports and Presentation of Data.

The core **Facility Information Form** shall be the first page of the emission inventory report. Other core and supplemental forms shall be in sequence by device number. The required source test report 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.

F. 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, unless an alternative scaling is authorized by the district. 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.

G. 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 S-UP forms in a format approved by the ARB staff for transmittals via paper or electronic media.

Section VIII. Other Requirements

A. 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 update required under Health and Safety Code section 44344:

(1) Each emission inventory plan.

(2) Each emission inventory report.

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

(4) 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.

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

(6) 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.

(7) All other documentation supporting the calculation or 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.

B. Specification of Reporting Period and Averaging Intervals for Each Substance.

(1) The calendar reporting period (reporting year) 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.

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

C. Specifications for Identifying Emission Points and Substances Emitted.

(1) The facility operator shall identify and report in the emission inventory plan and the emission 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.

(2) 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. The operator shall also report the production, use, or presence of substances listed in Appendix A-III if the substance is manufactured by the facility and is released to the air.

(3) 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 VIII.E.

(4) Nothing in ~~sub~~sections VIII.C.(1) through (3), 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.

D. Exempted Uses.

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

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

(2) 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.

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

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

(5) 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.

(6) 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.

(7) 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.

(8) 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.

E. Emission Quantification and Degree of Accuracy.

(1) For all substances listed in Appendix A-I, the emission 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.

(2) For each process for which source testing is required to quantify emissions of a listed substance under section IX.A. 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 ~~sub~~section VIII.E.(3) 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 emission 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 ~~sub~~section VIII.E.(3).

(3) For each substance listed in Appendix A-I, the total facility emissions from processes for which source testing is not required shall be reported to within plus or minus 10 per cent of the total emissions of the substance, or to within plus or minus the applicable degree of accuracy value in Appendix A-I for that substance, whichever is greater, in accordance with the instructions in Appendix B.

The degree of accuracy values shall be applied on a facilitywide basis, not at the level of each process. For reporting, the total facility emissions of substances shall be rounded to the nearest unit of the applicable degree of accuracy to determine whether they must be reported on Emission Information Forms. If facility emissions of a substance exceed one-half of the applicable degree of accuracy unit for the substance, the substance emissions shall be reported on Emission Information Forms.

(4) 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.

(5) For all substances listed in Appendix A-I which are manufactured, formulated, used, or released but for which total facility emissions are below the applicable limits for degree of accuracy required by ~~sub~~section VIII.E.(3) and listed in Appendix A-I, the facility operator shall submit the data required for Supplemental Use and Production Information specified in Appendix B to indicate the presence of such substances, unless a numeric estimate of such emissions is reported on an Emission Information Form for the appropriate emitting process.

(6) For all substances listed in Appendix A-III, the facility operator shall be required to report the production, use, or other presence of the substance only if the substance is manufactured by the facility and the substance is released to the air. If required to report the substance, the operator shall submit the data required for Supplemental Use and Production Information specified in Appendix B.

F. Reporting Mixtures and Trade Name Products.

(1) Except as provided in ~~sub~~sections VIII.F.(3) through F.(8), the emissions of each listed substance contained in any mixture shall be individually reported to the degree of accuracy required in section VIII.E. and Appendix A.

(2) **Mixtures Without Emittent Identification Numbers:** Except as required in ~~sub~~sections VIII.F.(3) through VIII.F.(8), 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.

(3) **Mixtures With Emittent Identification Numbers:** Except as required in ~~sub~~sections VIII.F.(4) through VIII.F.(8), 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:

(a) 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.

(b) If no individual substances are listed under the mixture or group heading, the emissions of the mixture or group heading shall be reported as total emissions of the aggregated mixture using the applicable emittent identification number. The listed 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.

(4) **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.

(5) **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.

(6) **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.

(7) 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.

(8) Source test results for dioxins and furans (polychlorinated dibenzodioxins, PCDD, and polychlorinated dibenzofurans, PCDF) 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-I.

(9) Trade name products shall be treated as mixtures.

(10) 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 VIII.E. 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 to the satisfaction of the district that no listed substances are included in the mixture or the facility operator establishes the amounts of listed substances that are present.

Section IX. Source Testing and Emission Factors

A. Source Testing and Measurement.

(1) Source testing shall be required for 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.

(2) The ARB-adopted test methods shall be used to fulfill the source test requirements in subsection IX.A.(1) when the specified conditions exist, except that:

(a) To determine quantities of trace elements in fuel, waste, or material samples, the following methods shall be used: EPA Method 7196A dated July 1992 for chromium (hexavalent), EPA Method 7471A dated September 1994 for mercury, EPA Method 7740 dated September 1986 for selenium, and EPA Method 6010A dated July 1992 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

(b) To determine chlorine content and sulfur content of coal and coke fuel samples, ASTM Methods D2361-85 91 amended as of 1985 1991 and D3177-89 amended reapproved as of 1989 1993, both of which are incorporated by reference herein, shall be used, respectively.

(c) To determine chlorine content and sulfur content in wood, refuse-derived, and other solid fuel, waste, or material samples, ASTM Methods E776-87 amended reapproved as of 1987 1992 and E775-87 amended reapproved as of 1987 1992, both of which are incorporated by reference herein, shall be used, respectively.

(d) To determine chlorine content and sulfur content in other fuel or material samples, ASTM Methods D808-87 91 amended as of 1987 1991 and D129-64 91 amended as of 1964 1991, both of which are incorporated by reference herein, shall be used, respectively.

(3) The facility operator may propose in the emission 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 emission inventory plan sufficient information to enable the Executive Officer of the state board 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.

(4) The emission 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: The underline on the words "Test Methods for Evaluating Solid Waste" is to indicate the title of a book, and does not denote revised text. The underline will remain in the final approved text.]

B. Pooled Source Testing.

(1) The operators of a group of related facilities may propose in each of their respective emission inventory plans to satisfy any source testing requirement under Ssection IX.A. 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 emission inventory plan.

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

(3) 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:

(a) The facility operator includes in the emission inventory 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

(b) If applicable, the facility operator corrects any deficiencies identified by the Executive Officer of the state board.

(4) If the proposal is not approved by the district or the state board, each facility shall undertake individual source testing as required.

C. Alternatives to Required Source Testing.

(1) As a substitute for a required source test as set forth in Appendix D or the alternatives to it as set forth in sections IX.A. and IX.B. and Appendix D, the emission 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:

(a) the proposed alternative method:

(i) 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

(ii) 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 VIII.E.; or

(b) 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

(c) 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 ~~sub~~section IX.C.(1)(b), in which case the best technologically feasible non-testing alternative may be proposed.

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

(3) 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 state board concur that the proposed alternative method complies with ~~sub~~section IX.C.(1). 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 state board to meet the requirements of ~~sub~~section IX.C.(1).

(4) If the proposed alternative method is to determine emissions of a substance other than those

identified in ~~sub~~section IX.C.(3), the district may approve the proposed alternative only if, after considering any comments by the Executive Officer of the state board, the district determines that the proposed alternative method complies with ~~sub~~section IX.C.(1). If the proposal is not approved, the facility shall undertake and complete source testing as required or shall use an alternative method which is determined by the district to meet the requirements of ~~sub~~section IX.C.(1).

D. ARB-Approved Emission Factors Derived From Hot Spots Source Tests.

(1) Proposal to Use ARB-Approved Emission Factors:

As a substitute for a required source test as set forth in Appendix D or the alternatives to a required source test as set forth in sections IX.A. and IX.B. and Appendix D, the emission inventory plan or update plan may include a proposal to use ARB-approved emission factors which have been derived from analysis of source tests conducted in accordance with the requirements of Health and Safety Code section 44340 and 44342. The ARB-approved emission factors are those which are compiled in the data system "California Air Toxics Emission Factors (CATEF): A CARB Database", Version 1.2, May 1996, which is incorporated by reference herein. The emission factors in CATEF include the mean (average) values, as well as the minimum and maximum values of the emission factor range for each substance and source type for which an emission factor is presented.

The district may approve the proposal for a facility to use CATEF emission factors subject to the following conditions:

(a) If the use of either the **average** value or the **maximum** value of the applicable emission factor range published in CATEF would result in calculated total emissions for the facility (defined below) that cause the facility to meet the criteria for a "high level" facility under section IV, the operator must use the maximum values of the emission factor ranges, except as specified below.

"Total emissions for the facility" shall be determined by including all listed substances and source types for which emission factors are proposed to be used, along with all other substances and sources at the facility quantified by other approved methods.

Exception: The operator may propose to use the average value of the emission factor range, and the district may approve the proposal, only if the operator can demonstrate to the satisfaction of both the district and the state board that the emissions from the operator's facility could not exceed the levels calculated to result from the use of the average value for specified reasons. The operator shall include in the emission inventory plan sufficient information regarding operating conditions, input and output streams, equipment characteristics, control equipment, and other parameters that affect emission characteristics of the operator's facility and the tested facility (or facilities) to demonstrate that the operator's facility could not exceed the average value of the emission factor range.

NOTE: The underlined paragraph headers on this page do not indicate new text. They were previously included to set off the text for ease of understanding. The underlines will remain in the final approved text.

(b) For purposes of evaluating whether a facility can be exempted as a "low level" facility under section IV, the facility operator must use the **maximum** value of the applicable emission factor range published in CATEF, and the use of these values must not result in calculated total emissions for the facility, as defined in section (a), above, that cause the facility to exceed the criteria for a "low level" facility under section IV, except as follows.

Exception: If the use of maximum values would result in emissions exceeding the "low level" criteria, but use of average values would not exceed the "low level" criteria, the operator may propose to use the average value of the emission factor range, and the district may approve the proposal, only if the operator can demonstrate to the satisfaction of both the district and the state board that the emissions from the operator's facility could not exceed the levels calculated to result from the use of the average value for specified reasons. The operator shall include in the emission inventory plan sufficient information regarding operating conditions, input and output streams, equipment characteristics, control equipment, and other parameters that affect emission characteristics of the operator's facility and the tested facility (or facilities) to demonstrate that the operator's facility could not exceed the average value of the emission factor range.

(c) The district determines that the proposed emission factor(s) will result in a characterization of the facility's emissions as accurate as that achievable in practice by the ARB-adopted source test method or a pooled source test;

(d) The facility operator includes in the emission inventory 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 tested facility (or facilities) from which the ARB-approved emission factor was derived to demonstrate to the satisfaction of the district and the state board that:

(i) the operator's facility and the tested facility (or facilities), from which the emission factors are derived, are substantially equivalent in all parameters affecting emissions of listed substances from the sources for which emission factors are proposed to be used; and

NOTE: The underlined paragraph headers on this page do not indicate new text. They were previously included to set off the text for ease of understanding. The underlines will remain in the final approved text.

(ii) sufficient similarity in all parameters affecting emissions of listed substances exists between the tested facility (or facilities) and the operator's facility to which the emission factor is proposed to be applied, such that emissions can be calculated to yield representative emission results to the required degree of accuracy;

(e) If applicable, the facility operator corrects any deficiencies identified by the Executive Officer of the state board.

(2) Review Process:

Upon receipt of a proposal for the use of ARB-approved emission factors to satisfy a required source test, the district shall ensure that all components of information required under section IX are included. Once the proposal is complete, the district shall immediately submit the proposal to the Executive Officer of the state board for technical review and comment. To the extent practicable, the Executive Officer of the state board will determine whether the required source test would provide a substantially more accurate quantification of emissions and shall note any deficiencies in the proposal. The proposal will be presumed acceptable to the state board if the Executive Officer does not respond to the district within 45 days of the state board's receipt of the proposal from the district.

(3) Approval Involving Potent Substances:

If ARB-approved emission factors are proposed ~~for~~ to satisfy a required source test for arsenic or arsenic compounds, beryllium or beryllium compounds, cadmium or cadmium compounds, chromium (hexavalent), benzo(a)pyrene, or polychlorinated dioxins and dibenzofurans, the district may approve the proposal only if both the district and the state board concur that the proposal complies with ~~sub~~section IX.D.(1). If the proposal is not approved by both the district and the state board, the facility shall undertake source testing as required or shall use an alternative method or emission factor which is determined by the district and the state board to meet the requirements of ~~sub~~section IX.D.(1).

(4) Approval Involving Other Substances:

If the proposed use of ARB-approved emission factors is to satisfy a required source test for a substance other than those identified in ~~sub~~section IX.D.(3), the district may approve the proposal only if, after considering any comments by the Executive Officer of the state board, the district determines that the proposal complies with ~~sub~~section IX.D.(1). If the proposal is not approved, the facility shall undertake source testing as required or shall use an alternative method or emission factor which is determined by the district to meet the requirements of ~~sub~~section IX.D.(1).

E. Source Test Protocol and Source Test Report.

For each required source test, including pooled source tests conducted under section IX.B., a proposed source test protocol shall be submitted with the emission inventory plan. The proposed protocol shall include the information set forth in ~~sub~~sections IX.E.(1) through E. (~~23~~24), responding to language in brackets to indicate future intent or anticipated values, and excluding information claimed to be trade secret.

For each required source test, a source test report shall be submitted with the inventory report. The source test report shall include the actual test values for the information required in ~~sub~~sections IX.E.(1) through E.(~~23~~24). Information denoted as trade secret on the facility diagram or elsewhere in the emission inventory report should be so denoted in the source test report according to the procedure set forth in ~~sub~~section VII.B.3. Facilities participating in pooled source tests conducted under section IX.B. 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 of the source test report is not needed.

(1) Date on which the source test was [will be] performed.
(2) Name and qualifications of companies and/or persons who conducted [will conduct] the source test and analyzed [will analyze] the samples.
(3) Name of contractor.
(4) Process description.
(5) Process reactant composition and rates [approximate values or range of values for composition and rates].
(6) Fuel analysis and firing rates for combustion processes [approximate values or range of values for fuel composition and firing rates].
(7) 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 IX.A. and Appendix D].
(8) 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.
(9) ARB independent tester Executive Order, provided in accordance with section 91207, Title 17, California Code of Regulations, if the tester has been certified by the ARB for the proposed source test method.
(10) Typical values and allowable ranges of operating parameters (including pressure and feed rate) of the process [approximate values or range of values for operating parameters].
(11) Process operating conditions during test [approximate values or range of values anticipated during test].
(12) Stack temperature [approximate value anticipated].
(13) Concentration of any listed substances in the exhaust stream [approximate values or range of values anticipated].
(14) Mass emission rate of any listed substances [approximate values or range of values anticipated].
(15) Composition and rate of waste streams, including scrubber effluent, ash, fly ash [approximate values or range of values anticipated].
(16) Oxygen, carbon dioxide and moisture content of exhaust gas [approximate values or range of values anticipated].
(17) Exhaust gas velocity and volumetric flow rate at the point where testing is conducted [approximate values or range of values anticipated].
(18) Sampling points and number of samples [proposed points and number].
(19) Calibration data, including certification that the accuracy of calibration gases is traceable to the National Institute of Standards and Technology (NIST).
(20) Quality assurance and quality control data including analysis, audit, zero and span drift, blank and spiked samples [proposed].

(21) Chain of custody document, where appropriate [proposal for provision of document].
(22) Applicable emission standards or other permit conditions affecting emissions of listed substances.
(23) The estimated limit of detection, the proposed number of test runs, and any other pretest calculations for the source test method that is used.
(24) A table summarizing the results of the test, with emissions and emission factors expressed, respectively, in pounds per hour and pounds per process unit appropriate for the SCC describing the process.

If any of the emissions are derived from source test results with some or all of the test runs below the limit of detection, the operator shall report the emissions in accordance with the procedures in Appendix B for reporting emissions derived from below the limit of detection source test results.

F. Converting Source Test Results to Emission Rates.

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

(2) 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.

(3) 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.

(4) 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.

G. Specifications for Acceptable Estimation Methods and Emission Factors.

(1) Where emissions of substances are required to be quantified but where measurement is not required under section IX.A., the emission 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 VIII.E. The district may approve a proposed method only if all of the following criteria are met:

(a) 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;

(b) 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 VIII.E.; and

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

(i) 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.

(ii) 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 state board has published, in accordance with Health and Safety Code sections 39650 - 39675, 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.

(iii) Engineering calculations and emission estimation models 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 VIII.E.

(2) 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 ~~sub~~sections IX.G. (1)(a) and (b) are met.

(3) The effects of all air pollution control equipment or process conditions that 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 emission 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.

Section X. Definitions.

For the purposes of this regulation the following definitions apply:

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

(2) **"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.

(3) **"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.

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

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

(6) **"Emittent identification number" or "Emittent ID"** means the number code for each listed substance in Appendix A, which is the Chemical Abstract Service (CAS) registry number for the chemical where available, or a 4-digit code number assigned by the staff of the state board.

(7) **"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.

(8) **"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.

(a) Except for the oil production operations defined in ~~sub~~section X.8(b), 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.

(b) 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 3.29, "Definitions" in San Joaquin Valley Unified Air Pollution Control District Rule 2201 "New and Modified Stationary Source Review Rule" as amended June 15, 1995, which is incorporated by reference herein.

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

(10) **"Federal Hazardous Air Pollutant" or "Federal HAP" or "HAP"** mean a substance identified by the United States Environmental Protection Agency under Section 112 subsection (b) of the federal Clean Air Act Amendments of 1990 (42 U.S. Code, Section 7412(b)).

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

(12) **"Hazard Index"** means a facility's numerical ratio value for assessing non-cancer health effects, as reviewed by the Office of Environmental Health Hazard Assessment and approved by the district, in accordance with Health and Safety Code section 44360 and in a manner consistent with the California Air Pollution Control Officers Association (CAPCOA) "Air Toxics 'Hot Spots' Program Revised 1992 Risk Assessment Guidelines, October 1993", which is incorporated by reference herein.

(~~12~~ 13) **"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 Appendices A-I, A-II, and A-III of this regulation; a "listed substance" is a substance included on this list.

(~~13~~ 14) **"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) f Title 8, California Code of Regulations, "Hazard Communication".

(~~13~~ 15) **"Operator" or "facility operator"** means the same as defined in Health and Safety Code section 44307.

(16) **"Prioritization score"** means a facility's numerical score for cancer health effects or non-cancer health effects, as determined by the district in accordance with Health and Safety Code section 44360 in a manner consistent with the California Air Pollution Control Officers Association (CAPCOA) "Air Toxics 'Hot Spots' Program Facility Prioritization Guidelines, July 1990", which is incorporated by reference herein.

(~~14~~ 17) **"Small business"** means the same as defined in Government Code section 11342(e).

(~~15~~ 18) **"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.

(~~16~~ 19) **"Source Classification Codes" or "SCCs"** means number codes created by the United States Environmental Protection Agency used to identify processes associated with point sources that contribute emissions to the atmosphere.

(20) **"Standard Industrial Classification Code" or "SIC Code"** means the Standard Industrial Classification Code that classifies establishments by the type of business activity in which they are engaged as defined by the Standard Industrial Classification Manual, 1987, published by the Executive Office of the President, Office of Management and Budget, 1987, which is incorporated

by reference herein.

(~~17~~ 21) **"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.

(~~18~~ 22) **"Trade secrets"** means the same as defined under Health and Safety Code section 44346(h).

(23) **"Update Category"** means the facility category designated by a district based on the facility's prioritization score, risk assessment results, *de minimis* level, or emissions of federal Hazardous Air Pollutants. Update categories are "low level", "intermediate level", "high level", and "not yet prioritized".

(~~19~~ 24) **"Update plan"** means an emission inventory plan which is revised and updated as required by Health and Safety Code section 44344.

(~~20~~ 25) **"Update report"** means an emission inventory report which is revised and updated as required by Health and Safety Code section 44344.

(~~21~~ 26) **"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 under section VIII.D.

APPENDIX A

LIST OF SUBSTANCES

APPENDIX A-I

SUBSTANCES FOR WHICH

EMISSIONS MUST BE QUANTIFIED

APPENDIX A-I
Substances For Which Emissions Must Be Quantified

Emittent ID (Note [1])	Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Applicable Degree of Accuracy (lb/yr) (Note [5])	Source List(s) (Note [6])	Other Notes(s)
75070	Acetaldehyde		c	20.	1 2 3 4	
60355	Acetamide		c	2.	1 2 3 4	
75058	Acetonitrile	06/91		200.	1 2	
98862	Acetophenone	06/91		100.	1 2	
53963	2-Acetylaminofluorene [PAH-Derivative, POM]		c	100.	1 2 4 5	
107028	Acrolein			0.05	1 2	
79061	Acrylamide		c	0.01	1 2 3 4	
79107	Acrylic acid	06/91		5.	1 2	
107131	Acrylonitrile		c	0.1	1 2 3 4 5	
107051	Allyl chloride		c	5.	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	5.	1 2 4 5	
92671	4-Aminobiphenyl [POM]		c	100.	1 2 3 4 5	
61825	Amitrole		c	0.1	3 4 5	
7664417	Ammonia			200.	1 2	
6484522	Ammonium nitrate	06/91		100.	1	
7783202	Ammonium sulfate	06/91		100.	1	
62533	Aniline	09/90	c	5.	1 2 4	
90040	o-Anisidine		c	100.	1 2 3 4 5	
-	Anthracene [PAH, POM], (see PAH)					
7440360	Antimony	06/91		1.	7	
*	Antimony compounds including but not limited to:	06/91		1.	1 2	[7]
1309644	Antimony trioxide	09/90	c	1.	1 2 3 4	[7]
7440382	Arsenic		c	0.01	1 2 3 4 5	
1016	Arsenic compounds (inorganic) including but not limited to:		c	0.01	1 2 3 4 5	[7]
7784421	Arsine			0.01	1 2 7	[7]
1017	Arsenic compounds (other than inorganic)	06/91		0.1	1	[7]
7440393	Barium	06/91		1.	7	
*	Barium compounds	06/91		1.	1	[7]
-	Benz[a]anthracene [PAH, POM], (see PAH)					
71432	Benzene		c	2.	1 2 3 4 5	
92875	Benzidine (and its salts) [POM]		c	0.0001	1 2 3 4 5	
1020	Benzidine-based dyes [POM] including but not limited to:		c	0.0001	1 2 3	
1937377	Direct Black 38 [PAH-Derivative, POM]		c	0.0001	1 2 4 5	
2602462	Direct Blue 6 [PAH-Derivative, POM]		c	0.0001	1 2 4 5	
16071866	Direct Brown 95 (technical grade) [POM]	09/89	c	0.0001	1 2 4	
-	Benzo[a]pyrene [PAH, POM], (see PAH)					
-	Benzo[b]fluoranthene [PAH, POM], (see PAH)					
271896	Benzofuran	06/91	c	100.	4	

*NOTE: The notation "7/96 *" indicates most recently added substances.*

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98077	Benzoic trichloride {Benzotrichloride}		c	10.	1 2 4 5	
-	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		c	50.	1 2 4	
7440417	Beryllium		c	0.001	1 2 3 4 5	
*	Beryllium compounds	09/89	c	0.001	1 2 3 4 5	[7]
92524	Biphenyl [POM]	06/91		0.5	1 2	
111444	Bis(2-chloroethyl) ether {DCEE}	09/89	c	0.05	1 2 4	
542881	Bis(chloromethyl) ether		c	0.001	1 2 3 4 5	
103231	Bis(2-ethylhexyl) adipate	06/91		100.	1	
7726956	Bromine			0.5	2	
*	Bromine compounds (inorganic) including but not limited to:			100.	1 2	[7]
7758012	Potassium bromate			0.1	1 3 4	[7]
75252	Bromoform	06/91		100.	1 2 4	
106990	1,3-Butadiene		c	0.1	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		c	0.01	1 2 3 4 5	
*	Cadmium compounds		c	0.01	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	c	100.	4	
133062	Captan	09/90	c	100.	1 2 4	
63252	Carbaryl [PAH-Derivative, POM]	06/91		100.	1 2	
1050	Carbon black extracts		c	2.	1 3 4	
75150	Carbon disulfide	09/89		200.	1 2 4	
56235	Carbon tetrachloride		c	1.	1 2 3 4 5	
463581	Carbonyl sulfide	06/91		100.	1 2	
1055	Carrageenan (degraded)		c	100.	3 4	
120809	Catechol	06/91		100.	1 2	
133904	Chloramben	06/91		100.	1 2	
57749	Chlordane	09/89	c	10.	1 2 4	
108171262	Chlorinated paraffins (average chain length, C12; approximately 60% chlorine by weight)	09/89	c	2.	3 4 5	
7782505	Chlorine			0.5	1 2	
10049044	Chlorine dioxide	06/91		1.	1	
79118	Chloroacetic acid	06/91		100.	1 2	
532274	2-Chloroacetophenone	06/91		0.1	1 2	
106478	p-Chloroaniline	07/96 *		100.	4 7	

*NOTE: The notation "7/96 *" indicates most recently added substances.*

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1058	Chlorobenzenes	06/91		100.	1	
	including but not limited to:					
108907	Chlorobenzene			200.	1 2	
25321226	Dichlorobenzenes (mixed isomers)	06/91		100.	1 7	
	including:					
95501	1,2-Dichlorobenzene	06/91		200.	1 7	
541731	1,3-Dichlorobenzene	06/91		100.	1 7	
106467	p-Dichlorobenzene (1,4-Dichlorobenzene)		c	5.	1 2 3 5	
120821	1,2,4-Trichlorobenzene	06/91		200.	1 2	
510156	Chlorobenzilate [POM] (Ethyl-4,4'-dichlorobenzilate)	09/90	c	100.	1 2 4	
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	10.	1 2 4	
58902	2,3,4,6-Tetrachlorophenol	07/96 *	c	100.	1 7	
95954	2,4,5-Trichlorophenol	06/91	c	100.	1 2	
88062	2,4,6-Trichlorophenol		c	2.	1 2 4	
95830	4-Chloro-o-phenylenediamine		c	10.	3 4 5	
76062	Chloropicrin			2.	7	
126998	Chloroprene			5.	1 2	
95692	p-Chloro-o-toluidine		c	0.5	3 4	
7440473	Chromium	06/91		0.001	7	
*	Chromium compounds (other than hexavalent)	06/91		0.001	1 2	[7]
18540299	Chromium, hexavalent (and compounds)		c	0.0001	1 2 3 4 5	[7]
	including but not limited to:					
10294403	Barium chromate	06/91	c	0.001	1 2 5	[7]
13765190	Calcium chromate	06/91	c	0.001	1 2 5	[7]
1333820	Chromium trioxide	06/91	c	0.0001	1 2 5	[7]
7758976	Lead chromate	06/91	c	0.001	1 2 5	[7]
10588019	Sodium dichromate	06/91	c	0.0001	1 2 5	[7]
7789062	Strontium chromate	06/91	c	0.001	1 2 5	[7]
-	Chrysene [PAH, POM], (see PAH)	06/91		0.5	7	
7440484	Cobalt	06/91		0.5	1 2	[7]
*	Cobalt compounds		c	0.05	1 2 3 4 5	
1066	Coke oven emissions			0.1	2	
7440508	Copper	09/89		0.1	1 2	[7]
*	Copper compounds		c	0.05	1 3 4	
1070	Creosotes		c	1.	3 4 5	
120718	p-Cresidine			5.	1 2	
1319773	Cresols (mixtures of) [Cresylic acid]	06/91		5.	1 2	
	including:	06/91		5.	1 2	
108394	m-Cresol	06/91		5.	1 2	
95487	o-Cresol	07/96 *	c	50.	7	
106445	p-Cresol	06/91		200.	1 2	
4170303	Crotonaldehyde					
98828	Cumene					

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80159	Cumene hydroperoxide	06/91		100.	1	
135206	Cupferron		c	0.5	4 5	
1073	Cyanide compounds including but not limited to:	06/91		0.05	1 2	[8]
74908	Hydrocyanic acid			10.	2	
110827	Cyclohexane	06/91		200.	1	
108930	Cyclohexanol	07/96 *		200.	7	
66819	Cycloheximide			2.	6	
1163195	Decabromodiphenyl oxide [POM]	06/91		100.	1 2	
1075	Dialkylnitrosamines including but not limited to:			0.001	1	
924163	N-Nitrosodi-n-butylamine		c	0.0001	1 3 4 5	
1116547	N-Nitrosodiethanolamine		c	100.	1 3 4 5	
55185	N-Nitrosodiethylamine		c	0.001	1 3 4 5	
62759	N-Nitrosodimethylamine		c	0.01	1 2 3 4 5	
621647	N-Nitrosodi-n-propylamine		c	0.01	1 3 4 5	
10595956	N-Nitrosomethylethylamine		c	0.001	1 3 4	
615054	2,4-Diaminoanisole		c	5.	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	0.05	1 2 3 4 5	
334883	Diazomethane	06/91	c	5.	1 2	
226368	Dibenz[a,h]acridine [POM]		c	0.5	1 2 3 4 5	
224420	Dibenz[a,j]acridine [POM]		c	0.5	1 2 3 4 5	
-	Dibenz[a,h]anthracene [PAH, POM], (see PAH)					
194592	7H-Dibenzo[c,g]carbazole		c	0.05	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	0.01	1 2 3 4 5	
96139	2,3-Dibromo-1-propanol	07/96 *	c	50.	4	
84742	Dibutyl phthalate	06/91		100.	1 2	
-	p-Dichlorobenzene {1,4-Dichlorobenzene} (see Chlorobenzenes)					
91941	3,3'-Dichlorobenzidine [POM]		c	0.1	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	20.	1 2 4	
94757	Dichlorophenoxyacetic acid, salts and esters {2,4-D}	06/91		100.	1 2	
78875	1,2-Dichloropropane {Propylene dichloride}	09/90	c	20.	1 2 4	
542756	1,3-Dichloropropene		c	10.	1 2 3 4 5	
62737	Dichlorovos {DDVP}	09/89	c	0.5	1 2 4	
115322	Dicofol [POM]	06/91		100.	1 2	

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- -	Diesel engine exhaust	09/90	c		1 3 4	[9]
9901	Diesel engine exhaust, particulate matter	09/90	c	10.	1 3 4	[9]
9902	Diesel engine exhaust, total organic gas	09/90	c	10.	1 3 4	[9]
#	Diesel fuel (marine)	06/91	c			
111422	Diethanolamine	06/91		20.	1 2	
117817	Di(2-ethylhexyl) phthalate (DEHP)		c	20.	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	0.01	1 2 3 4 5	
121697	N,N-Dimethylaniline	06/91		200.	1 2	
57976	7,12-Dimethylbenz[a]anthracene [PAH-Derivative, POM]	09/90	c	0.0001	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	0.1	1 2 3 4 5	
131113	Dimethyl phthalate	06/91		50.	1 2	
77781	Dimethyl sulfate		c	0.01	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	0.001	1 2 3 4	
42397659	1,8-Dinitropyrene [PAH-Derivative, POM]	06/91	c	0.05	1 2 3 4	
25321146	Dinitrotoluenes (mixed isomers) including but not limited to:	06/91		100.	7	
121142	2,4-Dinitrotoluene	09/89	c	0.5	1 2 4	
606202	2,6-Dinitrotoluene	06/91		100.	7	
123911	1,4-Dioxane		c	5.	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	2.	1 3 4	
106898	Epichlorohydrin		c	2.	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	200.	1 2 3 4 5	
100414	Ethyl benzene	06/91		200.	1 2	
75003	Ethyl chloride (Chloroethane)			200.	1 2 4	
-	Ethyl-4,4'-dichlorobenzilate (see Chlorobenzilate)	06/91		200.	7	
74851	Ethylene		c	0.5	1 3 4 5 6	
106934	Ethylene dibromide (1,2-Dibromoethane)		c	2.	1 2 3 4 5	
107062	Ethylene dichloride (1,2-Dichloroethane)	06/91		200.	1 2	
107211	Ethylene glycol	06/91		100.	1 2	
151564	Ethyleneimine (Aziridine)		c	0.5	1 2 3 4 5 6	
75218	Ethylene oxide		c	2.	1 2 3 4 5	
96457	Ethylene thiourea					

APPENDIX A-I
Substances For Which Emissions Must Be Quantified

Emittent ID (Note [1])	Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Applicable Degree of Accuracy (lb/yr) (Note [5])	Source List(s) (Note [6])	Other Notes(s)
1101	Fluorides and compounds including but not limited to:	09/89		100.	2	
7664393	Hydrogen fluoride					
1103	Fluorocarbons (brominated)			50.	1 2 7	
1104	Fluorocarbons (chlorinated) including but not limited to:			200. 200.	6 1 6	[10] [10]
76131	Chlorinated fluorocarbon {CFC-113} {1,1,2-Trichloro-1,2,2-trifluoroethane}			200.	1 2 6	
75456	Chlorodifluoromethane {Freon 22}	07/96 *		200.	1 6 7	
75434	Dichlorofluoromethane {Freon 12}	07/96 *		200.	1 6 7	
75694	Trichlorofluoromethane {Freon 11}	07/96 *		200.	1 6 7	
50000	Formaldehyde		c	5.	1 2 3 4 5 6	
110009	Furan	07/96 *	c	5.	4	
- -	Gasoline engine exhaust including but not limited to:	09/90	c		3	[9]
- -	Gasoline engine exhaust (condensates & extracts)	06/91	c		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	200.	1 2 3 4	[11]
111308	Glutaraldehyde			0.1	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 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		200.	1 2 6	
111159	Ethylene glycol monoethyl ether acetate	09/90		50.	1 2 6	
109864	Ethylene glycol monomethyl ether	09/89		100.	1 2 6	
110496	Ethylene glycol monomethyl ether acetate	09/90		10.	1 2 6	
2807309	Ethylene glycol monopropyl ether	09/90		200.	1 2 6	
107982	Propylene glycol monomethyl ether	09/90		100.	1 2 6	
108656	Propylene glycol monomethyl ether acetate	09/90		200.	1 6	
112492	Triethylene glycol dimethyl ether	09/90		100.	1 6	
76448	Heptachlor	09/89	c	100.	1 2 6	
118741	Hexachlorobenzene		c	100.	1 2 4	
87683	Hexachlorobutadiene	06/91		0.1	1 2 3 5	
1120	Hexachlorocyclohexanes (mixed or technical grade) including but not limited to:		c	0.1 0.05	1 2 1 3 4 5	
319846	alpha-Hexachlorocyclohexane	07/96 *	c	0.1	1 3 4 5 7	
319857	beta-Hexachlorocyclohexane	07/96 *	c	0.1	1 3 4 5 7	
58899	Lindane {gamma-Hexachlorocyclohexane}	09/90	c	0.1	1 2 4	

APPENDIX A-I
Substances For Which Emissions Must Be Quantified

Emittent ID (Note [1])	Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Applicable Degree of Accuracy (lb/yr) (Note [5])	Source List(s) (Note [6])	Other Notes(s)
77474	Hexachlorocyclopentadiene			2.	1 2	
67721	Hexachloroethane	09/90	c	200.	1 2 4	
680319	Hexamethylphosphoramide		c	100.	1 2 3 4 5	
110543	Hexane	06/91		200.	1 2	
302012	Hydrazine		c	0.01	1 2 3 4 5	
7647010	Hydrochloric acid			20.	1 2	
-	Hydrocyanic acid (see Cyanide compounds)					
7783064	Hydrogen sulfide			5.	1 2	
123319	Hydroquinone	06/91		100.	1 2	
-	Indeno[1,2,3-cd]pyrene [PAH, POM], (see PAH)					
13463406	Iron pentacarbonyl	07/96 *		5.	7	
1125	Isocyanates			0.05	6	
	including but not limited to:					
822060	Hexamethylene-1,6-diisocyanate	06/91		0.05	1 2	
101688	Methylene diphenyl diisocyanate (MDI) [POM]	06/91		0.1	1 2	
624839	Methyl isocyanate			1.	1 2	
-	Toluene-2,4-diisocyanate (see Toluene diisocyanates)					
-	Toluene-2,6-diisocyanate (see Toluene diisocyanates)					
78591	Isophorone	06/91		200.	1 2	
78795	Isoprene, except from vegetative emission sources	07/96 *	c	200.	3	
67630	Isopropyl alcohol	06/91		200.	1	
80057	4,4'-Isopropylidenediphenol [POM]	06/91		100.	1 2	
7439921	Lead		c	0.5	1 4 6	
1128	Lead compounds (inorganic)		c	0.5	1 3	[7]
	including but not limited to:		c	1.	1 2 4 5	[7] [12]
301042	Lead acetate					
-	Lead chromate (see Chromium, hexavalent)					
7446277	Lead phosphate		c	2.	1 4 5	[7]
1335326	Lead subacetate	09/90	c	2.	1 2 4	[7] [12]
1129	Lead compounds (other than inorganic)	06/91		5.	1 2	[7]
108316	Maleic anhydride			0.5	1 2	
7439965	Manganese			0.1	1 2	
*	Manganese compounds	09/89		0.1	1 2	[7]
7439976	Mercury			1.	1 2 4 6	
*	Mercury compounds	09/89		1.	1 2 4	[7]
	including but not limited to:					
7487947	Mercuric chloride			1.	2	[7]
593748	Methyl mercury (Dimethylmercury)			1.	2	[7]
67561	Methanol			200.	1 2	
72435	Methoxychlor [POM]	06/91		100.	1 2	
75558	2-Methylaziridine (1,2-Propyleneimine)		c	100.	1 2 3 4	
74839	Methyl bromide (Bromomethane)			20.	1 2 6	
74873	Methyl chloride (Chloromethane)	06/91		20.	1 2	
71556	Methyl chloroform (1,1,1-Trichloroethane)			200.	1 2 6	
56495	3-Methylcholanthrene [PAH-Derivative, POM]	09/90	c	0.001	1 2 4	
3697243	5-Methylchrysene [PAH-Derivative, POM]		c	0.05	1 2 3 4 5	
101144	4,4'-Methylene bis(2-chloroaniline) (MOCA) [POM]		c	0.1	1 2 3 4 5	

APPENDIX A-I
Substances For Which Emissions Must Be Quantified

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75092	Methylene chloride {Dichloromethane}		c	50.	1 2 3 4 5 6	
101779	4,4'-Methylenedianiline (and its dichloride) [POM]		c	0.1	1 2 3 4 5	
78933	Methyl ethyl ketone {2-Butanone}	06/91		200.	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		20.	1 2	
75865	2-Methyllactonitrile {Acetone cyanohydrin}	07/96 *		50.	7	
80626	Methyl methacrylate			200.	1 2 6	
109068	2-Methylpyridine	07/96 *		100.	7	
1634044	Methyl tert-butyl ether	06/91		200.	1 2	
90948	Michler's ketone [POM]		c	0.1	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	0.0001	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	0.1	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	0.1	1 2 5	[7]
3333393	Nickel carbonate	06/91	c	0.1	1 2 5	[7]
13463393	Nickel carbonyl		c	0.1	1 2 4 5	[7]
12054487	Nickel hydroxide	06/91	c	0.1	1 2 5	[7]
1271289	Nickelocene	06/91	c	0.1	1 2 5	[7]
1313991	Nickel oxide	06/91	c	0.1	1 2 5	[7]
12035722	Nickel subsulfide		c	0.1	1 2 4 5	[7]
1146	Nickel refinery dust from the pyrometallurgical process	09/89	c	0.1	4	
7697372	Nitric acid	06/91		50.	1	
139139	Nitrilotriacetic acid		c	100.	1 4 5	
98953	Nitrobenzene			0.5	1 2	
92933	4-Nitrobiphenyl [POM]	09/89	c	100.	1 2 4	
7496028	6-Nitrochrysene [PAH-Derivative, POM]	06/91	c	0.001	1 2 3 4	
607578	2-Nitrofluorene [PAH-Derivative, POM]	06/91	c	5.	1 2 3 4	
302705	Nitrogen mustard N-oxide		c	0.05	3 4	

APPENDIX A-I
Substances For Which Emissions Must Be Quantified

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100027	4-Nitrophenol	06/91		100.	1 2	
79469	2-Nitropropane		c	0.01	1 2 3 4 5	
5522430	1-Nitropyrene [PAH-Derivative, POM]	06/91	c	0.5	1 2 3 4	
156105	p-Nitrosodiphenylamine [POM]		c	5.	1 2 4 5	
684935	N-Nitroso-N-methylurea		c	100.	1 2 4 5	
59892	N-Nitrosomorpholine		c	0.01	1 2 3 4 5	
100754	N-Nitrosopiperidine		c	200.	3 4 5	
930552	N-Nitrosopyrrolidine		c	0.05	3 4 5	
- -	PAHs (Polycyclic aromatic hydrocarbons) [POM] including but not limited to:				1 2	[13]
1151	PAHs, total, w/o individ. components reported [PAH, POM]			50.	1 2	
1150	PAHs, total, with individ. components also reported [PAH, POM]			50.	1 2	
83329	Acenaphthene [PAH, POM]	07/96 *		50.	1	
208968	Acenaphthylene [PAH, POM]	07/96 **		50.	1	
120127	Anthracene [PAH, POM]	06/91		50.	1 2 7	
56553	Benz[a]anthracene [PAH, POM]		c	0.5	1 2 3 4 5	
50328	Benzo[a]pyrene [PAH, POM]		c	0.05	1 2 3 4 5	
205992	Benzo[b]fluoranthene [PAH, POM]		c	0.5	1 2 3 4 5	
192972	Benzo[e]pyrene [PAH, POM]	07/96 *		0.5	1	
191242	Benzo[g,h,i]perylene [PAH, POM]	07/96 **		0.5	1	
205823	Benzo[j]fluoranthene [PAH, POM]		c	0.5	1 2 3 4 5	
207089	Benzo[k]fluoranthene [PAH, POM]		c	0.5	1 2 3 4 5	
218019	Chrysene [PAH, POM]	09/90	c	5.	1 2 4	
53703	Dibenz[a,h]anthracene [PAH, POM]		c	0.1	1 2 3 4 5	
192654	Dibenzo[a,e]pyrene [PAH, POM]		c	0.05	1 2 3 4 5	
189640	Dibenzo[a,h]pyrene [PAH, POM]		c	0.001	1 2 3 4 5	
189559	Dibenzo[a,i]pyrene [PAH, POM]		c	0.001	1 2 3 4 5	
191300	Dibenzo[a,l]pyrene [PAH, POM]		c	0.001	1 2 3 4 5	
206440	Fluoranthene [PAH, POM]	07/96 *		0.5	1	
86737	Fluorene [PAH, POM]	07/96 **		0.5	1	
193395	Indeno[1,2,3-cd]pyrene [PAH, POM]		c	0.5	1 2 3 4 5	
91576	2-Methyl naphthalene [PAH, POM]	07/96 *		50.	1	
91203	Naphthalene [PAH, POM]			50.	1 2	
198550	Perylene [PAH, POM]	07/96 *		0.5	1	
85018	Phenanthrene [PAH, POM]	07/96 **		0.5	1	
129000	Pyrene [PAH, POM]	07/96 **		0.5	1	
#	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				[14]
56382	Parathion	06/91		100.	1 2	
1336363	PCBs (Polychlorinated biphenyls) [POM]		c	0.01	1 2 3 4 5 6	
82688	Pentachloronitrobenzene (Quintobenzene)	06/91		100.	1 2	
79210	Peracetic acid	06/91		100.	1	
127184	Perchloroethylene (Tetrachloroethene)		c	5.	1 2 3 4 5 6	

APPENDIX A-I
Substances For Which Emissions Must Be Quantified

Emittent ID (Note [1])	Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Applicable Degree of Accuracy (lb/yr) (Note [5])	Source List(s) (Note [6])	Other Notes(s)
108952	Phenol			200.	1 2	
106503	p-Phenylenediamine	06/91		100.	1 2	
90437	2-Phenylphenol [POM]	06/91		100.	1 2	
75445	Phosgene			2.	1 2	
7723140	Phosphorus			0.1	1 2	
- -	Phosphorus compounds:	09/89			2	
7803512	Phosphine			0.01	1 2	7
7664382	Phosphoric acid	09/89		50.	1 2	
10025873	Phosphorus oxychloride	09/89		0.1	2	
10026138	Phosphorus pentachloride	09/89		0.1	2	
1314563	Phosphorus pentoxide	09/89		0.1	2	
7719122	Phosphorus trichloride	09/89		0.1	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		0.5	1 2	
115866	Triphenyl phosphate [POM]	09/89		100.	1 2	
101020	Triphenyl phosphite [POM]	09/89		100.	1 2	
85449	Phthalic anhydride			0.01	1 2	
- -	Polychlorinated dibenzo-p-dioxins {PCDDs or Dioxins} [POM] including but not limited to:		c		1 2	
1086	Dioxins, total, w/o individ. isomers reported {PCDDs} [POM]		c	0.00002	1 2	
1085	Dioxins, total, with individ. isomers also reported {PCDDs} [POM]		c	0.00002	1 2	
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin {TCDD} [POM]		c	0.000001	1 2 3 4 5	
40321764	1,2,3,7,8-Pentachlorodibenzo-p-dioxin [POM]		c	0.000001	1 2	
39227286	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin [POM]		c	0.000001	1 2 4	
57653857	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin [POM]		c	0.000001	1 2	
19408743	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin [POM]		c	0.000001	1 2	
35822469	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin [POM]		c	0.000001	1 2	
3268879	1,2,3,4,5,6,7,8-Octachlorodibenzo-p-dioxin [POM]	07/96 *	c	0.000001	1 2	
41903575	Total Tetrachlorodibenzo-p-dioxin [POM]	07/96 *	c	0.000001	1 2	
36088229	Total Pentachlorodibenzo-p-dioxin [POM]	07/96 *	c	0.000001	1 2	
34465468	Total Hexachlorodibenzo-p-dioxin [POM]	07/96 *	c	0.000001	1 2	
37871004	Total Heptachlorodibenzo-p-dioxin [POM]	07/96 *	c	0.000001	1 2	

APPENDIX A-I
Substances For Which Emissions Must Be Quantified

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- -	Polychlorinated dibenzofurans [PCDFs or Dibenzofurans] [POM] including but not limited to:		c		1 2	
1080	Dibenzofurans [Polychlorinated dibenzofurans] [PCDFs] [POM]		c	0.00002	1 2	
51207319	2,3,7,8-Tetrachlorodibenzofuran [POM]		c	0.000001	1 2	
57117416	1,2,3,7,8-Pentachlorodibenzofuran [POM]		c	0.000001	1 2	
57117314	2,3,4,7,8-Pentachlorodibenzofuran [POM]		c	0.000001	1 2	
70648269	1,2,3,4,7,8-Hexachlorodibenzofuran [POM]		c	0.000001	1 2	
57117449	1,2,3,6,7,8-Hexachlorodibenzofuran [POM]		c	0.000001	1 2	
72918219	1,2,3,7,8,9-Hexachlorodibenzofuran [POM]		c	0.000001	1 2	
60851345	2,3,4,6,7,8-Hexachlorodibenzofuran [POM]		c	0.000001	1 2	
67562394	1,2,3,4,6,7,8-Heptachlorodibenzofuran [POM]		c	0.000001	1 2	
55673897	1,2,3,4,7,8,9-Heptachlorodibenzofuran [POM]	07/96 *	c	0.000001	1 2	
39001020	1,2,3,4,5,6,7,8-Octachlorodibenzofuran [POM]	07/96 *	c	0.000001	1 2	
55722275	Total Tetrachlorodibenzofuran [POM]	07/96 *	c	0.000001	1 2	
30402154	Total Pentachlorodibenzofuran [POM]	07/96 *	c	0.000001	1 2	
55684941	Total Hexachlorodibenzofuran [POM]	07/96 *	c	0.000001	1 2	
38998753	Total Heptachlorodibenzofuran [POM]	09/89			1 2	[15]
#	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])		c	0.05	1 2 3 4 5	
1120714	1,3-Propane sultone		c	10.	1 2 3 4 5	
57578	beta-Propiolactone	06/91		200.	1 2	
123386	Propionaldehyde	06/91		100.	1 2	
114261	Propoxur [Baygon]			200.	1 2	
115071	Propylene		c	10.	1 2 3 4 5	
75569	Propylene oxide	06/91		100.	7	
-	1,2-Propyleneimine (see 2-Methylaziridine)	06/91		100.	1 2	
110861	Pyridine	06/91		100.	1 2	
91225	Quinoline		c	100.	1 2 4	[16]
106514	Quinone	09/89	c	100.	1 2 4	
1165	Radionuclides including but not limited to:	09/89	c	100.	1 4	
24267569	Iodine-131		c	100.	1 2 4 5	
1166	Radon and its decay products	06/91	c	0.5	2	
50555	Reserpine [POM]			0.5	1 2	[7]
#	Residual (heavy) fuel oils	09/90	c	0.1	2 4 5	[7]
7782492	Selenium		c	0.1	1 3 4	
*	Selenium compounds including but not limited to:	06/91		2.	7	
7446346	Selenium sulfide	06/91		2.	1	[7]
1175	Silica, crystalline			2.	1 2	
7440224	Silver					
*	Silver compounds					
1310732	Sodium hydroxide					

APPENDIX A-I
Substances For Which Emissions Must Be Quantified

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100425	Styrene		c	100.	1 2 3 6	
96093	Styrene oxide		c	100.	1 2 3 4	
7664939	Sulfuric acid	06/91		2.	1	
100210	Terephthalic acid	06/91		100.	1	
79345	1,1,2,2-Tetrachloroethane	09/90	c	1.	1 2 4	
7440280	Thallium	06/91		100.	7	
*	Thallium compounds	06/91		100.	7	[7]
62555	Thioacetamide		c	0.01	3 4 5	
62566	Thiourea		c	0.1	1 3 4 5	
7550450	Titanium tetrachloride	06/91		100.	1 2	
108883	Toluene			200.	1 2 4 6	
-	2,4-Toluenediamine (see 2,4-Diaminotoluene)					
1204	Toluene diisocyanates including but not limited to:	06/91	c	0.1	1 3	
584849	Toluene-2,4-diisocyanate		c	0.1	1 2 3 5	
91087	Toluene-2,6-diisocyanate		c	0.1	1 2 3 5	
95534	o-Toluidine		c	10.	1 2 3 4 5	
8001352	Toxaphene (Polychlorinated camphenes)		c	100.	1 2 3 4 5	
79005	1,1,2-Trichloroethane (Vinyl trichloride)	06/91	c	50.	1 2 4	
-	1,1,1-Trichloroethane (see Methyl chloroform)					
79016	Trichloroethylene		c	20.	1 2 4	
-	2,4,6-Trichlorophenol (see Chlorophenols)					
96184	1,2,3-Trichloropropane	07/96 *	c	200.	3 4 7	
121448	Triethylamine	06/91 *		20.	1 2	
1582098	Trifluralin	06/91		100.	1 2	
95636	1,2,4-Trimethylbenzene	06/91		5.	1	
540841	2,2,4-Trimethylpentane	06/91		100.	1 2	
51796	Urethane (Ethyl carbamate)		c	0.1	1 2 3 4 5	
7440622	Vanadium (fume or dust)	06/91		10.	7	[17]
108054	Vinyl acetate	06/91		200.	1 2	
593602	Vinyl bromide		c	20.	1 2 3 4	
75014	Vinyl chloride		c	0.5	1 2 3 4 5	
100403	4-Vinylcyclohexene	07/96 *	c	5.	3	
75025	Vinyl fluoride	07/96 *	c	200.	3	
75354	Vinylidene chloride			20.	1 2	
1206	Wood preservatives (containing arsenic and chromate)	09/89		100.	6	
1210	Xylenes (mixed xylenes) including:			200.	1 2 6	
108383	m-Xylene	06/91		200.	1 2	
95476	o-Xylene	06/91		200.	1 2	
106423	p-Xylene	06/91		200.	1 2	
7440666	Zinc			2.	2	
*	Zinc compounds including but not limited to:	09/89		2.	1 2	[7]
1314132	Zinc oxide			2.	2	[7]

*NOTE: The notation "7/96 *" indicates most recently added substances.*

APPENDIX A-II

SUBSTANCES FOR WHICH PRODUCTION, USE, OR OTHER PRESENCE MUST BE REPORTED

APPENDIX A-II

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

Emittent ID (Note [1])	Substance Name (Note [2])	Add Date (Note [3])	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	
62476599	Acifluorfen [POM]	09/90	c	1 2 4	
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	
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	
-	2-Amino-9H-pyrido(2,3-b)indole (see A-alpha-C)				
134292	o-Anisidine hydrochloride		c	4 5	
104949	p-Anisidine	06/91		7	
140578	Aramite		c	3 4	
492808	Auramine [POM]		c	1 2 3 4 5	
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	
1694093	Benzyl violet 4B [POM]		c	1 2 3 4	
1025	Betel quid with tobacco		c	3 4	
494031	N-N-Bis(2-chloroethyl)-2-naphthylamine (Chlornaphazine) [PAH-Derivative, POM]		c	1 2 3 4 5	
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	
25013165	Butylated hydroxyanisole (BHA)		c	3 4	
123728	Butyraldehyde	06/91		7	
3068880	beta-Butyrolactone		c	3 4	
630080	Carbon monoxide	09/89		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	
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	

APPENDIX A-II

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

Emittent ID (Note [1])	Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Source List(s) (Note [6])	Other Notes(s)
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	
6358538	Citrus Red No. 2 [POM]		c	1 2 3 4	
8007452	Coal tars	09/89	c	3 4 5	
21725462	Cyanazine	09/90		4	
14901087	Cycasin		c	3 4	
13121705	Cyhexatin	09/89		4	
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	
1596845	Daminozide	09/90	c	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	
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	

APPENDIX A-II

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

Emittent ID (Note [1])	Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Source List(s) (Note [6])	Other Notes(s)
2475458	Disperse Blue 1 [PAH-Derivative, POM]	06/91	c	1 2 3 4	
541413	Ethyl chloroformate	06/91		7	
62500	Ethyl methanesulfonate		c	3 4	
2164172	Fluometuron	06/91		7	
133073	Folpet	09/89	c	4	
3570750	2-(2-Formylhydrazino)-4-(5-nitro-2-furyl)thiazole		c	3 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	
1024573	Heptachlor epoxide	09/89	c	4	
1335871	Hexachloronaphthalene [PAH-Derivative, POM]	06/91		1 2 7	
10034932	Hydrazine sulfate		c	4 5	
76180966	IQ (2-Amino-3-methylimidazo[4,5-f]quinoline)		c	3 4	
78842	Isobutyraldehyde	06/91		7	
120581	Isosafrole	09/90	c	4	
4759482	Isotretinoin			4	
77501634	Lactofen [POM]	09/89	c	1 2 4	
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	
59052	Methotrexate	09/89		4	
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	
70257	N-Methyl-N'-nitro-N-nitrosoguanidine		c	3 4	
-	N-Methyl-N-nitrosourethane (see N-Nitroso-N-methylurethane)				
924425	N-Methyloacrylamide	09/90	c	4	
9006422	Metiram	09/90		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	

APPENDIX A-II

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

Emittent ID (Note [1])	Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Source List(s) (Note [6])	Other Notes(s)
2385855	Mirex		c	3 4 5	
315220	Monocrotaline		c	3 4	
505602	Mustard gas [Sulfur mustard]		c	3 4 5	
134327	1-Naphthylamine [PAH-Derivative, POM]	09/90	c	1 2 4	
91598	2-Naphthylamine [PAH-Derivative, POM]		c	1 2 3 4 5	
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	
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	
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
794934	Panfuran S [Dihydroxymethylfuratrizine]		c	3 4	
122601	Phenyl glycidyl ether	09/90	c	3 4	
57410	Phenytoin [POM]		c	1 2 3 4 5	
88891	Picric acid	06/91			7
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	
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	

APPENDIX A-II
Substances For Which Production, Use, Or Other Presence Must Be Reported

Emittent ID (Note [1])	Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Source List(s) (Note [6])	Other Notes(s)
95067	Sulfallate		c	3 4 5	
5216251	p-alpha,alpha,alpha-Tetrachlorotoluene	09/90	c	4	
961115	Tetrachlorvinphos	06/91		7	
509148	Tetranitromethane	09/90	c	4	
139651	4,4'-Thiodianiline [POM]		c	1 2 3 4	
1314201	Thorium dioxide		c	4 5	
1200	Tobacco products, smokeless		c	3 4	
1205	alpha-chlorinated Toluenes		c	3	
636215	o-Toluidine hydrochloride		c	4 5	
106490	p-Toluidine	09/90	c	4	
52686	Trichlorfon	06/91		7	
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	
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	

APPENDIX A-III

SUBSTANCES WHICH NEED NOT BE REPORTED

UNLESS MANUFACTURED BY THE FACILITY

APPENDIX A-III

Substances Which Need Not Be Reported Unless Manufactured By the Facility

Emittent ID (Note [1])	Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Source List(s) (Note [6])	Other Notes(s)
546883	Acetohydroxamic acid	09/90		4	
50760	Actinomycin D	09/90	c	4	
23214928	Adriamycin [PAH-Derivative, POM]		c	1 2 3 4 5	
28981977	Alprazolam [POM]	09/90		1 2 4	
39831555	Amikacin sulfate	09/90		4	
54626	Aminopterin			4	
1005	Analgesic mixtures containing phenacetin		c	3 4 5	
1010	Androgenic (anabolic) steroids including but not limited to:		c	3 4	
58184	Methyltestosterone	09/90		4	
434071	Oxymetholone		c	4 5	
58220	Testosterone and its esters including but not limited to:	09/89		4	
315377	Testosterone enanthate	09/90		4	
50782	Aspirin	06/91		4	
115026	Azaserine		c	3 4	
5411223	Benzphetamine hydrochloride [POM]	09/90		1 2 4	
154938	Bischloroethyl nitrosourea		c	3 4	
55981	1,4-Butanediol dimethanesulfonate (Busulfen/ Myleran)		c	3 4 5	
41575944	Carboplatin	09/90		4	
474259	Chenodiol	09/90		4	
305033	Chlorambucil		c	3 4 5	
56757	Chloramphenicol		c	3 4	
1620219	Chlorcyclizine hydrochloride [POM]			1 2 4	
13010474	1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU)		c	3 4 5	
13909096	1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1-nitrosourea (Methyl CCNU)		c	3	
15663271	Cisplatin		c	3 4	
50419	Clomiphene citrate [POM]	09/90		1 2 4	
50180	Cyclophosphamide		c	3 4	
147944	Cytarabine	09/89		4	
4342034	Dacarbazine		c	3 4 5	
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	
84173	Dienestrol [POM]	09/90	c	1 2 4	
564250	Doxycycline	09/90		4	
379793	Ergotamine tartrate [POM]	09/90		1 2 4	
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	

APPENDIX A-III
Substances Which Need Not Be Reported Unless Manufactured By the Facility

Emittent ID (Note [1])	Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Source List(s) (Note [6])	Other Notes(s)
57636	Ethinyl estradiol		c	4 5	
72333	Mestranol		c	3 4 5	
33419420	Etoposide [POM]	09/90		2	
54350480	Etretinate			4	
51218	Fluorouracil	09/89		4	
76437	Fluoxymesterone	09/90		4	
13311847	Flutamide	09/90		4	
67458	Furazolidone	09/90	c	4	
126078	Griseofulvin		c	3 4	
23092173	Halazepam [POM]	09/90		1 2 4	
3778732	Ifosfamide	09/90		4	
9004664	Iron dextran complex		c	3 4 5	
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	
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	
15475566	Methotrexate sodium	09/90		4	
484208	5-Methoxypsoralen		c	3	
56042	Methylthiouracil		c	3 4	
443481	Metronidazole		c	3 4 5	
59467968	Midazolam hydrochloride [POM]	09/90		1 2 4	
62015398	Misoprostol	09/90		4	
50077	Mitomycin C		c	3 4	
70476823	Mitoxantrone hydrochloride [PAH-Derivative, POM]	09/90		1 2 4	
139913	5-(Morpholinomethyl)-3-[(5-nitrofurfurylidene)amino]-2-oxazolidinone		c	3 4	
86220420	Nafarelin acetate [PAH-Derivative, POM]	09/90		1 2 4	
3771795	Nafenopin [POM]		c	1 2 3 4	
1405103	Neomycin sulfate	09/90		4	
56391572	Netilmicin sulfate	09/90		4	
61574	Niridazole		c	3 4	
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	
6533002	Norgestrel	09/90		4	
79572	Oxytetracycline	06/91		4	
115673	Paramethadione	09/90		4	
52675	Penicillamine	06/91		4	

APPENDIX A-III

Substances Which Need Not Be Reported Unless Manufactured By the Facility

Emittent ID (Note [1])	Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Source List(s) (Note [6])	Other Notes(s)
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	
50066	Phenobarbital		c	3 4	
59961	Phenoxybenzamine [POM]	09/89	c	1 2 4	
63923	Phenoxybenzamine hydrochloride [POM]	09/90	c	1 2 3 4 5	
54911	Pipobroman	09/90		4	
18378897	Plicamycin [PAH-Derivative, POM]	09/90		1 2 4	
366701	Procarbazine hydrochloride		c	3 4 5	
57830	Progesterone		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	
81072	Saccharin		c	3 4 5	
3810740	Streptomycin sulfate	06/91		4	
18883664	Streptozotocin		c	3 4 5	
54965241	Tamoxifen citrate [POM]	09/90		1 2 4	
846504	Temazepam [POM]	09/90		1 2 4	
64755	Tetracycline hydrochloride	06/91		4	
50351	Thalidomide			4	
154427	Thioguanine	09/90		4	
49842071	Tobramycin sulfate	09/90		4	
299752	Treosulfan		c	3 4	
28911015	Triazolam [POM]	09/90		1 2 4	
13647353	Trilostane	09/90		4	
127480	Trimethadione	06/91		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	

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.

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, "( )".

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.

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].

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.

The square bracket designation, "[ ]", indicates that the substance is a component of the chemical group heading(s) within the brackets.

The braces designation, "{ }", 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" 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 Ssection VII.E. and Appendix B.

Note	Text of Note

[6] Substances are required to be included on the Hot Spots list based on the following lists cited in Health & Safety Code Ssection 44321:

1 = California Air Resources Board (44321(c));

2 = Environmental Protection Agency (44321(e));

3 = International Agency for Research on Cancer; (44321(a); Labor Code section 6382(b)(1))

4 = Governor's List of Carcinogens and Reproductive Toxicants; (44321(b); HSC Ssection 25249.8)

5 = National Toxicology Program (44321(a));

6 = Hazard Evaluation System and Information Service (44321(d));

7 = Added pursuant to HSC Ssection 44321 (f).

[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).

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 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:

9901 Diesel exhaust, particulate matter
9902 Diesel exhaust, total organic gas
9910 Gasoline exhaust, particulate matter
9911 Gasoline exhaust, total organic gas

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 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.

Note	Text of Note

[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.

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.

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.

[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.

*NOTE: The notation "7/96 *" indicates most recently added substances.*

APPENDIX B

REPORTING FORMATS

AND INSTRUCTIONS

APPENDIX B-I

DATA ELEMENTS AND FORMATS

APPENDIX B-I

DATA ELEMENTS AND FORMATS REQUIRED FOR AIR TOXICS HOT SPOTS REPORTS (see note 1 at end)

I. FACILITY INFORMATION

COUNTY ID	Number (2)
FACILITY ID	Number (9)
AIR BASIN	Character (3)
DISTRICT ID	Character (3)
INVENTORY YEAR	Number (4)
FACILITY NAME	Character (30)
STREET ADDRESS	Character (30)
CITY	Character (20)
ZIP CODE	Number (5)
ZIP CODE EXTENSION	Number (4)
CONTACT PERSON	Character (24)
PHONE AREA CODE	Number (3)
PHONE NUMBER	Number (7)
FACILITY SIC CODE	Number (4)
NUMBER OF EMPLOYEES	Number (5)
UTM ZONE	Number (2)
UTM EAST COORDINATE (km)	Number (6, 3 decimal places)
UTM NORTH COORDINATE (km)	Number (7, 3 decimal places)
MAILING INFO (if different):	
MAILING COMPANY NAME	Character (30)
MAILING STREET ADDRESS	Character (30)
MAILING CITY	Character (20)
MAILING STATE	Character (2)
MAILING ZIP CODE	Number (5)
MAILING ZIP EXTENSION	Number (4)
MAILING CONTACT PERSON	Character (24)
FACILITY PHASE	Character (2) [OPTIONAL]
P1=Phase 1 Facility	
P2=Phase 2 Facility	
P3=Phase 3 Facility	
INDUSTRYWIDE	Character (1) [OPTIONAL]
Y=Yes, N=No	

NOTE: Include the Authorizing Signature With the Submittal of Data

II. STACK INFORMATION

COUNTY ID	Number (2)
FACILITY ID	Number (9)
AIR BASIN	Character (3)
DISTRICT ID	Character (3)
INVENTORY YEAR	Number (4)
ACTION CODE A=Add, D=Delete, C=Change	Character (1)
STACK ID	Number (~~5~~6)
STACK UTM EAST	Number (6, 3 decimal places)
STACK UTM NORTH	Number (7, 3 decimal places)
STACK HEIGHT	Number (4)
STACK DIAMETER (in feet)	Number (4, 1 decimal place)
GAS TEMPERATURE (in deg F)	Number (4)
GAS FLOW RATE (in cfm)	Number (8)
GAS VELOCITY (in ft/min)	Number (6)

NOTE: Include the Authorizing Signature With the Submittal of Data

III. DEVICE INFORMATION

COUNTY ID	Number (2)
FACILITY ID	Number (9)
AIR BASIN	Character (3)
DISTRICT ID	Character (3)
INVENTORY YEAR	Number (4)
ACTION CODE A=Add, D=Delete, C=Change	Character (1)
DEVICE ID	Number (~~5~~6)
DEVICE NAME	Character (20)
PERMIT ID	Character (16) [OPTIONAL]
NUMBER OF DEVICES	Number (5)

NOTE: Include the Authorizing Signature With the Submittal of Data

IV. PROCESS INFORMATION

	COUNTY ID	Number (2)
	FACILITY ID	Number (9)
	AIR BASIN	Character (3)
	DISTRICT ID	Character (3)
	DEVICE ID	Number (~~5~~6)
	INVENTORY YEAR	Number (4)
	ACTION CODE A=Add, D=Delete, C=Change	Character (1)
	PROCESS ID	Number (14)
*	PROCESS DESCRIPTION	Character (40)
	SCC	Number (8)
	SIC	Number (4)
*	PROCESS RATE	Number (Width limit 11)
*	MAXIMUM HOURLY PR. RATE	Number (Width limit 9)
	STACK ID (corresponding to this process)	Number (~~5~~6)
**	CONFIDENTIAL FLAG	Character (1)
	HOURS PER DAY	Number (2)
	DAYS PER WEEK	Number (2)
	WEEKS PER YEAR	Number (2)
	YEAR OF ESTIMATE	Number (4)
	DISTRICT PROD1	Character (~~8~~16) [OPTIONAL DISTRICT USE ONLY]
	DISTRICT PROD2	Character (8) [OPTIONAL DISTRICT USE ONLY]

Relative Monthly Throughput: (Percent range: 0 - 100.0%)

JANUARY	Number (4, 1 decimal place)
FEBRUARY	Number (4, 1 decimal place)
MARCH	Number (4, 1 decimal place)
APRIL	Number (4, 1 decimal place)
MAY	Number (4, 1 decimal place)
JUNE	Number (4, 1 decimal place)
JULY	Number (4, 1 decimal place)
AUGUST	Number (4, 1 decimal place)
SEPTEMBER	Number (4, 1 decimal place)
OCTOBER	Number (4, 1 decimal place)
NOVEMBER	Number (4, 1 decimal place)
DECEMBER	Number (4, 1 decimal place)

NOTE: Include the Authorizing Signature With the Submittal of Data

V. EMISSION INFORMATION

	COUNTY ID	Number (2)
	FACILITY ID	Number (9)
	AIR BASIN	Character (3)
	DISTRICT ID	Character (3)
	DEVICE ID	Number (~~5~~6)
	PROCESS ID	Number (14)
	INVENTORY YEAR	Number(4)
	ACTION CODE A=Add, D=Delete, C=Change	Character (1)
	POLLUTANT ID	Number (9)
	POLLUTANT ABBREV. NAME	Character (15)
*	UNCONTROLLED EMISSION FACTOR	Number (Width limit 10)
	CONTROL DEVICE - PRIMARY	Number (3)
	CONTROL DEVICE - SECONDARY	Number (3)
	CONTROL EFFICIENCY	Number (4, 1 decimal place)
*	EMISSION FACTOR	Number (Width limit 10)
	ANNUAL EMISSIONS (in lbs/yr) (except radionuclides in Curies/yr)	Number (Width limit 14)
	MAXIMUM HOURLY EMISSIONS (in lbs/hr) (except radionuclides in milliCuries/hr ~~yr~~)	Number (Width limit 10)
*	METHOD OF ESTIMATION	Number (2)

NOTE: Include the Authorizing Signature With the Submittal of Data

VI. SUPPLEMENTAL USE AND PRODUCTION (S-UP) INFORMATION

COUNTY ID	Number (2)
FACILITY ID	Number (9)
AIR BASIN	Character (3)
DISTRICT ID	Character (3)
INVENTORY YEAR	Number (4)
ACTION CODE A=Add, D=Delete, C=Change	Character (1)
POLLUTANT ID	Number (9)
POLLUTANT ABBREV. NAME	Character (15)
USED Y=Yes, N=No	Character (1)
PRODUCED Y=Yes, N=No	Character (1)
OTHERWISE PRESENT Y=Yes, N=No	Character (1)
HOW PRESENT	Character (39)

NOTE: Include the Authorizing Signature With the Submittal of Data

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NOTES TO APPENDIX B-I:

NOTE 1: The reporting forms in Appendix B-II contain data fields for reporting each of the required data elements listed in Appendix B-I. The list of elements in Appendix B-I defines what data elements are required to be reported and in what format (e.g., numeric, character, what length).

NOTES REGARDING CONFIDENTIAL/TRADE SECRET DATA DESIGNATION:

* **The data elements preceded by an asterisk are automatically protected as confidential when the CONFIDENTIAL field on the Process Information form (or other approved data submittal form) is filled in with a "Y", as discussed below.**

** **The CONFIDENTIAL data field on the Process Information form or submittal should be filled in with a "Y" (for Yes) to designate a claim of confidential trade secret data for a specific device and process. When the CONFIDENTIAL data field is "Y", then the data fields marked with an asterisk (*) on the Process Information and Emission Information submittals are protected as trade secret data under the provisions of Health and Safety Code section 44346. These data fields are "necessary data to calculate emissions" and are ~~the only~~ therefore appropriate data which may be designated as trade secret. (See also ~~S~~sections II.I., VII.B., VII.C.(3)(c), and the instructions in Appendix B-II.)**

APPENDIX B-II

REPORTING FORMS AND INSTRUCTIONS

~~(PUBLISHED UNDER SEPARATE COVER AND INCORPORATED BY REFERENCE)~~

[NOTE OF CLARIFICATION ON PROPOSED CHANGE: Appendix B-II, previously proposed to be included in the "Additional Appendices" document and incorporated by reference, is now proposed to be included in the "Emission Inventory Criteria and Guidelines Report".]

Appendix B - II

Reporting Forms and Instructions

The following instructions are for completing core reporting forms, the Supplemental Use and Production Information Form, and the Update Summary Form as explained in Ssections V, VII, and VIII of the Emission Inventory Criteria and Guidelines Report:

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

The **Supplemental Use and Production Information Form** shall be completed and submitted with the inventory report for all substances set forth in:

a) 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.

b) 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 VIII.E, unless a numeric estimate of such emissions is reported on an Emission Information Form for the appropriate emitting process. See the instructions for the Emission Information Form (Item (16)) for information on using the degree of accuracy values for reporting purposes.

c) Appendix A-III which are manufactured by any facility subject to the requirements set forth in VIII.E.(6).

The facility operator shall complete and submit to the district an **Update Summary Form** (US Form) as required to comply with the applicable update requirements specified in section V.A. - M.

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 the facility operator does not know this information, the operator may 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 shaded fields on the forms are fields used primarily for the criteria pollutant emission inventory reporting (under combined toxics and criteria pollutant reporting) or for district use. The shaded fields are not required to be filled out by the facility operator for purposes of Hot Spots reporting under this regulation.

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

CALIFORNIA EMISSION INVENTORY DEVELOPMENT AND REPORTING SYSTEM II (CEIDARS II)
REVIEW AND UPDATE REPORT - DATA BASE YEAR:
FACILITY INFORMATION

COUNTY ID * AIR BASIN * DISTRICT ID * PERSON :

DATE :

FACILITY ID * ACTION CODE INVENTORY YEAR :

FACILITY NAME :

ADDRESS :

CITY : ZIP : -

CONTACT PERSON : PHONE : -

FACILITY SIC : NUMBER OF EMPLOYEES :

UTM ZONE : UTM EAST : UTM NORTH :

-- MAILING

COMPANY NAME :

ADDRESS :

CITY : ST: ZIP : -

ATTENTION :

FACILITY CITY CODE AIRS AQCR SUBCOUNTY ID

AREA DESIGNATION CO NO2 OZ PM SO2

FACILITY PHASE FACILITY STATUS FORECAST ID PRIORITY INDUSTRY WIDE

DISTRICT USE FACD1 FACD2

Facility Information Form

In the space provided on the upper right of the form, initial and date the form, and fill in the inventory reporting year for which you are reporting data.

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

(2) Facility ID: Enter the district-assigned facility identification code. If the Facility ID is unknown, consult 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 Facility Information 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) Facility Name: The name of 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 and extension 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 unknown, consult the district.

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

(12) 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, consult the district, who should be able to provide guidance on assigning facility coordinates.

(13) Mailing Address: Name, Address, City, State, Zip code (and extension), 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.

Shaded: The following fields have been included on the reporting forms for one of two reasons:

a) Optional Fields: These fields will be completed by district staff as tracking tools for the Hot Spots program.

b) Additional/Optional Merged Data System Fields: These fields will also be completed by district staff(s) if your district has chosen to submit a merged emission inventory report to the criteria pollutant and toxics data collection system. These fields are primarily related to emissions of criteria pollutants.

(14) Optional Fields: The fields FACILITY CITY CODE, FACILITY PHASE, FACILITY STATUS, PRIORITY and INDUSTRY WIDE are optional fields for district use and do not need to be filled in by the facility.

(15) Additional/Optional Merged Data System Fields: The fields AIRS AQCR, SUBCOUNTY ID, AREA DESIGNATION, CO, NO2, OZ, PM, SO2, FORECASTID, FACD1 and FACD2 are optional fields for those using the reporting forms to report emissions to the merged data system. The merged system allows the reporting of toxics and criteria pollutant emissions in one submittal.

CALIFORNIA EMISSION INVENTORY DEVELOPMENT AND REPORTING SYSTEM II (CEIDARS II)
REVIEW AND UPDATE REPORT - DATA BASE YEAR:
STACK INFORMATION

COUNTY ID * ___ AIR BASIN * ___ DISTRICT ID * ___ PERSON :

FACILITY ID * _____ DATE :

INVENTORY YEAR :

ACTION CODE	STACK ID *	AIRS STACK NUMBER	UTM EAST (KM)	UTM NORTH (KM)	STACK HEIGHT (FEET)	STACK DIAMETER (FEET)	GAS TEMP (F)	GAS FLOW RATE (CFM)	GAS VELOCITY (FPM)

Stack Information Form

This form can be copied as many times as needed.

In the space provided on the upper right of the form, initial and date the form, and fill in the inventory reporting year for which you are reporting data.

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 this information is not known or provided, consult the district.

Report on the Stack Information 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 Information Form a non-ducted, non-directional release. Instead, specify "fugitive", if applicable, in the process description field on the Process Information Form.

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

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

(4) 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.

(5) 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, consult the district, who will provide guidance on assigning stack coordinates.

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

(7) 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).

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

(9) 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

(10) 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.

Shaded: The following fields have been included on the reporting forms for one of two reasons:

a) Optional Fields: These fields will be completed by district staff as tracking tools for the Hot Spots program.

b) Additional/Optional Merged Data System Fields: These fields will also be completed by district staff(s) if your district has chosen to submit a merged emission inventory report to the criteria pollutant and toxics data collection system. These fields are primarily related to emissions of criteria pollutants.

(11) Additional/Optional Merged Data System Fields: The field AIRS STACK NUMBER is an optional field for those using the reporting forms to report emissions to the merged data system. The merged system allows the reporting of toxics and criteria pollutant emissions in one submittal.

CALIFORNIA EMISSION INVENTORY DEVELOPMENT AND REPORTING SYSTEM II (CEIDARS II)
REVIEW AND UPDATE REPORT - DATA BASE YEAR:
DEVICE INFORMATION

COUNTY ID * ___ AIR BASIN * ____ DISTRICT ID * ____ PERSON :

FACILITY ID * _____ DATE :

INVENTORY YEAR :

ACTION CODE | DEVICE ID * | DEVICE NAME | PERMIT ID | NUMBER OF DEVICES | AIRS POINT ID | SUB COUNTY

CONFIDENTIAL | EQUIPMENT SIZE | UNIT | TYPE | SECT | TOWNSHIP | RANGE | DISTRICT USE DEV1 | DISTRICT USE DEV2

ACTION CODE | DEVICE ID * | DEVICE NAME | PERMIT ID | NUMBER OF DEVICES | AIRS POINT ID | SUB COUNTY

CONFIDENTIAL | EQUIPMENT SIZE | UNIT | TYPE | SECT | TOWNSHIP | RANGE | DISTRICT USE DEV1 | DISTRICT USE DEV2

Device Information Form

This form can be copied as many times as needed.

In the space provided on the upper right of the form, initial and date the form, and fill in the inventory reporting year for which you are reporting data.

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 this information is not known or provided, consult the district.

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

(2) Facility ID: Enter the district-assigned facility identification code. If the Facility ID is unknown, consult 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 (Process Information and Emission Information Form data) associated with the device.

(4) 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.

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

(6) Permit ID: The district permit number for the device, if available.

(7) 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.

Shaded: The following fields have been included on the reporting forms for one of two reasons:

a) Optional Fields: These fields will be completed by district staff as tracking tools for the Hot Spots program.

b) Additional/Optional Merged Data System Fields: These fields will also be completed by district staff(s) if your district has chosen to submit a merged emission inventory report to the criteria pollutant and toxics data collection system. These fields are primarily related to emissions of criteria pollutants.

(8) Additional/Optional Merged Data System Fields: The fields AIRS POINT ID, EQUIPMENT CONFIDENTIALITY CODE, EQUIPMENT SIZE, EQUIPMENT UNIT, EQUIPMENT TYPE, SUBCOUNTY, SECTION, TOWNSHIP, RANGE, DEVD1 and DEVD2 are optional fields for those using the reporting forms to report emissions to the merged data system. The merged system allows the reporting of toxics and criteria pollutant emissions in one submittal.

NOTE: If the facility operator is reporting under the merged toxics and criteria pollutant emission inventory system, the Equipment Size (found on the Device Information Form) may be identified as confidential by putting a "Y" in the Equipment Confidentiality field on the Device Information Form. See the Process Information Form instructions for identifying confidential data fields on the Process Information Form and Emission Information Form.

CALIFORNIA EMISSION INVENTORY DEVELOPMENT AND REPORTING SYSTEM II (CEIDARS II)
REVIEW AND UPDATE REPORT - DATA BASE YEAR:
PROCESS INFORMATION

COUNTY ID * AIR BASIN * DISTRICT ID * PERSON :

FACILITY ID * DEVICE ID * PROCESS ID * DATE :

INVENTORY YEAR :

ACTION CODE | DESCRIPTION | SCC | SIC

PROCESS RATE SCC UNITS /YR | MAXIMUM HOURLY PROCESS RATE | MAXIMUM DESIGN RATE SCC UNITS/HR | % SULFUR | PROCESS RATE ORIGIN | PROCESS RATE RELIABILITY | STACK ID

HOURS/ DAY | DAYS/ WEEK | WEEKS/ YEAR | YEARS OF ESTIMATE | PROD1 | DISTRICT USE | PROD2 | FORECAST ID | CONFIDENTIAL

RELATIVE MONTHLY THROUGHPUT

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

Process Information Form

In the space provided on the upper right of the form, initial and date the form, and fill in the inventory reporting year for which you are reporting 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 this information is not known or provided, consult the district.

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

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

(3) Device ID: The number of the device associated with the process. This device ID should be included on the Device Information Form.

(4) Process ID: Process ID identifies the process and is unique within a device and a specific process.

(5) Action Code/Process: Enter the appropriate Action Code: A, C, or D.
'A' indicates Add--A new process has been added to the facility. Include all corresponding data on a Process Information 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 associated with the process.

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

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

(8) SIC: The Standard Industrial Classification number best describing the industrial activity associated with the process. If this information is 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".

(9) Process Rate (in SCC Units/Yr): The actual annual process rate during the reporting year, expressed in the appropriate units specified for the SCC describing the process.

(10) Maximum Hourly Process Rate (in SCC units/hour): The greatest operating rate that would be expected for the source in a one hour period, expressed in the appropriate units specified for the SCC describing 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 Stack Information Form. By entering the stack ID on the Process Information 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 Process Information 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 Process Information Forms.

(12) Hours/Day: The number of hours per day the process is in operation during the reporting year. (Consult the district regarding codes to use for any non-uniform operation.)

(13) Days/Week: The number of days per week the process is in operation during the reporting year. (Consult the district regarding codes to use for any non-uniform operation.)

(14) Weeks/Year: The number of weeks per year the process is in operation during the reporting year.

(15) Year of Estimate/Process: Enter the year that corresponds to the process data submitted. 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/Process field should be set to 1991.

(16) CONFIDENTIAL: For identifying trade secret data. Indicate if any of the data items required on the facility diagram and designated on the facility diagram as instructed under ~~S~~section VII.B are trade secrets by placing a "Y" in the confidential box. Putting a "Y" in this box identifies as confidential the following data fields on the Process Information Form and Emission Information Form:

Process Description, Process Rate, Maximum Hourly Process Rate, ~~Maximum Design Rate, % Sulfur in fuel~~ (~~all~~ found on the Process Information Form), Uncontrolled Emission Factor, Emission Factor, ~~Emission Factor Origin Code,~~ and Method of Estimate Code (~~all~~ found on the Emission Information Form).

NOTE: If the facility operator is also reporting under the merged toxics and criteria pollutant emission inventory system, the Equipment Size (found on the Device Information Form), the Maximum Design Rate, and % Sulfur in fuel (found on the Process Information forms), and the Emission Factor Origin Code (found on the Emission Information Form) may also be identified as confidential by putting a "Y" in the ~~Equipment~~ corresponding Confidentiality field on the ~~Device Information Form~~ appropriate form.

A facility operator may notify the district in writing in the emission inventory report that additional information is a trade secret. However, this additional information will not be included in the state board's data system.

Refer to ~~S~~section 44346 of the Health and Safety Code for additional information about trade secret data and its disclosure.

(17) Relative Monthly Throughput: 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.

Shaded: The following fields have been included on the reporting forms for one of two reasons:

a) Optional Fields: These fields will be completed by district staff as tracking tools for the Hot Spots program.

b) Additional/Optional Merged Data System Fields: These fields will also be completed by district staff(s) if your district has chosen to submit a merged emission inventory report to the criteria pollutant and toxics data collection system. These fields are primarily related to emissions of criteria pollutants.

(18) Additional/Optional Merged Data System Fields: The fields MAXIMUM DESIGN RATE (in SCC UNITS/HR), % SULFUR in fuel, PROCESS RATE ORIGIN, PROCESS RATE RELIABILITY, PROD1, PROD2, and FORECASTID are optional fields for those using the reporting forms to report emissions to the merged data system. The merged system allows the reporting of toxics and criteria pollutant emissions in one submittal.

CALIFORNIA EMISSION INVENTORY DEVELOPMENT AND REPORTING SYSTEM II (CEIDARS II)
REVIEW AND UPDATE REPORT - DATA BASE YEAR:
EMISSION INFORMATION

COUNTY ID * AIR BASIN * DISTRICT ID * PERSON :

FACILITY ID * DEVICE ID * PROCESS ID * DATE :

INVENTORY YEAR :

ACTION CODE | POLLUTANT ID * | POLLUTANT ABBREVIATED NAME

UNCONTROLLED EMISSION FACTOR | CONTROL DEVICES PRIMARY | CONTROL DEVICES SECONDARY | CONTROL EFFICIENCY | EMISSION FACTOR | EMISSION FACTOR ORIGIN | EMISSION FACTOR RELIABILITY | FRACTION ROG/PM10 | FRACTION VOC/PM2.5

ANNUAL EMISSIONS | HOURLY MAX EMISSIONS | METHOD OF ESTIMATE | REASON FOR CHANGE | DISTRICT USE POTENTIAL EMISSIONS | FORECAST ID

ACTION CODE | POLLUTANT ID * | POLLUTANT ABBREVIATED NAME

UNCONTROLLED EMISSION FACTOR | CONTROL DEVICES PRIMARY | CONTROL DEVICES SECONDARY | CONTROL EFFICIENCY | EMISSION FACTOR | EMISSION FACTOR ORIGIN | EMISSION FACTOR RELIABILITY | FRACTION ROG/PM10 | FRACTION VOC/PM2.5

ANNUAL EMISSIONS | HOURLY MAX EMISSIONS | METHOD OF ESTIMATE | REASON FOR CHANGE | DISTRICT USE POTENTIAL EMISSIONS | FORECAST ID

Emission Information Form

In the space provided on the upper right of the form, initial and date the form, and fill in the inventory reporting year for which you are reporting data.

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

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

(3) Device ID: The number of the device associated with the process. This device ID should be included on the Device Information Form.

(4) Process ID: Process ID identifies the process and is unique within a device and a specific process. This Process ID should be included on the Process Information Form.

(5) Action Code/Emissions: Enter the appropriate Action Code: A, C, or D.
'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.

(6) Pollutant ID: Enter the Chemical Abstracts Service Registry number (CAS number) or Emittent ID code created by the ARB for substances in Appendix A-I, A-II, or A-III.

Mixtures: In accordance with section VIII.F, 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 that 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.

(d) To avoid double counting of emissions in the cases listed in sections VIII.F.(7) and (8), pertaining to polycyclic aromatic hydrocarbons (PAHs) and polychlorinated dibenzo-p-dioxins (dioxins), respectively, the following instructions apply:

(i) Where the emissions of the individual substances are required to be quantified by source testing or other methods, the emissions shall be reported for each individual substance using the corresponding CAS number or 4-digit Emittent ID code. Also, emissions of all substances source tested (even if not individually listed) for the substance group (PAHs or dioxins) shall be summed and reported using the Emittent ID code indicating "Total, with individual substances also reported."

(ii) 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 emissions of individually listed substances, only the aggregate substance shall be reported, using the Emittent ID code indicating "Total, with individual substances not reported."

(7) Pollutant Abbreviated 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.

(8) Uncontrolled Emission Factor: The average rate at which the pollutant is emitted to the atmosphere in pounds per SCC process unit, not including the effect of any pollution control equipment which reduces emissions of the listed emittent.

(9) Control Device Codes (Primary and Secondary) and Control Efficiency Code: The primary control device 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, a secondary control device may be the only equipment controlling the listed emittent or may be used in conjunction with the primary control device which has a greater effect in reducing the listed emittent.

Enter the 3-digit code number from Table B-II that best describes the control device equipment used for a listed emittent, if applicable.

Table B-II also shows the various emittents, Particulate Matter (PM), Total Organic Gases (TOG), and Sulfur Dioxide (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.

On the far right-hand side of Table B-II 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 device if it 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.

(10) Emission Factor: The average rate at which the pollutant is actually being emitted to the atmosphere in pounds per SCC process unit. The emission factor should include the effect of any pollution control equipment which reduces emissions of the listed emittent.

(11) Annual 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 VIII.E) in reporting facility emissions, refer to item (16). For reporting emissions derived from below Limit of Detection (LOD) source test data, refer to the Below Limit of Detection Emissions instructions in item (17).

(12) Hourly Maximum Emissions: 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.

(13) Method of Estimate: Enter a code from Table B-III that describes the method used to collect or calculate the emissions of this substance.

(14) Reason for Change: Enter a code from Table B-IV that describes the reason for the change in the emissions.

Shaded: The following fields have been included on the reporting forms for one of two reasons:

a) Optional Fields: These fields will be completed by district staff as tracking tools for the Hot Spots program.

b) Additional/Optional Merged Data System Fields: These fields will also be completed by district staff(s) if your district has chosen to submit a merged emission inventory report to the criteria pollutant and toxics data collection system. These fields are primarily related to emissions of criteria pollutants.

(15) Additional/Optional Merged Data System Fields: The fields EMISSION FACTOR ORIGIN, EMISSION FACTOR RELIABILITY, FRACTION ROG/PM10, FRACTION VOC/PM2.5, DISTRICT USE/POTENTIAL EMISSIONS, and FORECASTID are optional fields for those using the reporting forms to report emissions to the merged data system. The merged system allows the reporting of toxics and criteria pollutant emissions in one submittal.

Using Degree of Accuracy Values in Reporting Facility Emissions

(16) **Degree of Accuracy.** The general use of the degree of accuracy values is described in section VIII.E 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 Emission Information Forms. In other words, if facility emissions of a substance exceed one-half of the applicable degree of accuracy unit for the substance, then the substance emissions shall be reported on Emission Information Forms. For example, assume that the total emissions of benzene from a facility are 1.7 lbs/year. The degree of accuracy value for benzene is 2 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 0.9 lbs/yr, the emissions (to the nearest unit of two pounds) would round down to zero and would not need to be reported on any Emission Information Form. However, the presence of benzene would be required to be reported on the Supplemental Use and Production Information 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 (17) below).

Reporting Emissions Derived from Below the Limit of Detection Source Test Results

(17) **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 detectable limits for use in emissions computations.

The resultant Annual Emissions (in pounds per year) and the Hourly Max Emissions (in pounds per hour) shall be reported on the "Emission Information Form". In addition, a value of "**98**" must be recorded in the "Method of Estimate" field on the Emission Information 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 Method of Estimate 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 Emissions and the Hourly Max Emissions on the "Emission Information Form" as "0" followed by "ND". In addition, a value of "**99**" must be recorded in the "Method of Estimate" field on the Emission Information Form. The code of "99" indicates that a source test was conducted, but that **all** runs were below detectable limits.

When these 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.

CALIFORNIA EMISSION INVENTORY DEVELOPMENT AND REPORTING SYSTEM II (CEIDARS II)
REVIEW AND UPDATE REPORT - DATA BASE YEAR:
SUPPLEMENTAL USE AND PRODUCTION INFORMATION

COUNTY ID * AIR BASIN * DISTRICT ID * PERSON :

DATE :

FACILITY ID * INVENTORY YEAR :

ACTION CODE | POLLUTANT ID * | POLLUTANT ABBREVIATED NAME | USED | PRODUCED

PRESENT | HOW_PRESENT

ACTION CODE | POLLUTANT ID * | POLLUTANT ABBREVIATED NAME | USED | PRODUCED

PRESENT | HOW_PRESENT

ACTION CODE | POLLUTANT ID * | POLLUTANT ABBREVIATED NAME | USED | PRODUCED

PRESENT | HOW_PRESENT

Supplemental Use and Production Information Form

Copy the form as many times as necessary for your facility.

The Supplemental Use and Production Information 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 Supplemental Use and Production Information Form unless the emissions are based on source test results or reported on Emission Information Forms.

(b) Substances listed in Appendix A-II that are used, produced, or otherwise present at the facility are to be reported on the Supplemental Use and Production Information Form.

(c) Substances listed in Appendix A-III that are manufactured and released to the air.

(1) In the space provided on the upper right of the form, initial and date the form, and fill in the inventory reporting year for which you are reporting data.

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

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

(4) Action Code: Enter the appropriate Action Code: A, C, or D.
'A' indicates Add--A new substance is being reported for the facility on the Supplemental Use and Production Information 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) Pollutant ID: Enter the Chemical Abstracts Service Registry number (CAS number) or Emittent ID code created by the ARB for substances in Appendix A-I, A-II, or A-III. Refer to the Emission Information Form Emittent ID instructions for instructions on reporting listed substances which are mixtures or classes of substances.

(6) Pollutant Abbreviated 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 Field - "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.

(8) Substance Produced Field - "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.

(9) Substance Present Field - "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 the space provided if the reported substance is present at the facility.

INVENTORY YEAR 19__	AIR TOXICS EMISSION DATA SYSTEM REVIEW AND UPDATE REPORT UPDATE SUMMARY FORM	FORM US Page 1

Part A To be completed by all facility operators subject to Sections V. C. and E.

COMPANY NAME

FACILITY ID

ADDRESS

COUNTY ID

CITY

ZIP CODE

AIR BASIN

DISTRICT

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 Section V. C.

(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 Section V. C.

(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 Section V. 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 Section V. C.]

Answer: Yes ☐ No ☐ If yes, update all required information via an update plan and report, or an alternative, in accordance with sections V. C and V. I. – M.

Specify: _____

_____

_____

Update Summary Form (US Form)

Note: All information provided on the Update Summary Form is subject to verification by the district staff.

For the purposes of completing the Update 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, consult the district. Using Table B-I, locate and enter the appropriate County ID, Air Basin, and District ID 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 Ssection V.C. 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 V.J.(3) 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 section V.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 V.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 V.C which answer "Yes" to question (7), updated process and emissions data for the identified devices with increases shall be reported via an update plan and report as specified in sections V.C. and V.I - V.M.

For those facilities with no device activity increases (question (7) is "No"), the Update Summary Form shall meet their update requirements unless, based upon data reported on the Update 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 Information Form(s) and Emission Information Form(s) must be submitted by the facility operator for any individual device or groups of devices (reported on the same Process Information Form) whose activity increases by 10 percent or more.

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	SS	SALTON SEA	IMP	IMPERIAL COUNTY APCD
14	INYO	GBV	GREAT BASIN VALLEYS	GBU	GREAT BASIN UNIFIED APCD
15	KERN	MOJ	MOJAVE 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	MOJ	MOJAVE 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	MOJ	MOJAVE DESERT	SC	SOUTH COAST AQMD
33	RIVERSIDE	MOJ	MOJAVE DESERT	MOJ	MOJAVE DESERT AQMD
33	RIVERSIDE	SS	SALTON SEA	~~MOJ~~	~~MOJAVE DESERT AQMD~~
				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	MOJ	MOJAVE DESERT	MOJ	MOJAVE DESERT AQMD
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

CONTROL DEVICE 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			
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			
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			
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[4], 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		
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			

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[a] Particulate Matter

[b] Total Organic Gases

[c] Sulfuric Oxides

[d] Chloromethanes include Methylene chloride, Chloroform, and Carbon tetrachloride.

TABLE B-III
METHOD OF ESTIMATE 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 Emissions 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 measurement conducted; however emissions from some (but not all) test runs were below detection limit.

99 Source test or measurement conducted; however emissions from all test runs were below detection limit.

* [NOTE: The double underlines on the capitalized subtitle lines indicate that these are underlined subtitles, not re-revised text. The underlines will remain in the final approved text.]

TABLE B - IV
REASON FOR CHANGE CODES AND DESCRIPTION

CODE NO.	REASON FOR CHANGE	EXPLANATION
1	Control Regulation	Process emissions are lower than the previous year because a rule or regulation has required a permanent change to the operation, process, or equipment.
2	Voluntary Control	Process emissions are lower than the previous year because of voluntary modification to the equipment, process or operating hours. Reduction in emissions may not be permanent.
3	Change in Operation	Process emissions may be higher or lower then the previous year and are due to normal seasonal or economic changes in the facility activity.
4	Previously Unreported	Emissions are higher because of emissions that were not recorded in the previous year data base.
5	New\Modified Source	An increase in emissions because of new equipment or a process that was not in operation in previous years.
6	Ceased Operation	A decrease in emissions because the equipment or process that was in operation the previous year will not operate in the future.
7	Temporary change	Process emissions are higher or lower than previous year emissions because of special circumstances that are not anticipated to continue into subsequent years. For example, equipment malfunction or a plant operating on a variance.
8	Error	Emissions are higher or lower than the previous year emissions because of an error in the previous year's data. This code would only be used to correct an error. Reasons 1,2 or 3 should be used if they are more significant.
9	Better Emission Factor/Method	Change in emission factor or change in method of emission estimate.

APPENDIX C

FACILITY GUIDELINE INDEX

(FACILITY "LOOK-UP" TABLE)

~~(PUBLISHED UNDER SEPARATE COVER AND INCORPORATED BY REFERENCE)~~

[NOTE OF CLARIFICATION ON PROPOSED CHANGE: Appendix C, previously proposed to be included in the "Additional Appendices" document and incorporated by reference, is now proposed to be included in the "Emission Inventory Criteria and Guidelines Report".]

APPENDIX C - I

RESPONSIBILITIES OF ALL FACILITIES

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) PAHs are composed of the following substances:

Acenaphthene
Acenaphthylene
Anthracene
Benz[a]anthracene
Benzo[b]fluoranthene
Benzo[j]fluoranthene
Benzo[k]fluoranthene
Benzo[a]pyrene
Benzo[g,h,i]perylene
Chrysene
Dibenzo[a,h]anthracene
Dibenzo[a,e]pyrene
Dibenzo[a,h]pyrene
Dibenzo[a,i]pyrene
Dibenzo[a,l]pyrene
Fluoranthene
Fluorene
Indeno[1,2,3,-cd]pyrene
Naphthalene
Phenanthrene
Pyrene

(3) Substances emitted by a particular device or process may not be limited to those listed in this 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.**

(4) 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

(5) 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.

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 3)
FUEL/WASTE COMBUSTION		
Boilers, Heaters, Kilns IC Engines, Furnaces 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 2 (Notes appear at the beginning of this index.)

Device/Process	Types of Emissions	Specific Substances (see Note 3)
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
Flares	Particulate metals including but not limited to:	Arsenic, Beryllium, Chromium, Lead, Mercury, Nickel Any other listed metal
	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 Also see Boilers, Heaters, IC Engines, etc, Appendix C-I		
Incinerators - see ALL other combustion releases, but pay particular attention to the following:		
	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 3)
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 3)
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
Resin Application	From adhesives	Carbon tetrachloride, Chloroform, Methylene chloride, Toluene, TCE
Coating Application	From wood finishing	Dioxane, Methylene chloride, Perc, Toluene
Flashoff	From metal finishing	Perc, Toluene, TCA
Baking/Curing		Formaldehyde
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
Process Vents		Transported listed substances
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 including but not limited to:	Each pure organic stored or transferred that is a listed substance
Tank Breathing		Each component of a mixture that is a listed substance
Fugitives		
Equipment Leaks	Gaseous and aerosol organic compounds From: vents, tanks, condensers pumps, valves, compressors	Emissions vary according to substances involved in specific process

Device/Process	Types of Emissions	Specific Substances (see Note 3)
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
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 Treatment		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 Also see Printing & Publishing, Appendix C-II		
Sterilizers		ETO, Formaldehyde, Lead, Toluene, Propylene oxide
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 3)
OTHER PROCESSES, Surface Coating, continued		
	Additives - Curing agents, Surfactants, Defoamers, Thickeners, Film-control agents Plasticizers	
Wastewater Treatment		Ammonia
		Benzene, Chloroform, EDC, Methylene chloride, TCE, Vinyl chloride, Any other listed substances
CONTROL EQUIPMENT	Emission reductions must be quantified: For each listed substance & device	

APPENDIX C- II

FURTHER RESPONSIBILITIES

FOR SPECIFIC FACILITY CLASSES

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
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) PAHs are composed of the following substances:

Acenaphthene
Acenaphthylene
Anthracene
Benz[a]anthracene
Benzo[b]fluoranthene
Benzo[j]fluoranthene
Benzo[k]fluoranthene
Benzo[a]pyrene
Benzo[g,h,i]perylene
Chrysene
Dibenzo[a,h]anthracene
Dibenzo[a,e]pyrene
Dibenzo[a,h]pyrene
Dibenzo[a,i]pyrene
Dibenzo[a,l]pyrene
Fluoranthene
Fluorene
Indeno[1,2,3,-cd]pyrene
Naphthalene
Phenanthrene
Pyrene

(3) Substances emitted by a particular device or process may not be limited to those listed in this 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.**

(4) 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

(5) 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.

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 3)
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
Agricultural 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
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, Appendix C-II		
Asbestos - see Mining Non-Metals, Appendix C-II		

* See Note 2 (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)
Asphalt Materials Mfg		
Asphalt Felts & Coatings - see Petroleum & Coal Products, Appendix C-II		
Asphaltic Concrete Prod (Including Asphalt Paving Materials Mfg)		
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/Repair - see Transportation Equipment, Appendix C-II		
Boat Building/Repair - see Transportation Equipment (Ship & Boat Building), 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 variable vapor space 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/Repair - 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)
Canned Food Product Mfg. 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/Repair - 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 Combustion Processes - see Combustion, Appendix C-I		Beryllium
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
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)
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		
Nitrogenous		Ammonia, Hydrogen sulfide, Mercury, Metal compounds, Methanol, Phosphorus, Sodium hydroxide
Phosphatic		Ammonia, Cadmium, Hydrogen sulfide, Lead Nickel
Mixing Only		Ammonia, Arsenic, Cadmium, Hydrogen sulfide
Sodium Arsenate		Ammonia Arsenic
Aldehyde Mfg		Aldehydes, Toluene
Anti corrosives Mfg		Cresols, Hydrazine
Bases Mfg		Ammonia, Hydrazine, Sodium hydroxide
Carbon Black & Charcoal Mfg		Ammonia, BaP & other PAHs*, Formaldehyde, Hydrogen sulfide, POM Any other listed metals
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 Also see Chem Mfg, Industrial Inorganics, Alkalies & Chlorine, Appendix C-II	From: hydrogen stream	Mercury

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)
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)
Chemical Mfg continued Fertilizers - see Chemical Mfg (Agricultural), Appendix C-II		
Flame Retardants Mfg		Hexachlorocyclopentadiene
Fluorocarbon Mfg Reactor Venting Distillation Storage	From: vents, storage	Carbon Tetrachloride, Chloroform
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-Butadiene, 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, 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)
Chemical Mfg, Cyclic Crudes, continued		
Gum & Wood Chemicals		
Wood Chem Mfg		Nitrosomorpholine, Pentachlorophenol (Chlorophenols), Phenol, Phosgene, Phthalic anhydride, POM, PAHs*, Styrene, Toluene, Toluene diisocyanate, TCE Xylenes, Vinyl chloride
Cresol		Arsenic, Benzene, BaP & other PAHs*, Chromium, Formaldehyde, Naphthalene, POM, Toluene diisocyanate
Cresylic Acid		Cresols, Phenol, Xylenes
Phenol		
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		Dioxane, Toluene
Miscellaneous		Ammonia, Arsenic, Benzene, Cadmium, Copper, Formaldehyde, Lead, Perc, Toluene, Vinyl chloride, Xylenes, Zinc
Printing		Cupferron, Thiourea
Metal Chelating Agent Mfg		
Corrosion Inhib,		Acrolein
Metal Treatment Chems		
Methionide Analogs Prod (poultry feed supp.)		Ethylene dichloride
Methyl Chloroform Prod	From: hydrochlorinated vent condenser, steam stripper vent condenser	Chloroform, EDC, Phosgene, Toluene
Military Chem Prod		
Monomers		Acetaldehyde, Acrylonitrile, Ammonia, Benzene, 1,3-Butadiene, Carbon tetrachloride, Chlorine, Chlorofluorocarbons, Dioxane, Epichlorohydrin, Ethyl chloride, EDB, EDC, ETO, Formaldehyde, Glycol ethers, Hydrochloric acid, Isocyanates, Maleic anhydride, Methyl bromide, Methyl methacrylate, Methylene chloride, Naphthalene, Nitrobenzene, Perc, Phenol, Phthalic anhydride,
Miscellaneous		

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)
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
Nuclear Fuel Fabrication		EDC
Organic Chem Mfg		Radionuclides
Paints & Allied Prod's		Acrylamide, Acrylonitrile, Carbon tetrachloride, Chlorobenzene, Chloroform, Methylene chloride, Perc, Toluene
Pigment		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
Perfume		Benzyl chloride, Cadmium, Toluene
Pesticides, Herbicides, Fungicides Mfg		Dimethyl sulfate
		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 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)
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 Production & Compounding	Gaseous, Aerosol, & Particulate releases including but not limited to:	
Synthetic Monomers		Acrylonitrile, 1,3-Butadiene, Chloropyrene, Epichlorohydrin, Ethyl acrylate, EDC, ETO, Propylene, Styrene
		n-Nitrosodiphenylamine, Phthalic anhydride
Retardants		Nickel
Catalysts		Toluene
Solvents		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
Miscellaneous		Hydrogen sulfide
		Chloroform, Dioxane, Nitrosomorpholine
Also see Chem Mfg, Monomers, Appendix C-II		
Synthetic Fibers		
Polish & Wax Mfg		

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)
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 Nitrosomorpholine
Optical Brighteners 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 Agents		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)
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
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
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, Structural		Arsenic, Beryllium, Lead
Brick & Structural Clay Tile		
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)
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)
Coke Production Also see Metal Smelters, Appendix C-II		POM, PAHs*, Toluene
Colleges & Universities Miscellaneous		Benzene, Carbon tetrachloride, Chloroform, Methylene chloride, Dioxane, Formaldehyde, Mercury, Nitrobenzene, Phenol, Toluene, TCA, Xylenes, Any other listed substance
Also see Chem Mfg, Appendix C-II Combustion, Appendix C-I Research & Development, Appendix C-II 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: Due to toxics in the solutions Fixatives Oxidizing Agents Dyeing Aids	Dyes - Auramine, Direct Black 38, Copper, Chromium Copper, Chromium Chromium Formaldehyde, Perc, Sodium hydroxide (caustic soda)
Combustion Processes - see Combustion, Appendix C-I		
Elec. or Natural Gas Service Combustion Processes - see Combustion, Appendix C-I Cooling Towers - see Other Processes, Appendix C-I		TCA
Electrical Assembly Cleaning - see Degreasing, Appendix C-I		
Electrical & Electronic Equip 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)
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
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)
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, Arsine, 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		
Electric Lamps		Toluene, TCE
Lighting Fixtures		Ammonia, Cadmium, Mercury, Toluene, TCA, TCE
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)
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 sulfide
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
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)
Food Prod Mfg continued		
Grain Mill Products		
Prepared Feeds		Acrolein, Methyl bromide
Wet Corn Milling		Chlorine, Hydrochloric Acid
Manufactured Ice		Arsenic
Meat Packing Plants		Arsenic, Formaldehyde, Hydrochloric Acid
Sausages & Other Prepared Meats		Acetaldehyde, Ammonia, Arsenic, Chloroform, Formaldehyde, Phenol, Toluene, TCA
Roasted Coffee		Acetaldehyde, Acrolein, Methylene chloride, TCE
Seafood, Canned & Cured		Arsenic, Hydrogen sulfide
Sugar & Confec Prods		
Beet Sugar		Beryllium
Confectionery Prod		Benzene, Toluene, Formaldehyde
Canning - see Canned Food Prod, Appendix C-II		
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		
Also see Wood, Appendix C-II		Naphthalene
Furniture & Fixture Mfg		
Miscellaneous		Methylene chloride, Perc, TCE
Drapery Hardware and Blinds & Shades		Methylene chloride, Phthalic anhydride, Toluene, TCE
Household Furniture		
Metal		Benzene, TCA
Upholstered		
Wood		Cresol, Toluene, TCE, Xylenes
TV & Radio Cabinets		Cadmium, Copper, Lead, Toluene
Office Furniture		Ammonia, Methylene chloride, Naphthalene, Styrene, Toluene, TCA, TCE, Xylenes
Metal		Toluene
Wood		Ammonia, Formaldehyde, Methylene chloride, Perc, Styrene, Toluene, TCA, TCE, Xylenes, Zinc Oxide
		Formaldehyde, Methylene chloride, Naphthalene, Toluene, Toluene diisocyanate, TCA, TCE, Xylenes
Partitions & Fixtures		
Metal		Methylene chloride, Perc, Toluene, TCA, TCE
Wood		Ammonia, Toluene, Toluene diisocyanate, TCE
Public Bldg & Related Furn		Ammonia, Toluene, Xylenes

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)
Furniture & Fixture Mfg, continued		
Combustion Process - see Combustion, Appendix C-I		
Degreasing - see Solvent Use, Appendix C-I		
Metal Working - see Metal, Appendix C-II		
Surface Coating - see Solvent Use and Other Processes, Appendix C-I		
Upholstery Mfg - see Textiles, Appendix C-II		
Wood Working - see Wood, Appendix C-II		
Furniture Stores		
Furniture Repair/Reupholstering		Ammonia, Methylene chloride, Toluene, TCA
		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		
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		
Gen'l Medical & Surgical		
		ETO, Hydrogen chloride, Hydrogen sulfide, Phenol, Styrene
Medical Labs		ETO
Combustion Processes - see Combustion, Appendix C-I		
Medical Instrument Mfg - see Instrument Mfg, Appendix C-II		
Research - see Research & Development, Appendix C-II		
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)
Instruments & Related Prod's		
Engineering & Science Instr		Freon 113, Toluene, TCA
		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 Controls		Beryllium, Chlorine, Hydrogen chloride, Mercury, TCE
		Beryllium, Cadmium, Hydrogen chloride, Toluene, Zinc, Zinc oxide
Process Control Inst		Beryllium, Toluene, TCA
		Ammonia, Hydrogen chloride, Toluene, TCE
Electricity Measuring Instruments		Ammonia, Cadmium, Chlorine, ETO, Formaldehyde, Phenol, Toluene, TCA, Zinc, Zinc oxide
		Ammonia, TCA, TCE
Medical Instr & Supplies		
Dental Equip & Supp		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
Ophthalmic Goods		ETO, Formaldehyde, Perc, Toluene, TCA, TCE, Zinc
Photographic Equip & Supplies		Ammonia, Chromium, ETO, Formaldehyde, Hydrogen chloride, Lead, Nickel, Toluene, TCA, Vinylidene chloride
		Acetaldehyde, Formaldehyde, Methylene chloride, Toluene, TCA, TCE
		Hydrogen chloride, Toluene, TCE
Surgical & Med Instr		
Srg Appliances & Sup		
Optical Instr & Lenses		
Watches/Clocks/Watchcases		
Plating - see Metal Plating, Appendix C-II		
Also see - Combustion, Other Processes, and Solvent Use Appendix C-I 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
Jewelers Materials & Lapidary Work		Ammonia, Hydrogen chloride, Lead

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)
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
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
Footwear, not rubber		Toluene
Personal Leather Goods		Toluene, TCE
Tanning Processes	Tanning agents	Chromium, Cresols, Formaldehyde, Phenol
	Dyes, pigments, & coloring agents	Cresols, Formaldehyde, Phenol
	Miscellaneous	Cadmium, Chromium, Copper, Direct Black 38, Lead, Nickel, Zinc compounds
		Ammonia, Chlorine, Chloroform, 1,2-Dichloro-benzene, 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		
Construction & Related Machinery		Ammonia, Formaldehyde, Freon 113, Methylene chloride, Nickel, Phenol, Toluene, TCA, TCE
Construction Machinery		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)
Machinery, Construction Related continued		
Oil Field Machinery		
Engines & Turbines		
Internal Combustion Engines		Chromium, Lead, Nickel, TCA, Xylenes
Farm Machinery & Equip		
Turbines & Turbine Generator Sets		Ammonia, Benzene, EDB, EDC, Gasoline vapors, Hydrazine, TCA Toluene
General Industrial Machinery		
Bell & Roller Bearings		Ammonia, Formaldehyde, Hydrogen chloride, Maleic anhydride, Perc, Phenol, Styrene, Toluene, Toluene diisocyanate, TCA, Xylenes
Blowers & Fans		Ammonia, Chromium, Copper, Cresol, Epichlorohydrin, Formaldehyde, Hydrogen chloride, Lead, Nickel, Phenol, Toluene, TCA, TCE, Zinc oxide
Comprsrs, Air & Gas		Copper, Naphthalene, Toluene, TCA
Industrial Furnaces & Ovens		Copper, Gasoline vapors, Lead, Toluene, TCA, TCE
Industrial Patterns		Toluene
Power Transmission Equipment		Arsenic, Copper, Hydrogen chloride, Lead, Toluene, TCE, Zinc
Pumps & Pumping Equipment		Formaldehyde, Phenol
Speed Changers, Drives & Gears		Ammonia, Copper, Hydrogen chloride
Metalworking Machinery		
Machine Tool Accessories		Ammonia, Formaldehyde, Hydrogen chloride, Lead, Perc, Phenol, Toluene, TCA, Xylenes
Machine Tools, Metal Cutting Types		Perc, Toluene, TCA
Machine Tools, Metal Forming Types		Arsenic, Perc
Rolling Mill Machinery		Ammonia, Beryllium, Chromium, Hydrogen chloride, Toluene, TCA, TCE
Special Dyes, Tools, Jigs, & Fixtures		Ammonia, Lead, Toluene, TCE
Office & Computing Machines		Ammonia, Benzene, Lead, Perc, Toluene, TCA, TCE
Miscellaneous		Cadmium, Chromium, Zinc, Zinc oxide
Calculating & Accounting Machines		1,4-Dichlorobenzene, Formaldehyde, Hydrogen chloride, Methylene chloride, Naphthalene, Toluene, TCE, TCA, Zinc
		CFC-113, Hydrogen chloride, Toluene, TCA
		Arsenic, Hydrogen chloride, TCA

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)
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		Toluene
Automatic Merchandising Machines		Arsenic, Perc, Toluene
Commercial Laundry Equipment		Toluene
Measur & Dispens Pumps		Ammonia, Copper, Formaldehyde, Freon 113, Hydrogen sulfide, Lead, Methylene chloride, Phthalic anhydride, Toluene, TCA, TCE, Xylenes, Zinc
Refrig & Htg Equip		Toluene
Misc Svc Indus Mach		Ammonia, Arsenic, Benzene, Chromium, Copper, Lead, Methylene chloride, Perc, Toluene, TCA, TCE
Special Industry Machinery		Arsenic
Food Prods Machinery		Ammonia, Perc, Toluene, TCE
Paper Indus Machin		Ammonia, Chromium, Lead, Methylene chloride, Toluene, Toluene diisocyanate, TCA, Zinc oxide
Printing Trades Mach		Toluene, TCE, Xylenes
Textile Machinery		Chlorine, Hydrogen chloride, Toluene
Woodworking Machin		
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		Chloroform, Methylene chloride, TCE
Machining		TCA
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)
Metal Furniture Mfg - see Furniture Mfg, Appendix C-II		
Metal Plating	Particulate metals including but not limited to: From electrocleaning, and plating Gaseous and aerosol releases including but not limited to:	Cadmium, Chromium (VI), Nickel, TCA
Electrocleaning	Alkaline cleaning agents	Sodium hydroxide
Cleaning/Pickling	Acid cleaning, pickling agents	Chromic acid, Hydrochloric acid
Cleaning/Plating	Chelating agents, solvents	Nitrilotriacetic acid, Thiourea
Storage/Handling	Plating/other process bath compon. Plating tank, Electric arc furnace	Ammonia, Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Sodium hydroxide, Zinc
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
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		Chromium, Lead, Toluene, TCE
Hand & Edge Tools		Ammonia, Chlorine, Chromium, Hydrogen chloride, Methylene chloride, Styrene, Toluene, TCA, TCE, Zinc
Hand Saws & Saw Blades		Copper, Lead, Nickel, Toluene, TCE, Zinc
Misc Hardware		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 & Stampings		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)
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 Hydrogen sulfide, Toluene, TCE
Small Arms Ammunition		Ammonia, Arsenic, Formaldehyde, Freon 113, Hydrogen chloride, Lead, Phenol, Toluene, Zinc oxide
Ammun, exc small arms		
Small Arms		Methylene chloride, Toluene
Plumbing & Heating, except electric		
Metal Sanitary Ware		Ammonia, Cadmium, Formaldehyde, Hydrogen chloride, Phenol, Toluene, TCE, Zinc oxide
Plumbing Fittings & Brass Goods		Ammonia, Benzene, Chromium, Formaldehyde, Perc, Phenol, Toluene
Heating Equipment, except electric		TCA, TCE
Screw Machine Products, Bolts, etc.		
Screw Machine Prod		Cadmium, Hydrogen chloride, Methylene chloride, TCA, TCE, Zinc Hydrogen chloride, Toluene, TCA
Bolts, Nuts, Rivets, & Washers		Toluene
Steel Springs, exc wire		
Structural Metal Product Fabrication		Copper, Toluene, Xylenes, Zinc oxide
Structural Metal Fabrication		Ammonia, Cadmium, Formaldehyde, Perc, Toluene, TCA, Xylenes, Zinc
Metal Doors, Sash, & Trim		Copper, Gasoline vapors, Hydrogen chloride, Lead, Perc, Styrene, Toluene, TCA, TCE Ammonia, Perc, Toluene, Toluene diisocyanate, TCA, TCE
Fabricated Plate Work, boiler shops		
Sheet Metal Work		Ammonia, Copper, Perc, Toluene, TCA, TCE
Architectural Metal Work		

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)
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 Fabrication		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)		
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, particulate releases including but not limited to:	Benzene, Chloroform, Cresols, ≠Fluorides≠, Methylene chloride, POM, PAHs*, TCE
Furnace Tapping	From the calciner, furnace, mat'l	
Coke Quenching	crusher/mill, storage & handling,	
Furnace Charging	service road, prebake/reduction/	
Metal Forming	soderberg stud cell	
	Anode bake furnace	Benzene, Cresols, POM, PAHs*
Secondary Aluminum	Gaseous, aerosol, particulate 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, particulate releases	
Molding	including but not limited to:	Beryllium
Primary Cadmium Pro	Gaseous, aerosol particulate 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, particulate 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, particulate releases including but not limited to: From dryer, mill, cyclone, storage	Chromium
Metallurgical Coke	Gaseous, aerosol particulate releases	
Coke Oven Charging/ Pushing	including but not limited to: From the coke oven, vessels, matr'l	Acetaldehyde, Benzene, Cresols, Formaldehyde, Phenol, Toluene, Xylenes
Material Prep	storage and handling, and outdoor	Ammonia, Arsenic, Beryllium, Cadmium, Hydrogen sulfide, Lead, Manganese, Mercury, Nickel, POM, PAHs*
Coke Quenching	storage pile	
Coke Production		POM, PAHs*, Toluene

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)
Metal Smelters & Foundries continued		
Primary Copper Smelt Converter Charging Furnace Tapping Furnace Charging Material Prep Metal Casting Slag Dumping Mining Operations Copper Forming	Gaseous, aerosol, particulate releases including but not limited to: From the converter, furnace, roaster vessel, material storage and handling, outdoor storage pile, service road	Arsenic, Cadmium, Copper, Lead, Mercury, POM, PAHs*, Selenium, Zinc
Secondary Copper Oper (Brass and Bronze Pro) Furnace Tapping Furnace Charging Metal Casting	Gaseous, aerosol, particulate releases including but not limited to: From the furnace, and service road	Arsenic, Mercury, Cadmium, Copper Perchloroethylene Cadmium, Copper, Lead, Manganese, Mercury, POM, PAHs*, Selenium, Zinc
Electrometallurgical Products		
Ferroalloy Production Furnace Tapping Furnace Charging Material Prep Metal Casting Mining, except V Slag Dumping	Gaseous, aerosol, particulate releases including but not limited to: From material storage & handling, storage pile, furnace, decarburizing vessels	Arsenic, Cadmium, Chromium, Copper, Manganese, Nickel Cadmium, Chromium, Copper, Lead, Manganese, Nickel, POM, PAHs*, Zinc Nickel
Iron & Steel Foundries		
Iron and Steel Pro Coke Oven Charging/ Pushing Furnace Tapping Furnace Charging Material Preparation Coke Quenching Slag Dumping Mining Operations Drying Crushing Sizing Weighing Feeding Furnace Also see Combustion (Blast Furnace), Appendix C-I	Gaseous, aerosol, particulate releases including but not limited to: From the coke oven, cupola, furnace, sintering machine, storage & handling, storage pile, service road	Ammonia, Arsenic, Benzene, Beryllium, Cadmium, Chlorine, Chromium, Coke oven emis, Copper, Formaldehyde, Hydrogen chloride, Hydrogen sulfide, Lead, Manganese, Mercury, Naphthalene, Nickel, POM, PAHs*, Phenol, Toluene, TCE, Xylenes, Zinc
Gray Iron Foundries Furnace Tapping Furnace Charging Converter Charging Metal Casting Cupola	Gaseous, aerosol, partic releases including but not limited to: From the furnace, foundry mold & core decomposition, & service road	Acetaldehyde, Acrolein, Ammonia, Arsenic, Benzene, Beryllium, Cadmium, Chromium, Copper, Formaldehyde, Hydrogen sulfide, Iron, Lead, Manganese, Mercury, 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)
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, windbox & discharge	
Metal Casting		
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)
Metal Smelters & Foundries continued		
Dry Battery Production	Particulate substance releases	
Material Prep	including but not limited to:	Manganese, Mercury
Screening	From the material crusher/mill and	
Storage & Handling	material storage	
Also see Electrical & Electronic Equipment, Appendix C-II		
Mercury Production	Particulate releases	Mercury
Mining	including but not limited to:	
Prim. Ore Process	From smelter, hoeing, retort	
Secondary Prod		
Nickel Production	Gaseous, aerosol, partic releases	
Metal Casting	including but not limited to:	Arsenic, Cadmium, Lead, Nickel,
Mining Operations	From the calciner, furnace, material	POM, PAHs*, Selenium, Zinc
Refining	crusher/mill, roaster, material	
Melting/Roasting	storage & handling, rotary dryers,	
Crushing	storage pile, day bin, skip hoists	
Drying		
Nonferrous Metal Prod	Gaseous, aerosol, partic releases	
Super Alloys	including but not limited to:	Nickel
Permanent Magnet Alloys		
Electrical Alloys		
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	Gaseous, aerosol, partic releases	
Material Prep	including but not limited to:	Arsenic, Cadmium, Copper, Mercury,
Slag Dumping	From the condenser, furnace, roaster,	POM, PAHs*, Selenium, Zinc
Mining Operations	retort, material storage and handling, outdoor storage pile, and service road	
Secondary Zinc Process	Gaseous, aerosol, partic releases	
Furnace Tapping	including but not limited to:	Cadmium, Mercury, Nickel, Selenium, Zinc
Furnace Charging	From the furnace, condenser, retort	
Metal Casting	service road, and galvanizing vessel	

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)
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)		
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
Monofilament Fiber Mfg	Gaseous and particulate releases including but not limited to:	Polymer constituents - Acrylonitrile, Propylene, Vinyl chloride
Wet Spin	From: polymer and solvent storage	Solvents/precipitants - Sodium hydroxide, Toluene, Zinc chloride
Dry Spin	dope preparation (blending), filtration, spin cell, lubrication, drawing, finish application, and drying	Flame retardants - Vinyl bromide
Filter-tow Dry Spin		Promoters/activators - Hydrazine
Filament Yarn Dry Spin		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 Transportation Equipment, Appendix C-II		
Musical Instrument 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)
National Defense		
Also see Military Bases, Appendix C-II		
National Security		Carbon tetrachloride, CFC 113, Chromium, Dioxin, Hydrazine, Mercury, Methylene chloride, Perc, Phenol, PCBs, TCA, Xylenes
Natural Gas Combustion - see Combustion, Appendix C-I		
Needle, Pin, & Fastener Mfg		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
Also see Metal Prod Fabrication, Appendix C-II		
Newspaper Publishing - see Printing & Publishing, Appendix C-II		
Nickel Plating - see Metal Plating, Appendix C-II		Formaldehyde, Hydrogen chloride, Lead, Toluene, TCE, Zinc
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
Exploration		Hydrogen sulfide
Extraction		Benzene, Carbon tetrachloride, Chlorobenzene, 1,4-Dichlorobenzene, EDC, Hydrogen sulfide, Toluene, TCA, Xylenes
Natural Gas & Crude Petroleum		
Nat'l Gas Liquids		Ammonia, Formaldehyde, Gasoline vapors, Hydrogen sulfide
Field Services		Ammonia, Hydrogen sulfide
Gas Stripping		Hydrogen sulfide, Gasoline vapors
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)
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, Appendix 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
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 Paving Mixtures & 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)
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
Printing & Publishing		
Miscellaneous		Toluene
Blankbooks & Bookbinding		
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)
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
	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	From sawdust used as bulking agent (sawdust from lumber obtained at structural demolition projects)	Ammonia, Dimethylamine 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)
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 Epichlorohydrin, Hydrogen sulfide
Commercial Testing Labs		
Chemical Mfg - see Chemical Mfg, Appendix C-II Combustion Processes - see Combustion, Appendix C-I Other Processes - see Other Processes, Appendix C-I Solvents - see Solvent Use, Appendix C-I 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
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 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)
Rubber Cement Application/Manufacture Application - see Solvent Use, Appendix C-I 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, Integrated Circuits, Appendix C-II		
Sewage Plants - see Combustion (Incineration), Appendix C-I		
Shingle & Siding Mfg Also see Plastics, Appendix C-II		Asbestos
Sign & Advert. Display Mfg		Ammonia, Beryllium, Hydrogen chloride, Naphthalene, Perc, Toluene, TCA, TCE, Zinc
Smelters - see Metal Smelters, Appendix C-II		
Solvent Recycling Also see - Solvent Use, Appendix C-I		Benzene, Chlorinated organics
Space Research & Technology Combustion Processes - 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		
Sporting & Athletic Goods Mfg Also see Combustion, Solvent Use, and Surface Coating, Appendix C-I Chemical Mfg, Metal Product Mfg, Rubber Product Mfg, and Textiles Mfg, Appendix C-II		Methylene chloride, TCA
Stone Products Mfg - see Clay, Glass & Stone Products, Appendix C-II		
Surface Coating Application/Manufacture Application - see Solvent Use and Surface Coating, Appendix C-I Manufacture - see Chemical Mfg, Appendix C-II		
Surgical & Med Supp Mfg Combustion Processes - see Combustion, Appendix C-I Degreasing - see Solvent Use, Appendix C-I Instruments - see Instrument Mfg, Appendix C-II Other Processes - see Other Processes, Appendix C-I Pharmaceuticals Mfg - see Chemical Mfg, Appendix C-II Sterilization - see Sterilizers, Appendix C-I 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)
Textile Mill Product'n Mfg. Miscellaneous		Asbestos, Benzene, Benzidine, Bis(chloromethyl) ether, 1,4-Dichlorobenzene, Dichloroethane, Dioxane, Ethyleneimine, Formaldehyde, Hydrazinc, Methyl Bromide, Perc, Phenol, TCE
Apparel/Other Textile Prod		Ammonia, Arsenic, Chlorine, EDC, Toluene, TCA
	Fur Goods	Ammonia, Perc
	Apparel Belts	Ammonia, Cadmium, Copper, Toluene, Zinc Toluene
	House Furnishings	Napthalene, Toluene
	Auto/Apparel Trimmings	Ammonia, Arsenic, Benzene, Toluene, Vinyl chloride
Floor Covering Mills		Arsenic
	Miscellaneous	Arsenic
	Woven Carpets & Rugs	Benzene, Formaldehyde
	Tufted Carpets & Rugs	Benzene, Benzidine
Knitting Mills		Acrylonitrile, Benzene
	Hosiery	Ammonia, Arsenic, Benzene, Perc
	Knit Outerwear Mills	Benzene, 1,4-Dioxane, Mineral fibers
Narrow Fabric Mills		Bis(chloromethyl) ether
Nonwoven Industry		Acrylonitrile, Benzene, Benzidene, 1,3-Butadiene, Formaldehyde, Hydrazine, Perc, Toluene, Vinyl chloride, Vinylidene chloride, Xylenes
Textile Finishing		
	Miscellaneous	
	Finish Plants	Acrylonitrile, Benzene, Chromium, 1,4-Dichlorobenzene, Toluene
	Cotton	Benzene, Copper, 1,4-Dioxane, Formaldehyde, Hydrazine, Perc, Xylenes
	Synthetic	Acrylonitrile, Benzene, 1,4-Dioxane, EDC, Toluene
Weaving Mills		Acrylonitrile, Benzene, Chloroform, 1,4-Dioxane, EDC, Formaldehyde, Mineral fibers, Perc, Styrene, Toluene diisocyanate
	Cotton	Benzene, 1,4-Dioxane, Formaldehyde, Perc
	Synthetics	1,4-Dichlorobenzene
	Wool	Toluene diisocyanate
Woven Fabric Finishing		Ammonia, Lead, Toluene diisocyanate
Yarn & Thread Mills		Arsenic
	Yarn Mills,not wool	Arsenic, Benzene, Cresol, Formaldehyde, Hydrogen chloride, Lead, Perc, Styrene, Toluene, Xylenes
	Throwing & Winding	TCA
	Wool Yarn Mills	
Misc Textile Goods		
	Coated Fabrics, not rubberized	
	Cordage & Twine	

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)
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
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)		Hydrogen chloride, Methylene chloride, Perc, Toluene, TCE
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		
Auto Repair/Auto Body Repair		
Gen'l Auto Repair		Ammonia, Asbestos, Formaldehyde, Toluene, TCA
Tire Retreading & Rpr		Toluene
Paint Shops		Benzene, Naphthalene, Toluene, Xylenes
Top & Body Rpr Shops		Zinc Oxide
Motor Vehicles & Car Bodies		Naphthalene, Toluene
		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)
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)
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 from: wood preserving agents	Arsenic, Benzene, Chloroform, Chromium, Copper, Cresols, Dibenzofuran, Dioxins, Hydrogen chloride, Phenol, Naphthalene, Toluene, Zinc, Zinc Oxide
Cellon Process		
Chromated Copper Arsenate Process		
Dricon Process		
Diluent/Creosote Process		
Oil/Penta Process		
	vapor drying agents	various solvents
	preserving carriers	various solvents
	fire retardants	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
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
Hardwood Veneer/Plywood		Formaldehyde, Perc

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)
Wood Product Mfg continued Paper & Allied Prod Mfg	Gaseous/aerosol/particulate releases including but not limited to: From: Sizing agents Wet & dry-strength agents Adhesives Dyes & pigments Binders Pigment fillers/coatings Humectants Coatings Oil-resistant additives Machine operating aids Retention aids Biocides & slime cont'l Deinking agents Bleaching chemicals From chemicals imported in waste paper: ink pigments, coating agents, binders, adhesives -	Acrylamide, Styrene Epichlorohydrin, Formaldehyde Acrylamide, Ammonia Benzidine, Direct Black 38, Direct Blue 6 Lead, o-Tolidine Styrene Asbestos, Styrene, Zinc, Zinc Oxide Formaldehyde Ammonia, Sodium hydroxide Fluorochemical chrome complex Asbestos, Epichlorohydrin Acrolein, TCA, Trichlorophenol Sodium hydroxide Ammonia, Chlorine, Chloroform, Chromic sulfate, Methanol, Sodium hydroxide, Zinc
Bldg Paper & Board Mills		Chloroform, Phenol, Toluene
Deink Fine & Tissue Paper, Secondary Fiber Mills		Ammonia, Asbestos
Paper Mills Misc		Chloroform Arsenic, Cadmium, Chlorine, Chloroform, Hydrogen sulfide, Toluene, TCE
Paperboard Containers & Boxes Mfg		
Corrug. & Solid Fiber Box		Ammonia, TCE Formaldehyde
Folding Box		Acetaldehyde, Ammonia, Toluene
Sanitary Food Containers		Ammonia, Toluene Toluene Cadmium, Chloroform, Formaldehyde, Toluene
Fiber Cans, Drums, etc		
Set-Up Box		Toluene, TCE Acetaldehyde, Ammonia, Formaldehyde, Hydrogen chloride, Methylene chloride, Naphthalene, Perc, Toluene, TCA
Paperboard Mills		Zinc Ammonia, Formaldehyde, Toluene
Converted Paper Prod		
Die-Cut Paper & Board		
Paper Bags		
Pressed & Molded Pulp Goods		
Miscellaneous		

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)
Wood Prod Mfg continued		
Pulp Mill Mfg		
Groundwood/Mechanical Pulp Mfg		Ammonia, Calcium, Carbon, Caustic soda, Sodium sulfate, Sulfur dioxide
Chemical Pulp Mfg		
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 Melamine-formaldehyde resins - Formaldehyde Dispersion agent (during glue formulation) - Sodium hydroxide 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

SOURCE TESTING:

SUMMARY OF REQUIREMENTS

FOR MEASUREMENTS

AND ALTERNATIVES

APPENDIX D

Source Testing:
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 ~~S~~section IX.A. 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

Source Testing:
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, 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
2. Coal and coke combustion including incineration*	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	-
		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.

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* See notes preceding the table for further explanation of terms used in the table.

3. Residual and crude oil combustion and incineration*	a. Full set metals/stack test b. Metals, chloride/fuel analysis c. Benzene/stack test d. PAH/stack test e. Formaldehyde/stack test	Small business:Fuel analysis - - - - 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 analysis b. PAH/stack test c. Formaldehyde/stack test	- - - 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. Requirements a-c shall not apply to emergency or stand-by equipment that primarily burn distillate or diesel fuel.
5. Waste oil combustion and incineration* (including oil containing used, recycled, reprocessed, or re-refined oil)	a. Full set metals/stack test b. Halogenated organics/stack test c. Benzene/stack test d. PAH/stack test e. Dioxins/stack test f. Formaldehyde/stack test g. PCBs/stack test: required any time that dioxins are tested	Small business:Fuel analysis - - - - Small business:Not required -
6. Wood, wood waste, and agricultural waste combustion and incineration* (includes untreated and treated wood)	a. Full set metals/stack test b. PAH/stack test c. Dioxins/stack test d. Formaldehyde/stack test	Small business:Fuel analysis - - - 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.

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* If co-fired with hazardous, municipal, or biomedical waste, or burning tires, then include all testing required under 1(a).

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)
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	-

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* Preferably dust trapped by the particulate control equipment, if any.

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
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 TONS PER YEAR OF CRITERIA POLLUTANTS

Appendix E

Requirements for Classes of Facilities Emitting Less Than 10 Tons Per Year of Criteria Pollutants

NOTES TO APPENDIX E

(1) **General Exclusions:** ~~Individual f~~ Facilities meeting the following conditions are excluded from the requirements in Appendix E. Any ~~individual~~ facility for which, in the judgment of the district, a health-conservative, preliminary assessment of the facility's emissions indicates that the facility's emissions would result in a prioritization score, risk level, or *de minimis* level which would qualify as a "low level" facility for reporting purposes in accordance with the criteria specified in section IV.A. of this regulation, is excluded from Appendix E.

The district may base the preliminary emission assessment on approximate facility-total emission estimates for the facility, provided that the estimates account for all listed substances emitted from the facility and represent a health-conservative characterization of the facility and its operations and emissions.

(2) **Additional Exclusions and Conditions:**

a [*Advisory note to districts*: Some SIC codes which may contain facilities of this type include: 33xx, 34xx, 35xx, 36xx, 37xx, 76xx, where "x" represents any valid digit for an SIC code. However, a facility in these SIC codes is not subject to the requirements for Appendix E facilities unless the facility is subject to ~~S~~section II. E.(1) or II.E.(2) and the facility's activities are also included in the described Appendix E class activity.]

b Facilities using less than four pounds of ethylene oxide per year are excluded. Also excluded are facilities which are hospital or veterinary clinics in compliance with the control requirements specified in the Ethylene Oxide Control Measure for Sterilizers and Aerators, section 93108 of Title 17, California Code of Regulations, and that have an annual usage of ethylene oxide of less than 100 pounds per year if the facility is housed in a single story building, or have an annual usage of ethylene oxide of less than 600 pounds per year if the facility is housed in a multi-story building.

c Facilities using solvents for cold cleaning and vapor degreasing in the following quantities are excluded:

(1) less than 55-gallon (drum) quantities per year of a listed substance designated as a human carcinogen or potential human carcinogen; and

(2) less than 55-gallon (drum) quantities per month of a listed substance not designated as a human carcinogen or potential human carcinogen.

NOTES TO APPENDIX E (continued)

d Any facility that is a crematorium for humans, animals, or pets or uses an incinerator to burn biomedical waste (animals), if the facility uses only propane or natural gas as fuel, and the facility annually cremates no more than 300 human bodies or 43,200 pounds of remains (human or animal) is excluded. Facilities using incinerators that burn biomedical waste other than cremating animals do not qualify for this exclusion.

e This class applies to any facility at which asbestos removal occurs on a routine and predictable basis for a period of at least one year.

f Any treatment, storage, disposal, and recycling facility (as defined by "hazardous waste facility" in Health and Safety Code, Ssection 25117.1 and in Title 22, California Code of Regulations (CCR), Ssection 66096) except:

(1) transfer stations (as defined in Title 22, CCR, Ssection 66212) that do not pump or package hazardous waste; and

(2) storage facilities (as defined in Health and Safety Code, Ssection 25123.3) that store only containerized waste.

g [*Advisory note to districts*: Some SIC codes which may contain facilities of this type include: 249x, 339x, 341x, 356x, 376x, 382x, 383x, 386x, 422x, 571x, 769x, 87xx, where "x" represents any valid digit for an SIC code. However, a facility in these SIC codes is not subject to the requirements for Appendix E facilities unless the facility is subject to Ssection II.E.(1) or II.E.(2) and the facility activities also include the described Appendix E class activity.]

h Only the described portions of the SIC are included.

i [ ] Indicates an SIC formerly used by the Executive Office of the President, Office of Management and Budget (OMB), which has been reassigned by OMB, but may still be in use by some facilities.

j Facilities using an annualized average of two gallons per day or less (or 17 pounds per day or less) of all graphic arts materials (deducting the amount of any water or acetone) are excluded.

k Facilities using 20 gallons per year or less of coatings, or performing all coating operations using hand held nonrefillable aerosol cans only are excluded.

l Facilities which do not have a sludge incinerator and whose maximum facility throughput does not exceed 10,000,000 gallons per day are excluded.

APPENDIX E

Classes of Facilities Emitting Less Than 10 Tons Per Year of Criteria Pollutants for Which the Facility Operators Must Prepare Complete Emission Inventory Plans and Reports (1), (2)

(1) See the General Exclusion for "low level" facilities in the preceding Notes.

(2) See the Additional Exclusions and Conditions in the preceding Notes, wherever superscripts appear.

Standard Industrial Classification Code (SIC)	Description of Class
Any SIC	Metal platers using cadmium or chromium[a].
Any SIC	Facilities using ethylene oxide for sterilization[b].
Any SIC	Facilities with cooling towers using hexavalent chromium.
Any SIC	Facilities that perform degreasing[c].
Any SIC	Facilities using incinerators that burn hazardous, municipal, or biomedical waste (including animal crematoria), or burning tires[d].
Any SIC	Long term asbestos removal (over one year)[e].
Any SIC	Treatment, storage, disposal, and recycling facilities (TSDFs; TSDR facilities)[f].
Any SIC	Facilities using 1,4-Dioxane where emissions exceed 85 pounds per year of 1,4-Dioxane[g].
Any SIC	Facilities where combustion of crude, residual, distillate, or diesel oil occurs in excess of 3,000 gallons per year total at the facility.
Any SIC	Facilities using styrene or styrene compounds where emissions exceed 1,000 pounds per year of styrene or styrene compounds.
Any SIC	Facilities using methylene chloride for paint or coating removal, where usage of methylene chloride exceeds 6 gallons per year.
Any SIC	Facilities identified by districts under section II.E.(3)(a).
0723[h]	Crop preparation services for market, if fumigation is performed using ethylene oxide, propylene oxide, or methyl bromide.

1442-1446[h]	Construction sand and gravel mining, if asphalt products are also used or produced at the facility.
2221[h],3229[h]	Fiberglass and various fiberglass materials and products manufacturing facilities within SICs 2221 and 3229.
2611,2621,[2631][i]	Pulp and paper mills.
2711-2771,2782	Printing and publishing including printshops and miscellaneous commercial printing[j].
2812-2899	Chemicals and allied products manufacturing.
2911-2999	Petroleum refining and related industries.
3011-3089, [3293],[3555][i]	Rubber and miscellaneous plastics products manufacturing, if a listed substance is used in a blowing agent, plasticizer, or diluent, or is present as free monomer.
3471-3479[h]	Miscellaneous plating, polishing, coating, engraving, and allied services, if using hexavalent chromium, nickel, or cadmium.
3674	Semiconductors and related devices manufacturing.
3731-3732	Boat and ship building and repair[k].
4952	Wastewater treatment facilities (including publicly owned treatment works, POTWs)[l].
4953	Refuse systems, where landfill gas emissions of vinyl chloride exceed 8.5 pounds per year.
5171-5172	Petroleum bulk stations and terminals and related wholesalers.
5511-5521,[7531], 7532,[7535][i]	Auto body shops (including new and used car dealers where surface coating occurs).
5541 or Any SIC	Facilities where any retail sale of gasoline occurs.
7216 or Any SIC	Dry cleaners using perchloroethylene.
7261[h]	Funeral services with crematories[d].
8011-8099[h]	Medical services, hospitals, and related facilities, if formaldehyde emissions exceed 110 pounds per year, or if sterilization occurs as described under "Any SIC" for "Facilities using ethylene oxide for sterilization", above.

APPENDIX F

CRITERIA FOR INPUTS

FOR RISK ASSESSMENT

USING

SCREENING AIR DISPERSION MODELING

Appendix F

Criteria For Inputs for Risk Assessment Using Screening Air Dispersion Modeling

(A) The emissions must represent all listed substances emitted from the facility. Emission estimates must be health-protective and approved by the district, and the assessment must take into account both the highest actual emissions and the facility's potential to emit, including use of the highest levels enforceable under the facility's permit(s), if the process(es) are subject to permits.

(B) Source characterization for the facility for air dispersion modeling (including but not limited to stack parameters, choice of volume or area source configurations, building downwash, raincaps, position of release point(s) within the facility) must be health protective. The most health-protective characterization which applies to the actual conditions at the facility must be chosen for the modeling analysis.

(C) Air dispersion modeling must use worst-case meteorological conditions and the most health-protective parameters applicable to the facility. Generic, default meteorological data, not site-specific data, should be used. A matrix representing all possible combinations of wind speed and stability classes should be used. The combination which results in the worst-case concentration should be selected. Ambient air temperature and mixing height must represent worst-case conditions. The rural or urban dispersion coefficients should represent the worst case which is applicable to the actual facility site. Some acceptable meteorological conditions are the "full meteorology" option in the U.S. Environmental Protection Agency (U.S. EPA) SCREEN3 (96043) model, February 1996, which is incorporated by reference herein.

(D) The most appropriate computer models must be used, including the most recent version, with all the correct switches (including but not limited to switches for downwash, rural vs. urban, and complex vs. flat terrain). The district must approve switches used in the model and ensure that the most health-conservative estimates of dose are obtained. Some acceptable models are the U.S. EPA SCREEN3 (96043) model, February 1996, and the U.S. EPA ISC3 (95250) model, September 1995, both of which are incorporated by reference herein.

(E) Other procedures must use methods in available guidelines as follows:

(1) The potential health impact must be calculated for the point of maximum impact (PMI) or maximum off-site concentration.

(2) The potential non-cancer acute inhalation total hazard index (H.I.) must be calculated for all substances for each toxicological endpoint.

(3) The potential non-cancer chronic inhalation hazard index (H.I.) must be calculated for all substances for each toxicological endpoint.

(4) The potential non-cancer chronic non-inhalation (ingestion and dermal exposure) hazard index (H.I.) must be calculated for all applicable substances for each toxicological endpoint.

(5) The non-cancer chronic inhalation and non-inhalation hazard indices (H.I.s) must be added for each toxicological endpoint to determine the total hazard index (total H.I.) for each endpoint.

(6) The total potential carcinogenic impact from inhalation exposure and non-inhalation exposure pathways (where applicable for the substance) must be calculated. At a minimum, multipathway exposure must include the inhalation, soil ingestion, and dermal exposure, and mother's milk pathways; exposure through food ingestion including vegetables/fruits, meat, milk, and fish, and exposure through consumption of contaminated surface water should be included if those pathways exist at a specific site.

(7) Health effects values used for cancer and non-cancer health effects are subject to ~~the approval~~ review by the Office of Environmental Health Hazard Assessment (OEHHA). Some appropriate hHealth effects values used for cancer risk assessment are those available in the California Environmental Protection Agency (Cal/EPA), Standards and Criteria Working Group document entitled "California Cancer Potency Factors: Update", memo dated 1994, with attachment updated as of April 4, 1995, available through the Office of Environmental Health Hazard Assessment, and incorporated by reference herein. Some appropriate health effects values for assessing non-cancer health impacts are available in the CAPCOA "Air Toxics 'Hot Spots' Program Revised 1992 Risk Assessment Guidelines, October 1993," which is incorporated by reference herein. Other appropriate health effects values for non-cancer risk assessment are available on the United States Environmental Protection Agency, Integrated Risk Information System (IRIS) database (Software Version 1.0, 1992), 1996; the non-cancer health effects values from this reference are available from the Office of Environmental Health Hazard Assessment and incorporated by reference herein. The CAPCOA Risk Assessment Guidelines will be superseded by OEHHA Air Toxics Hot Spots Risk Assessment Guidelines.

(8) Any other assumptions, if needed, must be consistent with the procedures approved by OEHHA for preparing health risk assessments. Some acceptable procedures are included in the California Air Pollution Control Officers' Association (CAPCOA) "Air Toxics 'Hot Spots' Program Revised 1992 Risk Assessment Guidelines, October 1993", which is incorporated by reference herein.

(F) Stochastic modeling exercises are not acceptable as screening level risk assessments.

APPENDIX G

LIST OF DOCUMENTS

INCORPORATED BY REFERENCE

Appendix G

List of Documents Incorporated By Reference

(1) San Joaquin Valley Unified Air Pollution Control District Rule 2201 "New and Modified Stationary Source Review Rule", Section 3.29, as amended June 15, 1995 (definition of facility "Stationary Source").

(2) ASTM Methods: D2361-91, amended as of 1991, and D3177-89, reapproved as of 1993, to determine chlorine content and sulfur content of coal and coke samples. E776-87, reapproved as of 1992, and E775-87, reapproved as of 1992, to determine chlorine content and sulfur content in wood, refuse-derived, and other solid fuel, waste, or material samples. D808-91 amended as of 1991, and D129-91 amended as of 1991, to determine chlorine content and sulfur content in other fuel or material samples.

(3) EPA Methods: 7196A, dated July 1992, for chromium (hexavalent); 7471A, dated September 1994, for mercury; 7740, dated September 1986, for selenium; 6010A, dated July 1992, for all other trace elements. All test methods set forth in SW-846, Test Methods for Evaluating Solid Waste, Third Edition, November 1986, (source test methods for determining quantities of certain metals and trace elements in fuel, waste, and material samples).

(4) California Air Pollution Control Officers' Association (CAPCOA) "Air Toxics 'Hot Spots' Program Facility Prioritization Guidelines, July 1990".

(5) California Air Pollution Control Officers' Association (CAPCOA) "Air Toxics 'Hot Spots' Program Revised 1992 Risk Assessment Guidelines, October 1993".

(6) "California Air Toxics Emission Factors (CATEF): A CARB Database", Version 1.2, May 1996.

(7) Air dispersion models: U.S. EPA SCREEN3 (96043) model, February 1996, and the U.S. EPA ISC3 (95250) model, September 1995.

(8) California Environmental Protection Agency (Cal/EPA), Standards and Criteria Working Group, "California Cancer Potency Factors: Update", memo dated 1994, with attachment updated as of April 4, 1995.

(9) Health effects values for non-cancer risk assessment from the United States Environmental Protection Agency, Integrated Risk Information System (IRIS) database (Software Version 1.0, 1992), 1996.

(10) Standard Industrial Classification Manual, 1987, published by the Executive Office of the President, Office of Management and Budget, 1987.

*** [NOTE: The underline on the words "Test Methods for Evaluating Solid Waste" is to indicate the title of a book, and does not denote revised text. The underline will remain in the final approved text.]**

California Environmental Protection Agency

Air Resources Board

ADDITIONAL APPENDICES

TO THE
EMISSION INVENTORY

CRITERIA AND GUIDELINES REPORT

FOR THE AIR TOXICS "HOT SPOTS" PROGRAM

MAY 1996

Issue Date: June 7, 1996

[NOTE OF CLARIFICATION ON PROPOSED CHANGE: The "Additional Appendices" document, previously proposed to be under separate cover and incorporated by reference, is now proposed to be included in the "Emission Inventory Criteria and Guidelines Report." This cover page for the "Additional Appendices document is therefore no longer needed.]

California Environmental Protection Agency
Air Resources Board

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~~APPENDIX B-I~~

~~DATA ELEMENTS AND FORMATS~~

~~(INCLUDED WITH THE MAIN REPORT)~~

[NOTE OF CLARIFICATION ON PROPOSED CHANGE: The "Additional Appendices" document, previously proposed to be under separate cover and incorporated by reference, is now proposed to be included in the "Emission Inventory Criteria and Guidelines Report" ("Report"). This title page is therefore no longer needed, because Appendix B-I has its own title page in the Report.]