

WHO IS REQUIRED TO FILE AN EMISSIONS REPORT?

- (a) Every facility that had estimated emissions of two (2) or more tons of any one of the specific pollutants VOC, NO_x, SO_x, PM, SPOG, **or** emissions of fifty (50) or more tons of CO, **or** had emissions of specific Toxic Air Contaminants or Ozone Depleting Compounds (listed on Form TACS) in excess of the toxics emission thresholds (refer to Appendix L of this Book).
- (b) Every facility that receives a 2007-2008 Six-Month Transitional Emissions Reporting package, regardless of the estimated emissions levels, even if no fees are due, to update the facility's emissions records.

THIS BOOK WILL HELP YOU PREPARE YOUR EMISSIONS REPORT

This book provides you with updated program information, general instructions, and references to help you complete your Emissions Report. This book may not contain all the necessary information/data for completing your Emission Report. You may be required to utilize other resources and reference documents such as District's rules and guidelines, facility permits, source test results, EPA's AP-42 or other documents, ARB's reports, etc. in order to accurately report your emissions.

To save time and effort, and to ensure accurate emissions reporting and fee submittal, please review the program information, instructions, and forms BEFORE you begin to fill out your forms. To look up specific instructions or information, please consult the Table of Contents, which has been arranged for quick and easy reference. There are also specific instructions on the back of every form. In particular, look through the "Frequently Asked Questions" and "Common Mistakes" sections. For additional assistance, please refer to the "Program Support" section.

The time you take to provide accurate data is very much appreciated. Thank you for your part in meeting the clean air challenge!

ADDITIONAL OPTION FOR FILING EMISSIONS REPORT AVAILABLE

There are three emissions reporting options available for this 6-month transitional period:

- A new web-based emission reporting system that can be accessed through an internet browser at <http://www.aqmd.gov/aer/aer.html>
- The AER Emissions Reporting Software (available for download from <http://www.aqmd.gov/aer/aer.html> and included in the reporting package CD), or
- The Paper Forms (this is last reporting period for paper reporting option).

For this reporting period a new option to use web-based reporting system is available. Starting January 2009 (for calendar year 2008 reporting period) and beyond, this will be the only reporting option. The new web-based reporting system also offers optional reporting of Greenhouse Gases (GHG).

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1. WHY REPORT EMISSIONS?

The data collected through the Emissions Reporting (AER) Program is used to update the emissions inventory for the South Coast Air Quality Management District, which includes Orange County, the non-desert portions of Los Angeles and San Bernardino counties, and the Riverside County areas west of the Palo Verde Valley. This emissions inventory is essential to properly design and evaluate clean air strategies for this region's Air Quality Management Plan (AQMP) in order to comply with state and federal air quality standards.

2. YOUR RESPONSIBILITIES

Facilities subject to AQMD Rule 301(e) (Emissions Fee) must report their emissions from all equipment and processes, regardless of the quantities emitted. Facilities emitting 2 tons or more per six-month transitional reporting period of Volatile Organic Compounds (VOC), Nitrogen Oxides (NO_x), Sulfur Oxides (SO_x), Specific Organic Gases (SPOG), or Particulate Matter (PM), or emitting 50 tons or more per six-month transitional reporting period of Carbon Monoxide (CO), or emitting specific Toxic Air Contaminants or Ozone Depleting Compounds exceeding the thresholds specified in Rule 301 Table IV are also required to pay emission fees. It is each facility's responsibility to account for all emissions whether or not the emitting equipment requires a permit. It is the facility's responsibility to utilize all available resources and reference documents (such as District's rules and guidelines, EPA's AP-42 or other documents, ARB's reports, etc.) as necessary in quantifying emissions. Please read all the information contained in this package before completing the forms to save time and also to ensure accurate emissions reporting and fee submittal. Please refer to Appendix L of this General Instruction Book for the applicable Rule 301 sections pertaining to the 2007-2008 Emissions Report.

Although default emission factors are provided for some equipment and materials, facilities are responsible for using valid emission factors that most accurately represent their actual operations. For example, if a facility uses lacquer and the volatile organic compound (VOC) content from the label or MSDS for that lacquer is 1.5 lbs/gal, the facility should use 1.5 instead of the default factor of 2.3 in calculating emissions. Also, if equipment complies with an equipment-specific rule, the rule emission limit could be used in lieu of the default factor. Similarly, if an AQMD pre-approved source test results in different emission factors for the equipment, you should use the source test results in calculating emissions from that equipment, regardless of whether the source test gives higher or lower factors compared to the default factors. Default emission factors are to be used only when source-specific data is not available.

3. WHAT'S NEW THIS YEAR?

- **2007-2008 Reporting is applicable to six-month transitional reporting period (July 1, 2007 – December 31, 2007). Consequently all thresholds (such as emission reporting (criteria and TAC) threshold, fee thresholds (criteria and TAC/ODC)) are reduced by half as specified in Rule 301 (e).**
- **New Emission Fee Rates:** New emission fee rates are in effect for the 2007-2008 six-month transitional Emissions Reporting Program for criteria pollutants, toxic air contaminants, and ozone depleting compounds in accordance with AQMD Rule 301(e). The new fee rates represent a 10% increase compared with last year's fee rates. Please refer to Appendices L and M of this book for a copy of Rule 301(e) and the Emission Fee Table, respectively.
- **New option to file:** There are three emissions reporting options available for this 6-month transitional period:
 - A new web-based emission reporting system that can be accessed through an internet browser at <http://www.aqmd.gov/aer/aer.html>
 - The AER Emissions Reporting Software (available for download from <http://www.aqmd.gov/aer/aer.html> and included in the reporting package CD), or
 - The Paper Forms
- **AB2588 Quadrennial Report is not part of 2007-2008 Reporting:** For this six-month transitional reporting period, there will not be AB2588 Quadrennial Reporting. The next AB2588 Quadrennial Report will be applicable to calendar year 2008.
- **Electronic reporting:** For the six-month transitional reporting period, facilities have an option to use the criteria and toxics AER reporting software (enclosed in reporting package and available for download from <http://www.aqmd.gov/aer/aer.html>) or web-based reporting system which in addition to consolidated criteria and toxics offers optional Greenhouse Gas (GHG) reporting, available at <http://www.aqmd.gov/aer/aer.html>. Please see the Web-based AER Reporting system flyer included in the reporting package for more details.

- **New Equipment and Fuel Codes for Combustion Forms: B1, B1U, B2, B2U, E1, E1U, and R2: 999- other equipment and fuel codes were removed from the combustion forms.** Consequently, new equipment and fuel codes are added to combustion forms to more accurately describe the following fuel and equipment :

Equipment:

- Incinerator
- Micro Turbine

Fuel:

- | | |
|--|----------------------------------|
| • Compressed Natural Gas [CNG] (1000 gals) | • Coal (tons), |
| • Coke (tons) | • Tire (tons) |
| • Wood (tons) | • Bio-Diesel (1000 gals) |
| • Biomass Derived Gas (mmscf) | • Methanol (1000 gals) |
| • Kerosene (1000 gals) | • Process Associated Gas (mmscf) |
| • Municipal Solid Waste (tons) | • Lignite (tons) |
| • Bark (tons) | • Spent Solvent (1000 gals) |

Since 999-Other equipment and fuel codes ("999a-other external combustion <10 MMBTU/hr equipment", "999b-other external combustion 10-100 MMBTU-hr equipment", "999c- other external combustion >100 MMBTU/hr equipment" and "999d- other internal combustion equipment" and "999- other fuel" Codes) for combustion forms were removed, these mentioned codes will not be imported.

- **New Fuel Codes for Forms B8 and B8U:** New fuel codes are added to bulk loading forms to more accurately describe the following material:

- | | |
|--|-------------------------------------|
| • Compressed Natural Gas [CNG] (1000 gals) | • Bio-Diesel (1000 gals) |
| • Naphtha (1000 gals) | • Asphalt (1000 gals) |
| • Fuel Oil (0.05%S) (1000 gals) | • LPG, Propane, Butane (1000 gals). |

- **Jet Fuel Code description update:** Fuel Code "Jet Fuel" on combustion forms and "JP-4" on forms B8/B8U are both updated to fuel code "Jet fuel (Jet-A and Jet-B)".

- **Refinery Fuel Code description update:** "Refinery Gas/ Refinery Mixed Gas" was changed to "Refinery Gas/ Refinery Mixed Gas/Petroleum Process Gas"

- **Requirement for Importing EPA TANKS Data:** Please see special instruction in software Help to accommodate six-month transitional reporting (Form B6: use 6-month throughput in TANKS, but DO NOT mark the individual months; during import function software will automatically reduce calculated Rim Seal Loss, Deck Fitting Loss and Deck Seam Loss for VOC and toxics to half (1/2) of the amount. Form B7/B7U: use 6-month throughput in TANKS, but DO NOT mark the individual months; during import function software will automatically reduce calculated Standing Loss for VOC and toxics to half (1/2) of the amount).

- **NAICS Code:** SIC Code was substituted with NAICS Code.

- **Forms P2 and P2U:** If you are using default emission factors listed below, enter half (1/2) of the number of sources to estimate the emissions during this six-month transitional reporting period.

- **Forms P1, P1U, R3 and T1 and "Guidelines for Fugitive Emissions Calculations" dated June 2003:** If you are using default emission factors listed on page 6 of Guidelines, enter half (1/2) of the number of sources to estimate the emissions during this six-month transitional reporting period.

- **Form R5:** If you are using default emission factors listed below;
 - for 1000 gals/day, million gals/day and sq. ft., enter half (1/2) of the value,
 - for 1000 tons enter value for 1000 tons during six-month reporting period,
 - for tons enter value for tons during six-month reporting period, and
 - for hours enter value for hour during six-month reporting period
 to estimate the emissions during this six-month transitional reporting period (07/01/07-12/31/07).

- **"Guidelines for Calculating Emissions from Cooling Towers" dated June 2006:** If you are using Table 1 default emission factors, since default emission factor is annual, report half (1/2) of million gallons circulating water rate/day as Throughput to estimate the emissions during this six-month transitional reporting period (07/01/07-12/31/07).

- **Dairy and Poultry operations:** refer to "Guidelines for Calculating Emissions from Dairy and Poultry Operations" dated June 2008; report half (1/2) of number of animals as Throughput to estimate the emissions during this six-month transitional reporting period (07/01/07-12/31/07). If you are dairy farm, take the annual average number of animals

for each annual category from the January 2008 annual report (completed for 2007 calendar year) submitted to the Santa Ana Regional Water Quality Control Board (SARWQCB) then report half (½) of that amount as “Throughput” to estimate the emissions during this six-month transitional reporting period (07/01/07-12/31/07). If you are a poultry farm, take the annual average number of birds using your annual recordkeeping report for calendar year 2007 then report half (½) of that amount as “Throughput” to estimate the emissions during this six-month transitional reporting period (07/01/07-12/31/07).

- **Form CR:** Modified to accommodate six-month transitional reporting period.
- **New Frequently Asked Question:** with the definition of Architectural coating was added.
- **A Few Reminders:**
 - **No Extension:** Extensions for 2007-2008 Emissions Reporting Program will not be granted and extension requests will not be accepted by the AER staff. This year, the reporting deadline is **September 2, 2008**, and all reports received after the deadline will be considered late and will be subject to surcharge.
 - **Paper Forms Submittals:** Facilities using paper forms must return all of their S, X, ES, C, CU, TACS, TAC, WT forms, and if applicable Form A and CF (see Category I forms, Appendix N), even if there are no reportable emissions or fees due.
 - **Reporting Options:** The enclosed CD-ROM contains the AER Emissions Reporting software and all the forms and instructions in PDF format, which can be viewed and printed. The new web-based emissions reporting system is available at <http://www.aqmd.gov/aer/aer.html> . If you must use the paper forms to report emissions, you can get the necessary forms by printing them out from the enclosed CD-ROM, or downloading them directly from the AER web site (see “Program Support”), or calling the Hotline at (714) 596–7456. Facilities are encouraged to use the either software (the AER Reporting Software or new web-base reporting system) to simplify and streamline the reporting process, reduce errors, and save time. The AER Reporting Software is for IBM-compatible computers running Microsoft Windows 98 or higher (Macintosh is not available), the new web-based system is available through internet browser, and both software systems have many user-friendly features such as built-in information libraries and automatic calculations.
 - **Record Keeping:** We recommend that facilities retain all records and calculations used in completing the Emissions Reporting Forms for a minimum of five years for AQMD’s audit purposes as well as future references.
 - **Reporting Emissions for Compounds Classified as VOC and TAC, or PM and TAC:** Facilities emitting VOC and PM emissions are required to report the total emissions of these pollutants including any toxic air contaminants that are classified as VOC or PM, per AQMD Rule 301(e). VOC and PM emission fees apply to the total VOC or PM emissions. In addition to VOC or PM emission fees, facilities emitting any of the 22 toxic air contaminants and 2 ozone depleting compounds at or above the thresholds listed in Rule 301 Table IV are also required to pay the corresponding toxic emission fees as well.
 - **If the pollutant is classified as TAC and VOC,** you must report the pollutant first as VOC on the appropriate criteria emissions form to create an Emission Source Reference, then use that specific Emission Source Reference and the corresponding throughput to report the same pollutant on Form TAC as toxic air contaminant. Similarly, **if the pollutant is classified as TAC and PM,** report the pollutant first as PM on the appropriate criteria emissions form to create an Emission Source Reference, then use that specific Emission Source Reference and the corresponding throughput to report the same pollutant on Form TAC as toxic air contaminant.
 - **Submitting On-line:** Facilities can file their report online with both software systems. Facilities will still be required to mail a copy of the printed Forms X and S, and if applicable Form A and Form CF, a check for all fees due (if any), the on-line submittal confirmation and supporting documentation to AQMD on or before **September 2, 2008**. AER Reporting Software online option will not be available after **October 17, 2008**. Any submittals after September 2, 2008 will be subject to late payment surcharge as specified by District Rule 301 (e)(10)(B).
 - **Software Import:** If you used the AER Reporting Software to prepare last year’s Annual Emissions Report you can import last year’s information using the import function; however import of last year data is not yet available with the new web-based system. The AER Reporting software import feature imports most of last year’s data so you only need to update information rather than entering all the information again. In general, fuel codes, emission factors, equipment codes, material codes, activity codes, and the bulk of Form X information from last year’s report will be imported through this process. Specific data not imported through this process are listed in Appendix P. You can access the detailed instructions for the import process by choosing “Import Last Year” and then “Help” in the first pop-up window. Please be sure to verify and update the imported data as necessary.

- **Software Functionality Related to Reporting of Combustion Toxics:** Software automatically assigns default toxics emission factors for combustion of certain standard fuels on Form TAC (please note the built-in message). The software user, however, has to modify Form TAC if:
 - No default factors are available (e.g., for other fuel types not listed), or
 - Equipment specific emission factors are available, or
 - If the message indicates that adjustment to the ammonia emission factor is necessary depending on whether the equipment has SCR, or does not have SCR or SNCR.

Reminder: You have to report all of your criteria and toxic emissions. Only combustion default toxic emission factors, if available, are built into the software, the other toxics have to be entered manually.
- **Filing Amendment:** Facilities filing amendment requests for their prior emissions reports, with no emission fee impact, are required to pay the associated fees for processing these amendments as specified in Rule 301(e)(9)(A).
- **Ecotek as AQMD’s Contractor:** Ecotek will continue to be AQMD’s contractor for implementing the privatized portions of the 2007-2008 six-month transitional Emissions Reporting Program. Under AQMD’s direction, Ecotek’s responsibilities include: updating the forms/instructions and General Instruction Book, improving and updating the AER Reporting Software, preparing and distributing emission reporting packages to facilities, providing outreach and support services to help facilities prepare their Emissions Reports, compiling the data submitted, and conducting limited data quality control. AQMD staff will continue to be responsible for detailed audits of the reports, preparing underpayment letters, and processing exemptions, amendments, or refund requests.
- **AER Reporting Software:** The AER Emissions Reporting Software has been modified to incorporate all the changes to the reporting program including the public comments and feedback collected during the previous years. The software is more user-friendly and simplifies the reporting process. The software also reduces the chances for errors, improves the data accuracy, and assists the users with the transition to the new program requirements as specified in “3. What’s New This Year”. Numerous features were incorporated into the design to improve the performance, navigation, and functionality. Software was modified to allow default 100% digester efficiency on Form TAC for dairies. Also improved are: the “Errors Check” function, warnings for possible problem situations, on-screen reminders, pull-down menus, and many other enhancements.

4. WHAT’S NEW WITH THE AER PROGRAM FORMS (SOFTWARE AND PAPER)?

The following revisions have been made to the 2007-2008 Emissions Reporting forms in addition to specifying on all the forms that this is six-month transitional reporting period:

Form CR	Modified to accommodate six-month transitional reporting period.
Forms B1, B1U, B2, B2U, E1, E1U, R2	New Equipment and Fuel Codes were added.
Forms B8 and B8U	New Fuel Codes were added
Form X	SIC was substituted by NAICS

A new web-based reporting system providing access to online versions of the emission reporting forms is available for electronically entering and reporting your emissions. The web-based system provides direct access to all data entry and summary forms through your web-browser. The web-based system functionality is similar to that of the AER Reporting desktop software (ease of navigation, built-in default emission factors, automatic transfer of information between forms, etc.).

5. SUBMITTAL DATE

The 2007-2008 Six-Month Transitional Emissions Report must be submitted to AQMD on or before **September 2, 2008**.

IF YOU OWE EMISSION FEES, AND NO FEE PAYMENT IS RECEIVED BY AQMD OR POSTMARKED BY SEPTEMBER 2, 2008, YOU WILL BE SUBJECT TO A LATE PAYMENT SURCHARGE AS SPECIFIED BY DISTRICT RULE 301(e)(10)(B), INCLUDED IN APPENDIX L, AND EXPLAINED IN SECTION 6 BELOW.

6. NON-PAYMENT/LATE PAYMENT SURCHARGE

If no fee payment is received by AQMD or postmarked by **September 2, 2008**, a surcharge shall be assessed and the emission fee due shall be increased as follows:

When payment is received:

- Less than 30 days after September 2, 2008
- 30 to 90 days after September 2, 2008
- 91 days to 1 year after September 2, 2008
- More than 1 year after September 2, 2008

* *Based on fee schedule in effect at time of payment.*

Emission fees and surcharge due are:

- Unpaid fees +5% of unpaid fees
- Unpaid fees +15% of unpaid fees
- Unpaid fees +25% of unpaid fees
- Unpaid fees +50% of unpaid fees*

7. UNDERPAYMENT SURCHARGE

If emission fee is paid on time, but the amount paid is determined to be underestimated, total fee due shall be calculated as follows:

When underpayment is determined **within one year and 60 days from the official due date (July 1)** and:

- Payment was less than 90% of amount due
- Payment was 90% or more of the amount due

Underpayment fee and surcharge due are:

- Underpayment + 15% of underpayment amount
- Underpayment + 0 % of underpayment amount

When underpayment is determined **more than one year and 60 days from the official due date (July 1)**:

All underpayments as determined by the District or as disclosed by the facility will be assessed a 50% surcharge on the underpayment, calculated based on the fee schedule in effect when the underpayment is determined.

8. REFUND REQUEST FOR OVERPAYMENT

Rule 301(e)(9)(B) requires facilities to submit a written refund request for overpayment of emission fees within 1 year and 60 days from the official due date (July 1). **Credit from previous year cannot be applied toward this six-month's Emissions Report fees.** Also, Form A (instead of a separate written request) can be used to request a refund associated only with the current six-month transitional reporting period.

9. AMENDMENTS

All amendments must be submitted in writing and must include:

- A complete copy of the originally submitted forms (if your original report was submitted electronically, print and provide all originally submitted forms), with the originally reported values that need to be amended crossed out on all applicable forms and amended values added,
- A new submittal diskette incorporating the amendments and submittal forms (for software users),
- An explanation of the amendment (e.g., type of error, corrections made); and
- Calculations and documentation to support the amendment request.

Facilities filing amendment requests for prior Annual Emissions Reports (AER), which have no fee impact, are also required to pay the associated fee for processing these amendments as specified in Rule 301(e)(9)(A). Requests must be submitted to AQMD headquarters address: AQMD, Office of Planning, Rule Development and Area Sources, Emissions Reporting Program, 21865 Copley Dr., Diamond Bar, CA 91765. Review of amendment requests can result in any of the following actions:

- **Additional Fees** – Additional fees that result from underpayments are subject to the same surcharge provisions and time frame outlined earlier under the “Underpayment Surcharge” section. Facility emissions will be updated accordingly, after the amendment has been verified.
- **Refund** - A refund may be made as a result of the amendment only if a written claim for refund is filed with AQMD within one year and 60 days from the official submittal due date (July 1). However, the facility emissions will be updated accordingly, after the amendment has been verified.
- **Denial** - As a result of AQMD evaluation, the amendment or fee refund may be denied.

10. OTHER FEE ISSUES

For financial hardship cases related to the following District billing/fee matters you may contact the AQMD Fee Review Committee coordinator at (909) 396-2207:

- Payment by installment of fees due;
- Alleged District billing or fee errors; and
- Surcharges assessed.

If you have billing or payment questions you may contact AQMD Customer Service toll free at 866-888-8838 from inside California, or call (909) 396-2900.

11. MAILING INSTRUCTIONS

Please use the pre-addressed return envelope provided to submit your Six-Month Transitional Emissions Report along with any fee payments. Since reports are first received and processed by Bank of America to deposit the checks, return receipts for certified mail will be stamped by Bank of America rather than AQMD. If you need to use a different envelope, please mail the completed report and fees to the following address (use correct postage to avoid delays):

South Coast Air Quality Management District
2007-2008 Emissions Report
File No. 54493
Los Angeles, CA 90074-4493

First Class Postage

To avoid late payment surcharges, all mail must be postmarked by the Post Office on or before September 2, 2008.

If you wish to use a messenger (or hand deliver), to avoid late payment surcharges, the package should be delivered to the cashier's booth at AQMD Headquarters at the address listed below in Diamond Bar **on or before 5:00 p.m. September 2, 2008; please note that AQMD is closed on Mondays.**

South Coast Air Quality Management District
ATTN: Finance Cashier
2007-2008 Emissions Report
21865 Copley Drive
Diamond Bar, CA 91765-4178

Messenger Service

12. WHAT TO SUBMIT

Please be sure to include all of the following in your submittal to AQMD as applicable. If you are using the paper form reporting option, arrange your forms in the same sequence as shown in Appendix N of this book. Do not staple, fold, or wrinkle the forms. Use the enclosed checklist to make sure that all necessary information is submitted.

Electronic Submittals (created by using AER software and submitted on-line or on CD or diskette; or online data reporting using new web-based AER system)

- If you choose to use the AER software, you may either submit your data file using the electronic on-line option, or submit a data diskette or CD. If you choose to use the new web-based AER system you will submit your emissions report on-line. If you choose the on-line option (from either software), you will receive a confirmation upon submission of your file. Please enclose a copy of the received confirmation with your submittal. A separate confirmation is required for each facility. The AER software on-line option will not be available after **October 17, 2008**.
- If you choose to create a submittal disk (floppy or CD), please enclose your Submittal Data Disk created by the Emissions Reporting Software with your report (please use a protective cover to avoid damage in the mail). Label the disk with: 2007-2008 Emissions Report, your Facility Name, and Facility ID. A separate Submittal Data Disk is required for each facility. Electronic submittals NOT received online are automatically considered as incomplete if you do not enclose the data diskette and you will be contacted by Ecotek. For further information about electronic submittals, see Frequently Asked Questions "X. How do I prepare my report if I use the software reporting program?"
- Return Form S, Form X (signed), and if applicable Form A/CF printed by the software.
- Include check made payable to South Coast Air Quality Management District or AQMD for all fees due.
- Include supporting documentation. Mark all supporting documentation with your facility ID, facility name, and corresponding form name.

Paper Form Submittals (not AER software generated print-outs)

- **Return all of your S, X, ES, C, CU, TACS, TAC, WT forms, and if applicable Form A and CF** (see Category I forms, Appendix N), **even if there are no reportable emissions or fees due.** Return Form CR if you are a RECLAIM facility. Dry cleaners using only perchloroethylene (perc) should submit Form DC instead of TACS, TAC and WT.
- Return all remaining forms (see Category II forms, Appendix N) that you used to calculate your emissions. Please do not return Category II forms that were not used.
- Place Form S as the top sheet of your return package whether you owe fees or not.
- Include check made payable to South Coast Air Quality Management District or AQMD for all fees due.
- Include supporting documentation as explained in the next section. Mark all supporting documentation with your facility ID, facility name, and corresponding form name. For further information about paper submittals, see Frequently Asked Questions “Y. How do I prepare my report if I use Paper Forms (not AER software generated print-outs)?”

Supporting Documentation

- Toxic Emission Factor Documentation: Form TAC
If you used an equipment-specific toxic emission factor or a toxic emission factor other than the default factor, submit documentation to substantiate the emission factor such as, but not limited to:
 - (a) If Material Safety Data Sheets (MSDS) or other technical data sheet showing the TAC/ODC content of the material were used, enclose copy of the used sections of MSDS.
 - (b) If AQMD pre-approved source tests were used, enclose a copy of the source test results and supporting data.
 - (c) If rule or permit emission factors or Best Available Control Technology (BACT) emission levels were used, enclose a list of equipment by rule number and by permit number that comply with the rule or permit limit, or comply with the BACT levels.
 - (d) If other documents (e.g. EPA AP-42) were referenced for emission factors, enclose a copy of the referenced sections or tables.
- Emission Factor Documentation-Combustion Sources/Miscellaneous Processes: Forms B1, B1U, B2, B2U, B4, B4U, E1, E1U, R2 and R6
If emission factors other than the defaults are used, submit documentation to support the emission factors such as, but not limited to:
 - (a) If Continuous Emissions Monitoring (CEMS) data was used, enclose CEMS summary data.
 - (b) If AQMD pre-approved source tests were used, enclose a copy of the source test results and supporting data.
 - (c) If rule or permit emission factors or Best Available Control Technology (BACT) emission levels were used, enclose a list of equipment by rule number and by permit number that comply with the rule or permit limit, or comply with the BACT levels.
 - (d) If other documents (e.g. EPA AP-42) were referenced for emission factors, enclose a copy of the referenced sections or tables.
- RECLAIM Emission Documentation - RECLAIM Combustion Sources: Form CR
If you are a RECLAIM facility, enclose a copy of your APEP forms (Part I-A) to support the emissions reported on Form CR. Refer to the instructions on the back of Form CR.
- Emission Factor Documentation-Organic Emissions: Forms B3 and B3U
For emission factors other than default factors, provide supporting documentation such as, but not limited to, Material Safety Data Sheets or other technical data sheet showing the VOC content of the material.
- Emission Factor Documentation-Solvent Waste Recycling: Forms W, WT and WU
If waste-recycling credit is claimed on these forms, submit the following documentation to support the waste credit:
 - (a) Copy of the waste manifest for each shipment listed, and
 - (b) Corresponding lab analyses (if 100% credit is claimed) or waste profiles.
- Importing EPA TANKS: Forms B6, B7 and B7U
You must include as a supporting documentation either:
 - 1. Detail Reports printed from the EPA TANKS program, or
 - 2. The Microsoft Access data files (client1.mdb and tankdata.mdb) generated by the EPA TANKS program on a CD.
- Fugitive Emissions: Forms P1, P1U, R3 and T1
If you used the Correlation Equation Method or the Screening Value Range Method to calculate fugitive emissions on these forms, enclose data diskette(s), summary report, and process unit descriptions as specified in the document “Guidelines for Fugitive Emission Calculations”, dated June 2003.
- Control Efficiency Documentation
If you used control efficiency in your calculations, provide supporting documentation to substantiate the control efficiency of your control device.
- Portable Equipment: Forms CR, B2, and B4
If you operated portable equipment that was registered under the Statewide Portable Equipment Registration Program, provide a copy of the registration certificates issued by California Air Resource Board for these portable equipment.

13. INFORMATIONAL WORKSHOPS

Staff from AQMD and Ecotek will conduct informational workshops for the 2007-2008 Emissions Reporting (AER) Program. YOU DO NOT NEED TO REGISTER FOR THESE WORKSHOPS. SIMPLY CHOOSE A DATE AND TIME AND ATTEND. There is no charge for these workshops. The workshops will help facility personnel prepare the 6-month transitional Emissions Report using either AER reporting Software, or the new web-based emission reporting system, or the paper forms. During each workshop we will discuss the changes to the program, describe the emissions reporting process, give an overview and a demonstration of how to use both electronic systems, and finish with a question-and-answer session. Staff will be available after the General Session to provide detailed software training and one-on-one consultation. We encourage facility representatives involved in preparing the Emissions Report to attend one of these scheduled workshops.

You are strongly encouraged to attend one of the following workshops:

Workshop Dates and Times (No Registration Necessary)

Date	Day	Time	Location
July 09, 2008	Wednesday	9:30 a.m.	Auditorium
July 15, 2008	Tuesday	1:30 p.m.*	Room GB
July 17, 2008	Thursday	9:30 a.m. *	Room GB

*Different Room.

Workshop Agenda

General Session – 2 Hours

- Emissions Reporting Program Overview
- Emissions Report Preparation Process
- Questions & Answers
- AER Software Overview & Demonstration
- Questions & Answers
- Web-based Emission Reporting System Overview & Demonstration
- Questions & Answer

Consultation and Training – 1 to 2 Hours

- Software Training (AER software and web-based training)
- One-on-One Consultations

Registration

No registration or RSVP is required for attending these workshops.

Location

AQMD Headquarters
 21865 Copley Drive
 Diamond Bar, CA 91765

Directions

Call (909) 396-3554 for directions to AQMD headquarters. You can also access travel directions via the Internet at <http://www.aqmd.gov> (at the AQMD home page, click on “Contact Us,” then jump to “Phone/Email/Map,” then click on “Map to Headquarters”).

14. PROGRAM SUPPORT

Free support is available from Ecotek, the AQMD's contractor for this program, as well as from AQMD staff. Support staff will be available from July 1, 2008 through September 2, 2008, from 8:00 a.m. to 5:00 p.m., Monday through Friday (or Tuesday to Friday for AQMD staff). Support is available through the following channels.

■ **Help and Appointment Hotline:** (714) 596 – 7456 or (909) 396-3660 for web-based system

If you need help completing your report call the Help and Appointment Hotline (the Hotline). Ecotek staff (or AQMD staff) will be available to provide immediate responses to your questions to the extent possible. You may also schedule an appointment for a one-on-one consultation by calling this Hotline.

If you need help with the new web-based emissions reporting system, please call (909) 396-3660 and AQMD staff will be available to answer your question.

■ **Forms Request:**

If you need additional paper emissions reporting forms or instructions you may:

1. Print the forms and/or instructions from the CD-ROM enclosed in your package, or
2. Download from <http://www.ecotek.com/aqmd> or <http://www.aqmd.gov/aer/aer.html>, or
3. Call the Hotline. The requested forms will be promptly mailed to you.

■ **Fax Help Line:** (714) 596 – 8837

You can fax your questions and form requests to the Fax Help Line (please include your telephone number, occasionally support staff may need to obtain additional information to answer your question). A response will be either promptly faxed back or you will receive a phone call, depending on the type of question.

■ **E-mail:** aer@ecotek.com or aer@aqmd.gov for web-based system questions

You can send your questions via e-mail (please include your telephone number, occasionally support staff may need to obtain additional information to answer your question) and a response will be promptly e-mailed back to you.

■ **Internet:** Ecotek: <http://www.ecotek.com/aqmd>
AQMD: <http://www.aqmd.gov/aer/aer.html>

All published supplemental instruction materials are available on the **CD-ROM** enclosed in your package. All of the same information and more is available on the web including: the AER Emission Reporting Software program, new web-based reporting system (including help and instructions), paper emissions reporting forms, the General Instruction Book, Supplemental Instructions for Liquid Organic Storage Tanks and References, and other materials. In addition to published supplemental instructions, additional information is available on the web such as AQMD rules, Clean Air Solvents List and other information.

■ **In-Person:**

Scheduled in-person appointments may be arranged upon request. For a scheduled appointment, you will need to bring the forms or software package you received and all pertinent information for the period of July 1, 2007 through December 31, 2007. This may consist of:

- Summary of fuel use records (Gas Co. receipts, invoices, etc.).
- Invoices showing types and amounts of materials used (e.g. coatings, inks, etc.).
- Process throughput records.
- Material Safety Data Sheets, waste manifests, waste (chemical) analysis, etc.
- Copies of source tests.
- Any other information affecting emission estimation (e.g. control devices).

Support staff will help you fill out the forms and calculate your emission fees (if applicable) for your Six-Month Transitional Emissions Report. There is no charge for this service. However, support staff cannot prepare your report for you. Appointment times are limited and usually fill up rapidly the last three weeks before the reporting deadline. Appointments are scheduled on a first-call, first-served basis. To ensure a timely appointment, please call early before the deadline crunch.

15. FREQUENTLY ASKED QUESTIONS

A. Which Emissions Do I Report?

All emissions from your facility must be reported regardless of whether emissions are from sources that require a permit or not. Emissions should include criteria pollutants, specific organics, and toxic air contaminants/ozone depleting compounds including certain chemicals defined as exempt compounds in Rule 102.

Criteria pollutants are reactive organic gases (ROG) or volatile organic compounds (VOC), carbon monoxide (CO), nitrogen oxides (NO_x), sulfur oxides (SO_x), and particulate matter (PM).

Specific organics include hydro-fluoro-carbons (HFC) and hydro-chloro-fluoro-carbon (HCFC) as listed in Appendix B of the General Instruction Book.

The new web-based reporting system also offers OPTIONAL reporting of the following **Greenhouse Gas (GHG)** emissions according to CARB Mandatory Rule requirements: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).

Toxic air contaminants/ozone depleting compounds (TAC/ODC) are identified in Table IV of Rule 301 including the following chemicals defined as exempt compounds in Rule 102:

- **Toxic air contaminants** are carbon tetrachloride, methylene chloride, and perchloroethylene.
- **Ozone depleting compounds (ODC)** include 1,1,1-trichloroethane (111-TCA) and chlorofluorocarbon (CFC).

However, usages and emissions from the following categories are **NOT** subject to reporting requirements under the Emission Reporting Program:

- Exempt compounds as defined in Rule 102 as **non-VOC**: acetone, ethane, perchlorobenzotrifluoride (PCBTF), volatile methylated siloxanes (VMS), and methyl acetate.
- On-road motor vehicles (cars, trucks, vans, etc.)
- Off-road vehicles and mobile equipment (forklifts, bulldozers, tractors, lawnmowers, etc.)
- Portable equipment registered under the Statewide Portable Equipment Registration Program (see Question R)
- Clean Air Solvents.
- Architectural coatings/paints (see question AG.)

B. What Forms Do I Use?

Use the forms that correspond to emitting equipment or processes at your facility. The following table gives general guidance on which forms may apply to your facility. See Appendix N of this Instruction Book for a list and description of all forms. The Emissions Reporting Software can assist you in selecting the appropriate forms for your type of operation through a series of questions during the Interview Process. However, if you use the paper forms, you may print out the forms from the enclosed CD or AER web site, or contact the Hotline by phone, fax, or e-mail to request any paper forms. Discard any Category II forms (i.e., paper forms) that do not apply to your equipment or operations.

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Form	Autobody Shops & Car Dealers	Dry Cleaners	Dairy and Poultry	General Facilities	Facility with Above-Ground Tanks	Power Plants & Cogen Units	Oil & Gas Production Facilities	Bulk Loading Terminals	Refineries
A	X	X	X	X	X	X	X	X	X
CF	X	X		X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
S	X	X	X	X	X	X	X	X	X
ES	X	X	X	X	X	X	X	X	X
C, CU	X	X	X	X	X	X	X	X	X
CR				RECLAIM	RECLAIM	RECLAIM	RECLAIM	RECLAIM	RECLAIM
TACS	X		X	X	X	X	X	X	X
TAC	X		X	X	X	X	X	X	X
WT	X			X	X	X	X	X	X
DC		X							
DCB		X							
AB	X								
B1, B1U			X	X	X		X	X	
B2, B2U			X	X	X		X	X	
B3, B3U	X			X	X	X	X	X	X
W, WU	X			X	X	X	X	X	X
B4, B4U	X		X	X	X	X	X	X	X
B6					X	X	X	X	X
B7, B7U					X	X	X	X	X
B8, B8U							X	X	X
E1, E1U						X			
P1, P1U							X	X	
P2, P2U							X	X	
R1, R1U					X	X	X	X	X
R2									X
R3									X
R4									X
R5									X
R6									X
R7									X
T1								X	

C. What Is the Difference Between Permitted and Non-Permitted Equipment?

All operating equipment which requires an AQMD permit, even if applications have not been submitted or written permits yet issued, is considered permitted equipment for Emissions Reporting. Equipment or processes that are not required to have an AQMD permit are considered non-permitted equipment. A list of equipment or processes that are not required to have an AQMD permit can be found in AQMD Rule 219. Equipment/emissions exempt pursuant to Rule 219 must have separate records to clearly demonstrate that the fuels or the materials were used exclusively in non-permitted equipment in order to report the emissions on “non-permitted” equipment forms (“U” forms). If you do not have records to clearly document these non-permitted emissions, you must report this information on the “permitted” equipment forms. You may obtain a copy of AQMD Rule 219 (Equipment not Requiring a Written Permit) by contacting the AQMD Public Information Center at (909) 396-3600 or using the AQMD web site at www.aqmd.gov.

For previously exempt equipment under Rule 219 (i.e., equipment being deleted from the Rule 219 list), the equipment is considered permitted equipment from January 1, or July 1, whichever is sooner after Rule 219 is amended to exclude this equipment from exemption, even if applications have not been submitted or written permits yet issued. Fuel and material use data for such equipment should be reported on the “permitted” equipment forms.

In addition, equipment, processes, and operations which are directly related to permitted equipment or processes are considered permitted, even though they themselves may not require a specific permit. For example, emissions from materials used in preparing surfaces before being sprayed in a permitted spray booth are considered permitted emissions and should also be reported on the “permitted” emission forms.

Beginning with reporting cycle 2001-2002 Annual Emissions Reporting Program, non-permitted emissions are subject to emission fees as per AQMD Rule 301(e)(2) and authorized under Health and Safety Code (Section 40522.5).

Non-permitted emissions subject to emission fees include emission sources that do not specifically require an AQMD permit but are regulated by AQMD rules and regulations (e.g., Reg. XI rules, Reg. IV prohibitory rules, etc.). For example, emissions from solvent cleaning operations subject to Rule 1171 which are classified as non-permitted emissions are now subject to emission fees.

D. Why Do I Need to Provide Information for Both Permitted and Non-Permitted Equipment?

Emissions data from your equipment and processes, both permitted and non-permitted, are used to compile the emission inventory for this region. This information is required by state and federal air quality management programs. The emission inventory forms the basis for air quality planning and analysis which is an important component of our region’s Air Quality Management Plan (AQMP). Therefore, under AQMD Rule 301(e), you are required to report all emissions from your facility.

E. How Do I Report My Facility’s Status Change?

Status Change	How/What to report in Emission Report?	Other Steps to Follow*
Facility Name Change (Facility location name)	Report the emissions under the same ID, since there is no ID changes for simple name change. Indicate the new name on Form A and all forms.	Call Customer Service or Permit Services and follow instructions for official change of company’s name.
Change of ownership	The old owner is generally responsible for the emission fees for the period he/she owned the facility, and the new owner is responsible for the emission fees for the remaining period. However, if the new owner has agreed with the old owner to assume the liability, then all the emissions should be reported by the new owner under the new ID.	Contact Permit Services for official change of ownership application package and filing fee requirements. A change of ID will occur and new permits will be issued.
Change of location	Report all emissions using the new ID for the new and old locations. Indicate on Form A the old/new IDs, locations, and effective date for reference.	Contact Permit Services to receive an application package to formalize the change of location. A change of ID will occur and new permits will be issued for the new location.
Facility out of business or shut down	Report the emissions from the period (during the reporting cycle) the business is in operation, if any. Indicate on Form A the effective date for reference.	Notify Customer Service and Permit Services in writing if facility has not already done so.
All permitted equipment not in operation	Report emissions only from all non-permitted equipment, if any. Send a letter along with completed report stating that the permitted equipment were not in operation during the reporting period and explain why.	
Customer Service (909) 396 – 2900 or toll-free from inside California (866) 888-8838		
Permit Services (909) 396 – 3385		

*To avoid possible penalties and enforcement actions you must take these steps to make official changes to the facility’s status.

F. What if I Have Multiple Locations?

If you have multiple locations, you should have separate facility IDs for each location. A separate packet is sent for each facility ID and you must file a separate report for each ID.

Note: If your six-digit facility ID number begins with an “8” (800000 series), you should file a single emission report for each 800000 series ID. The 800000 series “unitized” ID numbers are issued to large facilities such as refineries with equipment at contiguous or adjacent locations. If you have an 800000 series ID and have received multiple packets for various sub-portions of your facility, please call the Help and Appointment Hotline.

G. Can I Receive Credits for Recycled Organic Liquid Waste?

Yes, you can. In order for you to receive credits for the liquid hazardous waste shipped out for recycling or disposal, you must complete Form W, WU and/or WT. You must list all waste shipments from your facility and submit a copy of the waste manifest for each shipment. A 50% credit for the organic waste solvents or applicable TAC substances will be given. You may qualify for higher credits if you submit a copy of waste (chemical) analysis performed by a certified laboratory for each shipment. In the absence of a certified lab analysis, auto body shops and car dealers can apply a 70% standard default solvent percent to their recycled clean-up solvent waste and claim 100% waste credit. You cannot report waste credits that exceed your reported emissions. Verify that you have calculated waste credits correctly. Refer to Appendix E for more guidance. Waste material should directly correspond to emitting materials. If the emitting equipment has a control device, please refer to Question S.

H. Do I Report Vehicle Emissions?

No, do not include fuel usage or emissions from company “fleet” vehicles such as on-road motor vehicles (cars, trucks, and vans) or off-road vehicles and mobile equipment (forklifts, bulldozers, and tractors). However, you must report emissions from portable IC engines which are not registered with the state (See Question R).

I. How Long Do I Keep a Copy of My AQMD Forms?

We recommend that facilities keep a copy of your report for at least five years, as well as the records and calculations used in preparing this report, for your files and for use in the event of an AQMD audit.

J. What If I Wish to Use VOC Contents Different from the Default Values?

You are required to use the best available data to report the VOC content whether it is higher or lower than the default value. AQMD recognizes and encourages the use of VOC data from the supplier Material Safety Data Sheets (MSDS). You must provide copies of the MSDS used in preparing your emission reports. Commercial grade generic organic chemicals used as solvents and thinners have their densities as the emission factors (VOC content). In these instances the values in Appendix B are adequate.

The three-digit general Material Codes in Appendix B should be used on B3 and B3U forms in conjunction with the MSDS. However, if the MSDS cannot be secured nor an equivalent reliable reference provided, you may use VOC values provided in Appendix B. The VOC values in Appendix B are default factors that should only be used when more accurate values are unavailable.

K. What if I Wish to Use Rule-Based Emission Factors Rather than the Default Values?

You are required to use emission factors which most accurately reflect emissions from your equipment whether it is higher or lower than the default values. You may use rule-based factors, permit limit factors, or BACT factors as long as your equipment complies with the corresponding rule, permit, or BACT level, except for Rule 1162, for which you should refer to the guideline “Guidelines for Calculating Emissions from Polyester Resin Operation”, dated June 2007. You must submit a list of equipment by rule number and by permit number that complies with the rule or permit limit, or complies with the BACT levels.

L. Where Do I Report Emissions from Miscellaneous Activities?

If you have any stationary source emissions from miscellaneous activities at your facility not specifically addressed on any other form, please use Form B4 or Form B4U. Select and enter an appropriate “activity code” listed in Appendix F for your miscellaneous activities. Enter the requested data and quantify the respective emissions in the assigned columns.

M. What Do I Need to Include in My Return Packet?

Please refer to Section 12, “What to Submit.”

N. Am I a RECLAIM Facility?

Only certain facilities are included in the RECLAIM program based on their NO_x and/or SO_x emissions. RECLAIM facilities are required to report their emissions on a daily, monthly, and/or quarterly basis depending on the type/size of the facility. RECLAIM facilities already know that they are in the RECLAIM program because of the AQMD requirements. However, please contact our Hotline if you are in doubt.

O. What Forms do I Use if my Facility is in RECLAIM Program?

RECLAIM NO_x and/or SO_x emissions are reported on **Form CR ONLY. DO NOT DOUBLE-REPORT** RECLAIM NO_x and/or SO_x emissions on Forms B1, B1U, B2, B2U, B4, B4U, E1, E1U, or other forms. Non-RECLAIM emissions (emissions that are **not** subject to RECLAIM requirements) should be reported on the appropriate forms as instructed in the AER Program. The non-RECLAIM emissions are TAC, ROG, PM, CO, NO_x from emergency flares, and SO_x from equipment that burn natural gas only. For RECLAIM facilities, on detail criteria forms, replace NO_x (and/or SO_x) emissions that are subject to RECLAIM requirements with “0” (zero) to avoid double-reporting NO_x (and/or SO_x) emissions.

P. How Do I Report Emissions if My Facility Became a RECLAIM Facility at a Time Other than the First Day of the Reporting Period?

A facility is not officially a RECLAIM facility until the initial issuance date of the RECLAIM Facility Permit. The facility should report emissions as a non-RECLAIM facility for the portion of the reporting period prior to the effective date of the RECLAIM Facility permit. From the effective date of the RECLAIM Facility Permit forward, the facility should report emissions as a RECLAIM facility.

Q. How Do I Report Emissions from My Wave Soldering Machine?

The wave soldering machine results in trace emissions of lead which need not be reported. However, for flux used in your wave soldering machine, you should report the organic gas emissions based on the VOC content of the flux and the particulate matter emissions based on the oil and resin content (from MSDS) of the flux on Form B4. If you need help calculating these emissions, please call the Hotline.

R. Do I Report Emissions from Portable Equipment Registered Under the Statewide Portable Equipment Registration Program (PERP)?

No. Once the PERP registration is issued, registered equipment would be subject to the reporting requirements of the Statewide PERP program and would not be required to report their emissions under the AQMD Emission Reporting Program anymore. Facilities with registered portable equipment must provide a copy of the registration certification as

supporting documentation. For RECLAIM facilities, emissions from registered portable equipment included in RECLAIM emissions (APEP report) are subtracted from this total (on Form CR) for fee purposes.

S. How Do I Calculate Organic Waste Credits for a Process Which is Vented to a Control Device?

If you claim credit for waste shipments of material generated from a process that is vented to a control device, two methods are suggested to calculate potential volatile organic waste credits.

Method 1: When reporting the material used in a process vented to a control device, apply the control efficiency to the entire amount on Form B3. On Form W, report the amount of recycled material and use an "emission factor" which incorporates the control efficiency. Calculate this "emission factor" using the following formula:

$$EF (W) = EF (B3) \times (1 - \text{Control Efficiency})$$

where; EF (W) = "emission factor" (column (f) on paper forms) on Form W

EF (B3) = emission factor for the corresponding material on Form B3

Then follow the additional instructions in Appendix E for calculating credit.

Method 2: If your waste records provide the amount of material that was generated from the process which is vented to the control device but did not go through the control device, enter this amount on Form B3 without applying the control efficiency and report the corresponding organic waste (from the manifest) on Form W without incorporating the control efficiency. Report the remainder of the material that went through the control device as a separate entry on B3 and apply the control efficiency.

T. What is "Certified Laboratory" Mentioned on Form WT, Form W and Form WU?

A certified laboratory is a laboratory certified by the California State Department of Health Services for the Environmental Laboratory Accreditation Program (ELAP) specifically for the field of testing referred to as "Organic Chemistry of Hazardous Waste".

U. As a Furniture Stripping Facility, Do I Have to Pay Fees for the Use of Methylene Chloride?

Yes. Methylene Chloride used for furniture stripping as well as any other application must be reported on Form TAC and fees paid based on the new fee rates. The exemption previously provided for furniture stripping facilities emitting less than 8 tons per year has expired.

V. How are Emissions from Charbroilers and Deep Fat Frying Operations Reported?

Emissions (PM and VOC) from charbroilers and deep fat fryers operated by restaurants and eatery establishments directly servicing consumers (e.g. fast foods, cafeteria, etc.) should not be reported under the AER program since these emissions are classified as area sources and are calculated using specific methodologies. However, for commercial and large operations of packaged foods, PM and VOC emissions should be reported on Form B4 or B4U (contact Help Hotline for emission factors if needed). For these facilities, emissions from burning of fuel are reported on Form B1 and BIU.

W. What is the Overall Control Efficiency?

The Overall Control Efficiency represents the emission portion that is captured and destroyed by control equipment. To calculate the Overall Control Efficiency use the following formula:

$$\text{Overall Control Efficiency} = \text{capture efficiency} \times \text{destruction efficiency}$$

Use decimal fraction to report efficiencies. If your Control Efficiency is in percent, convert percent to decimal fraction (e.g. 0.85 for 85%, 0.925 for 92.5%).

X. How Do I Prepare My Report if I Use the Software Reporting (AER Emission Reporting software or new web-based reporting system)?

1. First, gather your records for fuel use, organic materials used, process throughput, etc., for six-month transitional reporting period 2007-2008 (i.e., July 1, 2007 through December 31, 2007). Any information that relates to your operations and emission estimates may be useful.
2. Software reporting program will assist you in selecting the applicable forms for your facility. Reading the step-by-step instructions in the built-in Help system as well as the General Instruction Book will assist you in determining the records you need to gather.
3. Form TAC should be completed last. Begin with the software forms for "permitted" equipment (B Forms, P Forms, R Forms, T Forms, and/or W Forms) depending on the type of your facility. Follow the instructions in the built-in Help system and review the detailed examples enclosed in this package.
4. Follow the same procedure and complete the "non-permitted" or "U" forms (BU Forms, PU Forms, RU Forms, and/or WU Forms).

5. All calculations and data transfers to appropriate summary forms will be automatically performed by the either software system. Forms ES and TACS will also be automatically created based on the data entered on all applicable forms.
6. If you emit any TAC/ODC (i.e. if you have any combustion processes or materials containing TAC/ODC), finalize Form TAC, according to the instructions.
7. If you want to claim recycled-waste credit, you must complete Form W (and/or WU) for common organics and/or Form WT for toxic air contaminants and ozone depleters. For perchloroethylene (perc) dry cleaners, this is covered on Form DC.
8. Double check that all emission source references identified on all forms containing TAC/ODC are reported on Form TAC.
9. If you are reporting emissions for a perchloroethylene (perc) dry cleaner or combustion emissions from dry cleaning facilities or auto body shops, simplified specific forms have been included and are illustrated in the enclosed examples.
10. If fees are due, attach the check to Form S. Make sure Form S is the top sheet of your return package whether fees are due or not. Make sure to include the credit for installments paid during the 2007-2008 reporting period.
11. Sign Form X - Signature Sheet. Now your Emissions Report is complete and ready for submittal.
12. For AER Emissions Reporting software: Submit your electronic data file on-line OR create a submittal data diskette generated by software. If you choose to submit data diskette please use a protective cover to avoid damage in the mail.
13. For web-based emissions reporting system: Submit your electronic emissions report on-line through the system.
14. For on-line submittals (generated by either reporting systems): make sure to mail Forms X, S, A/CF and on-line submittal confirmation. For diskette submittal: make sure to mail Forms X, S, A/CF and submittal data diskette (in a protective cover). In both cases, include all supporting documentation required by the AQMD.

Y. How Do I Prepare My Report if I Use Paper Forms (not AER software generated print-outs)?

1. First, gather your records for fuel use, organic materials used, process throughput, etc., for six-month transitional reporting period 2007-2008 (i.e., July 1, 2007 through December 31, 2007). Any information that relates to your operations and emissions estimates may be useful.
2. If you have chosen to use the paper forms, make as many photocopies of the blank forms as you may need for rough drafts and final submittals. It is recommended that you first use photocopies of your original forms for a rough draft, then transfer the finalized data legibly onto the forms you will use for the actual submittal.
3. Read the detailed instructions on the back of the forms as well as the General Instruction Book.
4. Form TAC should be completed last. Begin with the worksheets for "permitted" equipment (B Forms, P Forms, R Forms, T Forms, and/or W Forms) depending on the type of your facility. Follow the instructions on the back of each form and review the detailed examples enclosed in this package. Transfer the information from the bottom line of these forms to Form C - Permitted Emissions Summary.
5. Follow the same procedure and complete the "non-permitted" or "U" forms (BU Forms, PU Forms, RU Forms, and/or WU Forms). Transfer the information from the bottom line of these forms to Form CU - Non-Permitted Emissions Summary.
6. List all of your emission sources (by reference Form and Row number for every row reported on every permitted and non-permitted form) on Form ES, provide a brief description for every emission source and indicate whether it contains TACs/ODCs.
7. If your facility emits any toxic air contaminant or ozone depleter you must complete Form TAC. Please note that fuel combustion always results in toxic emissions. If you are reporting organic solvents that are exclusively TAC/ODC and are only reported on Form TAC (not reported on any other form), list these emission sources on Form ES under reference "TAC-Row on TAC Form." Perc from dry cleaners should only be reported on Form DC.
8. If you want to claim recycled-waste credit, you must complete Form W (and/or WU) for common organics and/or Form WT for toxic air contaminants and ozone depleters. For perc dry cleaners, this is covered on Form DC.
9. Check to make sure that combustion emissions and all emission source references identified on any form as containing TACs/ODCs are marked as containing TAC/ODC on Form ES and are all reported on Form TAC.
10. Complete Form TACS based on data reported on Form TAC, by summarizing all TAC Codes 01 to 23 and TAC Code 32. Transfer fees from Form TACS or DC to Form S (Fees Due Summary form).
11. Transfer the total emissions from Form C (line 7), Form CU (line 7), and Form CR (for RECLAIM facilities only) to Form S - Fees Due Summary.

12. If you are reporting emissions for a perchloroethylene (perc) dry cleaner or combustion emissions from dry cleaning facilities or auto body shops, simplified specific forms have been included and are illustrated in the enclosed examples.
13. Calculate the fees due, if any, on Form S using Appendix M. If fees are due, attach the check to Form S. Make sure Form S is the top sheet of your return package whether fees are due or not. Include the credit for installments paid during the 2007-2008 reporting period.
14. Complete Form A (if applicable) for status updates, exemption requests, refund requests, and use of alternative emission factor or calculating methodology.
15. Complete and sign Form X - Signature Sheet. Now you are ready to mail your Emissions Report.
16. Make sure to enclose all forms (as explained in the Section 12 "What to Submit"), check (if applicable), and the supporting documentation required for specific forms.

Z. Do I Need to Report Total Particulate Matter (PM) or PM10?

In the AER program, you are required to report total PM emissions from your processes and equipment. If you only have PM₁₀ values available, multiply PM₁₀ by an appropriate factor (contact the helpline for assistance) to convert to total PM.

AA. What do Rich-Burn or Lean-Burn Internal Combustion Engines (ICE) mean?

Below are the definitions of each engine type as defined in Rule 1110.1:

A **Rich-Burn** Engine is a spark-ignited, Otto-cycle or two-stroke engine that is operated with gaseous fuel as defined in Rule 431.1 and with an exhaust stream **oxygen concentration of less than 4 percent by volume**.

A **Lean-Burn** Engine is a spark-ignited, Otto-cycle or two-stroke engine that is operated with gaseous fuel as defined in Rule 431.1 and with an exhaust stream **oxygen concentration of 4 percent by volume, or greater**.

If engine specification is not available, assume 4-stroke, lean-burn IC engine.

AB. What Does Horsepower (HP) Mean?

The Horsepower (HP) is the engine rating specified by the engine manufacturer and listed on the engine nameplate and/or equipment specification manual and/or it may be listed on the equipment permit description.

AC. What is the Difference Between Two-Stroke Internal Combustion (IC) Engine and Four-Stroke IC Engine?

The four-stroke engine is probably the most common IC engine type. A four-stroke (cycle) IC engine completes its power cycle (intake, compression, power, and exhaust) in two revolutions of the crankshaft as compared to one revolution for the two-stroke (cycle) IC engine. This information could be found on your AQMD permit description and/or equipment specification manual.

AD. What is BTU/HR (British Thermal Unit per Hour)?

BTU/HR is the rating of the burner (e.g., for a boiler) specified by the equipment manufacturer, and normally listed on the nameplate and/or equipment specification manual. It specifies the amount of heat released by burning fuels in combustion equipment.

AE. What are the Worker and Residential Receptor Distance?

Receptor locations are off-site locations where persons may be exposed to toxic emissions from equipment. Residential receptor locations include current residential land uses and areas that may be developed for residential uses in the future, given land use trends in the general area. Commercial receptor locations include areas zoned for manufacturing, light or heavy industry, retail activity, or locations that are regular work sites.

Worker Receptor Distance – Closest distance between any source of air toxic emissions at your facility and the property boundary of any one of the following receptors: other business or work-site, school, day-care center, shopping center, or hospital.

Residential Receptor Distance - Closest distance between any source of air toxic emissions at your facility and the property boundary of any one of the following receptors: house, apartment, convalescent home, trailer park, or other residence.

If you are an AB2588 facility filing its quadrennial toxic emission inventory, list your closest worker and residential receptor distance on Form X (if you are using paper forms), or in Interview (if you are using the software).

AF. What is SCR and SNCR?

Selective Catalytic Reduction (SCR) and Selective Non-Catalytic Reduction (SNCR) are control systems for stationary source combustion equipment to reduce Nitrogen Oxides (NOx) emissions resulted from the combustion gases. SCR and

SNCR systems use ammonia (NH₃) or Urea (NH₃ derivative) as reducing agents. With both reducing agent, some NH₃ remains after the NO_x reduction, and it is emitted in the flue gas. This NH₃ emission is termed “NH₃ slip.”

AG. What are architectural coatings?

- Architectural coatings are any coating applied to stationary structure and their appurtenances, to mobile homes, to pavements, or to curbs (see Rule 1113). For example, painting pipes that are connected to the stationary structures and delivers products are considered architectural coating.
- Commonly, architectural coatings are pre-formulated and supplied in ready-to-use forms; therefore no thinning or reformulation needed. Architectural coatings used in manufacturing or production must be reported in the AER program. For example, window shutters (wood surface), doors (wood or metal surface), mobile homes or parts (metal, wood, ceramic, etc).

16. COMMON MISTAKES

The following is a list of mistakes commonly made when completing an emissions report. Please review this list to help you avoid making these mistakes when completing your emissions report.

- Late submittal due to the delay in issuing the check for emission fees.
The report is completed on time. However, the delay in issuing the check for emission fees cause the report submitted past the deadline, which incurs a surcharge. Anticipate a delay in approval and issuing of the check from company headquarters or central office to avoid being late.
- Using wrong due date to calculate late payment surcharge.
Please make sure to use the correct due date, September 2, 2008, and apply any late payment surcharge if submitting after the due date. Also see section “6. Non-Payment/Late Payment Surcharge” of this book for late payment surcharge schedule.
- Reporting emissions from fuel combustion in mobile equipment such as forklifts, bulldozers, and tractors.
Emissions from self-propelled on-road or off-road mobile source vehicles should not be reported in this program.
- Double reporting of RECLAIM NO_x and SO_x emissions on Form CR and on other forms (RECLAIM facilities only).
If you are a RECLAIM facility and reported your RECLAIM NO_x and/or SO_x emissions on Form CR, you should not report the same NO_x and/or SO_x emissions on any other forms (i.e., Forms B1/B1U, B2/B2U, B4/B4U, E1/E1U, or other relevant forms). On these forms, enter a zero as the emission factor for the RECLAIM NO_x and/or SO_x emissions in order to avoid double reporting the emissions reported on Form CR. See Question O of Frequently Asked Questions for details.
- Reporting RECLAIM NO_x and SO_x emissions on Form CR without reporting the other combustion emissions on the appropriate forms (RECLAIM facilities only).
If you are a RECLAIM facility and have reported your RECLAIM NO_x and/or SO_x emissions on Form CR, you should report the emissions of other combustion contaminants (i.e., ROG, CO, and PM) on the appropriate forms (i.e., Forms B1/B1U, B2/B2U, B4/B4U, E1/E1U or other relevant forms).
- Reporting natural gas usage in units other than million standard cubic feet on combustion forms.
Report all natural gas usage in million standard cubic feet (mmscf) on combustion forms. Please be aware that your gas bill usually lists the natural gas usage in both therms and hundred cubic feet (ccf). Please verify with the gas supplier if the volume is expressed in actual or standard cubic feet. To convert from hundred standard cubic feet (cscf) to mmscf, divide by 10,000. However, if the gas bill lists usage in actual ccf (or no information), then convert therms to mmscf by multiplying therms by 0.0000952.
- Reporting liquid fuel (e.g., diesel) in wrong units.
The default emission factors provided for liquid fuel usage on the combustion forms (e.g., B1/B1U or B2/B2U) or fuel dispensing on Form B4 are given in pound per 1,000 gallons (lb/1000 gal). Therefore, please convert all liquid fuel use or dispensing to 1,000 of gallons when using the default emission factors.
- Reporting emissions from acetone.
You should not report the use of acetone, ethane, or other exempt solvents.
- Claiming 100% credit for a waste shipment on waste credit forms (W, WU, WT) without enclosing an appropriate lab analysis (refer to appendix E for more details).
When 100% credit is claimed for any waste shipment, a certified lab analysis of that waste shipment must be attached to the report.
- Throughput units on Forms B4 and B4U not consistent with emission factor units.
Throughput units must be consistent with emission factor units to ensure that emissions are calculated correctly (in pounds).

- Not reporting emissions on any of the forms without an explanation on Form A (part of Interview Section in Emissions Reporting Software).

Explain on Form A the reasons for not reporting any emissions.

The following is a list of additional mistakes made exclusively by facilities using the paper forms option:

- Not returning all Category I Forms as part of the submittal:
You must return all of your S, X, ES, C, CU, CR, TACS, TAC, WT forms, and if applicable Form A and CF (see Category I forms, Appendix N), even if there are no reportable emissions or fees due.
- Reporting a usage in pounds on Forms B3 or B3U and a corresponding emission factor in pounds per gallon.
On Forms B3 and B3U, if you report a usage in pounds, please verify that your emission factor is in pound per pound (lb/lb). You can convert an emission factor from lb/gal to lb/lb by dividing by the density of the material (or specific gravity x 8.34). Alternatively, you can convert your usage from pounds to gallons by dividing by the density of the material. Only use an emission factor in lb/lb if your usage is reported in pounds (Appendix I).
- Reporting “Organic Gases” emissions in the “Specific Organics” columns on Forms B3/B3U.
Specific organics refers to the twelve compounds listed in Appendix B as Specific Organics. Please check this list before reporting emissions in the Specific Organics column.
- Not rounding emissions to the nearest ton prior to calculating emission fees.
Please remember to round emissions to the nearest ton on Form S when transferring emissions from column (a) and/or column (b) and/or column (c), to column (d). Do not prorate the fee schedule to account for a fraction of a ton. Follow the rounding instructions on the back of Form S.
- Paying fees for less than two tons of Organic Gases, NO_x, SO_x, or Particulate Matter or for less than 50 tons of Carbon Monoxide.
Do not pay for any emissions of Organic Gases, NO_x, SO_x, or Particulate Matter less than 2 tons, even if the total emission of each of these pollutants is 1.99 tons. Do not pay for any emissions of Carbon Monoxide less than 50 tons even if the total emission of this pollutant is 49.99 tons.
- Making transfer and arithmetic errors.
Please double-check all of your calculations and transfers prior to submitting your Report.
- Listing more than 1 equipment code in one row on Forms B1, B1U, B2, B2U, E1, E1U and R2.
List only one equipment code in each row on Forms B1, B1U, B2, B2U, E1, E1U and R2. If the fuel usage is not available for each type of equipment, use manufacturer data (i.e., equipment rating) to distribute the total fuel usage for each equipment type.
- Reporting toxic air contaminants directly on Forms TACS, or reporting the wrong toxic air contaminants on TACS, or misunderstanding the relationship between criteria pollutant forms, Form ES, TAC, TACS and S.
*To create the Emission Source Reference, start with the worksheets for criteria pollutant forms (B#/B#U Forms, P#/P#U Forms, R# Forms, T1 Form, and/or W/WU Forms) depending on the type of your facility and your equipment/processes. On Form ES, list all your emission sources by reference Form and Row number for every row reported on every permitted and non-permitted form (for example: emission source reference B1-2 will be used for external combustion equipment reported on Form B1, row 2). Provide a brief description for every emission source (such as: <10 MMBTU/HR natural gas fired boiler) and indicate whether it contains TACs/ODCs.
If your facility emits any toxic air contaminant or ozone depleter you must complete Form TAC for every toxic air contaminant / ozone depleter emission by corresponding Emission Source Reference.
Complete Form TACS based on the data reported on Form TAC, by summarizing all TAC Codes 01 to 23 and TAC Code 32 Transfer fees from Form TACS or DC to Form S (Fees Due Summary form).*

17. GENERAL TIPS

AQMD closely audits the Emissions Reports to verify accuracy, completeness, and correct fee payment. You can help minimize possible emission and fee discrepancies by carefully noting the following.

- Please follow all instructions. Improperly filled out forms will delay processing of your submittal, could result in data entry errors if you are using paper forms, and prevent quick refunds.
- Make sure units of measure are correct (and emissions calculations if you are using paper forms). Common conversion factors have been provided in Appendix I to assist you with unit conversions and emission calculations. All emissions calculations are checked during audit and the facility will be subject to late or underpayment surcharges if additional fees are due.
- Make sure you submit documentation to support all emission factors. Documentation can include, but is not limited to (depending on your type of facility): Material Safety Data Sheets; CEMS summary data; AQMD pre-approved source test results; and lists of equipment by rule number and by permit number that comply with a rule or permit limit, or comply with a BACT level.
- Make sure you submit documentation for toxic air contaminants and ozone depleting compounds emission factors other than default factors.
- Make sure you submit documentation to support waste recycling credits. Documentation includes waste manifests, waste profile (if applicable) and laboratory analytical reports if you claim more than a 50% waste credit.
- You cannot report waste credits that exceed your reported emissions. Verify that you have calculated waste credits correctly. Waste material should directly correspond to emitting materials. If the emitting equipment has a control device, make sure that your waste credit emission factor is also controlled.
- RECLAIM facilities should submit copies of their Quarterly Certification of Emissions Report forms and/or their APEP Annual Emissions Certification page (Part I-A) to ensure that RECLAIM emissions match emissions reported through the RECLAIM program.
- To provide additional explanation/documentation, use a separate sheet(s).
- If you are using paper forms:
 - Use photocopies of blank forms if you need additional forms.
 - Neatly print all requested information with black ink, or use a typewriter or printer. Do not use pencil to fill out forms.
 - Only fill in requested data. Fill in information only inside the provided boxes.
 - Do not put any unsolicited lines, markings or crossings or any other characters across the page or in any of the boxes.
 - Do not staple, fold, or wrinkle the forms.
 - Discard Category II forms (see Appendix N) not applicable to your facility. Do not return Category II forms not used in your report.
- If you are using the Emission Reporting Software (either the web-based reporting system or AER Emissions reporting software), you do not need to print the paper forms. You will be submitting specified submittal forms printed by software (please refer to section 12 of this book).

APPENDIX A - DEFAULT EMISSION FACTORS FOR COMBUSTION EQUIPMENT (CRITERIA AND TOXICS)

**Table 1
Default Emission Factors for External Combustion Equipment for Forms B1 and B1U (for all sizes)**

Fuel Type (fuel unit)	Organic Gases (lb/unit)	Methane (lb/unit)	Nitrogen Oxides (lb/unit)	Sulfur Oxides (lb/unit)	Carbon Monoxide (lb/unit)	Particulate Matter (lb/unit)
Natural Gas (mmscf) / Boilers Only	5.50	2.30	100.00	0.60	84.00	7.60
Natural Gas (mmscf) / Other Equipment	7.00	2.30	130.00	0.60	35.00	7.50
LPG, Propane, Butane (1000 gal.)	0.26	0.28	12.80	4.60	3.20	0.28
Diesel/Distillate Oil (1000 gal.)	1.32	0.05	20.00	7.10	5.00	2.00

**Table 2
Default Emission Factors for Internal Combustion Engines (ICE) and Micro Turbines for Forms B2 and B2U**

Fuel Type (fuel unit)/Engine Type	Organic Gases (lb/unit)	Methane (lb/unit)	Nitrogen Oxides (lb/unit)	Sulfur Oxides (lb/unit)	Carbon Monoxide (lb/unit)	Particulate Matter (lb/unit)
Natural gas (mmscf)/2 Stroke (Lean-Burn) ICE	122.00	1,479.00	3233.00	0.60	394.00	39.00
Natural gas(mmscf)/4 Stroke (Lean-Burn) ICE* and Micro Turbine	120.00	1,275.00	4162.00	0.60	323.00	----
Natural gas(mmscf)/4 Stroke (Rich-Burn) ICE	30.00	235.00	2254.00	0.60	3794.00	10.00
LPG, Propane, Butane (1000 gal.)/All ICEs & Micro Turbine	83.00	----	139.00	0.35	129.00	5.00
Diesel/Distillate Oil (1000 gal.)/All ICEs & Micro Turbine	37.50	----	469.00	7.10	102.00	33.50
Gasoline (1000 gal.)/All ICEs & Micro Turbine	206.00	----	102.00	5.30	3,940.00	6.50

* If engine specification is not available, assume 4 Stroke (Lean-Burn) ICE.

**Table 3
Rule-Based Emission Factors for Combustion Equipment for Forms B1 and B2
(For Equipment in Compliance with Rule Limits)**

Fuel Type (fuel unit)	Nitrogen Oxides (lb/fuel unit)
A) E.F. based on Rule 1146 for Form B1	
Natural Gas (mmscf)	49.80
LPG, Propane, Butane (1000 gal.)	4.50
B) E.F. based on Rule 1146.1/1146.2 for Form B1	
Natural Gas (mmscf)	37.40
LPG, Propane, Butane (1000 gal.)	3.40
C) E.F. based on Rule 1110.2 for Form B2 (Stationary ICEs only)	
Natural gas (mmscf)	238.70
LPG, Propane, Butane (1000 gallons)	15.30
Diesel/Distillate Oil (1000 gallons)	33.40
Gasoline (1000 gallons)	21.50

Table 4: DEFAULT TOXIC EMISSION FACTORS FOR NATURAL GAS COMBUSTION (LB / MMSCF)

SOURCE: External Combustion Equipment (Boiler, Oven, Dryer, Furnace, Heater, Afterburner)

TAC Code	POLLUTANT	CAS NO.	<10 MMBTU/HR	10-100 MMBTU/HR	>100 MMBTU/HR
2	Benzene	71432	0.0080	0.0058	0.0017
12	Formaldehyde	50000	0.0170	0.0123	0.0036
19	PAHs*	1151	0.0004	0.0004	0.0004
32	Ammonia**	7664417	18.000	18.000	18.000

SOURCE: Flare, Non-Refinery

TAC Code	POLLUTANT	CAS NO.	ALL SIZES
2	Benzene	71432	0.159
12	Formaldehyde	50000	1.169
19	PAHs *	1151	0.014

SOURCE: Turbine

TAC Code	POLLUTANT	CAS NO.	ALL SIZES
2	Benzene	71432	0.0122
4	1,3-Butadiene	106990	0.000439
12	Formaldehyde	50000	0.724
19	PAHs *	1151	0.00225
32	Ammonia**	7664417	18.000

SOURCE: Stationary and Portable Internal Combustion Engines (ICE) and Micro Turbine

TAC Code	POLLUTANT	CAS NO.	2 Stroke-Lean Burn	4 Stroke-Lean Burn	4 Stroke-Rich Burn
			ICE	ICE & Micro Turbine	
2	Benzene	71432	1.98	0.449	1.61
4	1,3-Butadiene	106990	0.836	0.272	0.676
6	Carbon Tetrachloride	56235	0.0619	0.0374	0.0181
9	Ethylene Dibromide	106934	0.0749	0.0452	0.0217
10	1,2-Dichloroethane	107062	0.0430	0.0241	0.0115
12	Formaldehyde	50000	56.3	53.9	20.9
16	Methylene Chloride	75092	0.150	0.0204	0.0420
19	PAHs *	1151	0.133	0.137	0.0990
21	Vinyl Chloride	75014	0.0252	0.0152	0.00732
32	Ammonia**	7664417	18.000	18.000	18.000

*This value represents a combined default emission factor for toxic compounds within the PAH family. Speciated (by CAS#) default emission factors are listed in the software. Non-AB2588 facilities may use either method to report PAH emission.

**This value corresponds to equipment with Selective Non Catalytic Reduction (SNCR), for equipment with Selective Catalytic Reduction (SCR) substitute listed value by 9.1lbs/mmscf, and for equipment without SNCR or SCR by 3.2 lbs/mmscf.

Table 5: DEFAULT TOXIC EMISSION FACTORS FOR GASOLINE COMBUSTION (LB / 1000 GAL)

SOURCE: Stationary and Portable Internal Combustion Engines (ICE) and Micro Turbine

TAC Code	POLLUTANT	CAS NO.	Non-catalyst (Portable and Stationary ICEs and Micro Turbine)		Catalyst, Portable ICE	Catalyst, Stationary ICE
2	Benzene	71432	3.8061		1.5726	0.1564
4	1,3-Butadiene	106990	0.9183		0.3240	0.0322
12	Formaldehyde	50000	3.4520		1.0131	0.1007
17	Nickel	7440020	0.0033		0.0033	0.0033
19	PAHs*	1151	0.1438		0.0295	0.0029

Table 6: DEFAULT TOXIC EMISSION FACTORS FOR JET FUEL COMBUSTION (LB / 1000 GAL)

SOURCE: Turbine

TAC Code	POLLUTANT	CAS NO.	ALL SIZES
2	Benzene	71432	0.9377
4	1,3-Butadiene	106990	0.8563
5	Cadmium	7440439	0.0168
12	Formaldehyde	50000	7.2700
14	Arsenic	7440382	0.1776
15	Lead	7439921	0.1843
17	Nickel	7440020	0.0168
19	PAHs*	1151	0.2740

Table 7: DEFAULT TOXIC EMISSION FACTORS FOR DIESEL / DISTILLATE OIL FUEL COMBUSTION (LB / 1000 GAL)

SOURCE: External Combustion Equipment (Boiler, Oven, Dryer, Furnace, Heater, Afterburner)

TAC Code	POLLUTANT	CAS NO.	ALL SIZES
2	Benzene	71432	0.0044
4	1,3-Butadiene	106990	0.0148
5	Cadmium	7440439	0.0015
12	Formaldehyde	50000	0.3506
13	Hexavalent chromium	18540299	0.0001
14	Arsenic	7440382	0.0016
15	Lead	7439921	0.0083
17	Nickel	7440020	0.0039
19	PAHs *	1151	0.0498
32	Ammonia**	7664417	2.9000

SOURCE: Stationary and Portable Internal Combustion Engines (ICE), Turbines, and Micro Turbine

TAC Code	POLLUTANT	CAS NO.	ALL SIZES
2	Benzene	71432	0.1863
4	1,3-Butadiene	106990	0.2174
5	Cadmium	7440439	0.0015
12	Formaldehyde	50000	1.7261
13	Hexavalent chromium	18540299	0.0001
14	Arsenic	7440382	0.0016
15	Lead	7439921	0.0083
17	Nickel	7440020	0.0039
19	PAHs *	1151	0.0559
32	Ammonia**	7664417	2.9000

*This value represents a combined default emission factor for toxic compounds within the PAH family. Speciated (by CAS#) default emission factors are listed in the software. Non-AB2588 facilities may use either method to report PAH emission.

**This value corresponds to equipment with Selective Non Catalytic Reduction (SNCR), for equipment with Selective Catalytic Reduction (SCR) substitute listed value by 1.4 lbs/1000 gallons, and for equipment without SNCR or SCR by 0.8 lbs/1000 gallons.

Table 8: DEFAULT TOXIC EMISSION FACTORS FOR LPG, BUTANE, OR PROPANE COMBUSTION (LB / 1000 GAL)

SOURCE: External Combustion Equipment (Boiler, Oven, Dryer, Furnace, Heater, Afterburner)

TAC Code	POLLUTANT	CAS NO.	<10 MMBTU/HR	10-100 MMBTU/HR	>100 MMBTU/HR
2	Benzene	71432	0.00071	0.00051	0.00015
12	Formaldehyde	50000	0.00151	0.00109	0.00032
19	PAHs *	1151	0.00004	0.00004	0.00004
32	Ammonia	7664417	0.30	0.30	0.30

SOURCE: Turbine

TAC Code	POLLUTANT	CAS NO.	ALL SIZES
2	Benzene	71432	0.00109
4	1,3-Butadiene	106990	0.0000389
12	Formaldehyde	50000	0.0643
19	PAHs *	1151	0.0002
32	Ammonia	7664417	0.30

SOURCE: Stationary and Portable Internal Combustion Engines (ICE) and Micro Turbine

TAC Code	POLLUTANT	CAS NO.	2 Stroke-Lean Burn	4 Stroke-Lean Burn	4 Stroke-Rich Burn ICE
			ICE	ICE & Micro Turbine	
2	Benzene	71432	0.17757	0.0398	0.143
4	1,3-Butadiene	106990	0.0742	0.0242	0.06
6	Carbon Tetrachloride	56235	0.00549	0.00332	0.0016
9	Ethylene Dibromide	106934	0.00664	0.00401	0.00193
10	1,2-Dichloroethane	107062	0.00382	0.00214	0.00102
12	Formaldehyde	50000	5.00	4.78	1.86
16	Methylene Chloride	75092	0.0133	0.00181	0.00373
19	PAHs *	1151	0.011788179	0.0121728	0.00879
21	Vinyl Chloride	75014	0.00224	0.00135	0.00065
32	Ammonia	7664417	0.30	0.30	0.30

*This value represents a combined default emission factor for toxic compounds within the PAH family. Speciated (by CAS#) default emission factors are listed in the software. Non-AB2588 facilities may use either method to report PAH emission.

Table 9: DEFAULT TOXIC EMISSION FACTORS FOR LANDFILL GAS COMBUSTION (LB / MMSCF)

SOURCE: External Combustion Equipment (Boiler, Oven, Dryer, Furnace, Heater, Afterburner)

TAC Code	POLLUTANT	CAS NO.	ALL SIZES
3	Beryllium	7440417	0.0011
5	Cadmium	7440439	0.0067
7	Chlorinated dioxins and dibenzofurans*	1080	0.0000102
12	Formaldehyde	50000	0.134
13	Hexavalent chromium	18540299	0.000714
14	Arsenic	7440382	0.00394
15	Lead	7439921	0.00685
17	Nickel	7440020	0.115
19	PAHs *	1151	0.265
32	Ammonia	7664417	2.3500

SOURCE: Flare, Non-Refinery

TAC Code	POLLUTANT	CAS NO.	ALL SIZES
2	Benzene	71432	0.159
12	Formaldehyde	50000	1.169
19	PAHs *	1151	0.014

SOURCE: Stationary and Portable Internal Combustion Engines (ICE), Turbines, and Micro Turbine

TAC Code	POLLUTANT	CAS NO.	ALL SIZES
2	Benzene	71432	0.0084
6	Carbon tetrachloride	56235	0.0007200
16	Methylene chloride	75092	0.000920
18	Perchloroethylene	127184	0.00100
20	Trichloroethylene	79016	0.000760
21	Vinyl chloride	75014	0.000640

Table 10: DEFAULT TOXIC EMISSION FACTORS FOR DIGESTER GAS COMBUSTION (LB / MMSCF)

SOURCE: External Combustion Equipment (Boiler, Oven, Dryer, Furnace, Heater, Afterburner)

TAC Code	POLLUTANT	CAS NO.	<10 MMBTU/HR	10-100 MMBTU/HR	>100 MMBTU/HR
2	Benzene	71432	0.0080	0.0058	0.0017
12	Formaldehyde	50000	0.0170	0.0123	0.0036
19	PAHs *	1151	0.0004	0.0004	0.0004
32	Ammonia	7664417	3.2	3.2	3.2

SOURCE: Flare, Non-Refinery

TAC Code	POLLUTANT	CAS NO.	ALL SIZES
2	Benzene	71432	0.159
12	Formaldehyde	50000	1.169
19	PAHs *	1151	0.014

SOURCE: Stationary and Portable Internal Combustion Engines (ICE), Turbines, and Micro Turbine

TAC Code	POLLUTANT	CAS NO.	ALL SIZES
4	1,3 Butadiene	106990	0.00588
5	Cadmium	7440439	0.000348
6	Carbon tetrachloride	56235	0.0120
10	Ethylene dichloride	107062	0.00900
12	Formaldehyde	50000	0.1140
14	Arsenic	7440382	0.00138
15	Lead	7439921	0.00204
16	Methylene chloride	75092	0.00780
17	Nickel	7440020	0.00120
18	Perchloroethylene	127184	0.0126
20	Trichloroethylene	79016	0.0108
21	Vinyl chloride	75014	0.0216
32	Ammonia	7664417	3.2

*This value represents a combined default emission factor for toxic compounds within the PAH and Chlorinated dioxins and dibenzofurans family. Speciated (by CAS#) default emission factors are listed in the software. Non-AB2588 facilities may use either method to report PAH and Chlorinated dioxins and dibenzofurans emission.

APPENDIX B – MATERIAL CODES AND DEFAULT VOC EMISSION FACTORS FOR FORMS B3 AND B3U

If your material contains TAC/ODC, you must refer to the MSDS for the VOC and TAC/ODC content. Please use consistent units. Default factors with units of lbs/gal can only be used with material usage reported in gallons. Default factors with units of lb/lb can only be used with material usage reported in pounds.

Note: The use of default emission factors may result in overestimation of emissions. These emission factors may be used only when actual VOC data from MSDS is not available or cannot be obtained from the manufacturer.

MAT'L CODE	DESCRIPTION	VOC EF		MAT'L CODE	DESCRIPTION	VOC EF
	<u>Coating Materials</u>	<u>(lbs/gal)</u>			<u>Solvents (continued)</u>	<u>(lbs/gal)</u>
110	Adhesives	5.2		324	Ethyl Alcohol	6.8
112	Enamel	2.8		326	Furfuryl Alcohol	9.4
114	Lacquer	2.3		328	Hexane	5.5
116	Urethane / Polyurethane (Hi-Gloss)	3.5		330	Hexylene Glycol	7.7
118	Urethane / Polyurethane (Non-Hi-Gloss)	2.8		332	Isopropyl Acetate	7.2
120	Primer	2.3		334	Isopropyl Alcohol	6.6
122	Sealer	2.3		336	MEK	6.7
124	Shellac (Clear)	6.1		338	Methanol	6.6
126	Shellac (Pigmented)	4.6		340	Mineral Spirits	6.5
128	Stains	4.6		342	Naphtha Solvent	7.3
130	Varnish	4.1		344	Petroleum Solvent (Stoddard)	6.5
991	Other Coating Material-Use ONLY	MSDS		346	Toluene	7.2
	<u>Printing Materials</u>	<u>(lbs/gal)</u>	<u>(lb/lb)</u>	348	Turpentine	7.2
210	Blanket Wash	6.7		350	Xylene	7.2
212	Flexo Inks – Water borne	1.5	0.18	993	Other Solvent Material-Use ONLY	MSDS
214	Flexo Inks – Solvent borne	4.5	0.60		<u>Miscellaneous Materials</u>	<u>(lbs/gal)</u>
216	Fountain Solution	0.8		410	Contact Cement	2.1
218	Gravure Inks	2.5	0.32	412	Epoxy Primer	2.8
220	Letter Press Inks	2.5	0.32	414	Glaze	4.6
222	Lithographic Inks – Heatset (Gas/Electric) Including RF	2.0	0.24	416	Linings (Can or Drums)	4.2
224	Lithographic Inks – Non-heatset Including RF	0.13	0.015	418	Paint Remover	1.7
226	Lithographic Inks-Non-heatset (IR) Including RF	0.13	0.015	420	Quench Oil (Heat Treatment)	7.5
228	Screen Printing Inks – Water borne	1.0	0.12	422	Treating Oil	7.5
230	Screen Printing Inks – Solvent borne	5.2	0.59	417	Lubricant Oil	1.5
232	Overprint Varnish, Oil Based	2.2		421	Rust Inhibitors	6.7
234	Overprint Varnish, Water Based	1.5		425	Vanishing Oil	6.7
236	Roller Wash	6.7		995	Other Specialty Material-Use ONLY	MSDS
992	Other Printing Material-Use ONLY	MSDS			<u>Polyester Resin Coating Materials</u>	<u>(lb/lb)</u>
	<u>Solvents</u>	<u>(lbs/gal)</u>		510	Resin – Manual	0.067
310	Butyl Acetate	7.2		512	Resin – Spray	0.120
312	Butyl Alcohol	6.7		514	Resin – Mechanical Flow/Roll	0.050
314	Butyl Cellosolve	7.5		516	Gel Coat	0.360
316	Cellosolve Acetate	8.1		518	Resin Additives	0.050
318	Cellosolve Solvent	7.7		996	Other Specialty Material-Use ONLY	MSDS
322	Dimethyl Formamide	7.9				
	<u>Specific Organics</u>		<u>(lb/lb)</u>			<u>(lb/lb)</u>
910	Trifluoromethane (HFC-23)	1.0		950	Dichlorofluoroethane (HCFC-141b)	1.0
918	Dichlorofluoromethane (HCFC-21)	1.0		960	Chlorodifluoroethane (HCFC-142b)	1.0
920	Chlorodifluoromethane (HCFC-22)	1.0		962	Dichloropentafluoropropane (HCFC-225ca)	1.0
930	Dichlorotrifluoroethane (HCFC-123)	1.0		964	Dichloropentafluoropropane (HCFC-225cb)	1.0
932	Monochlorotetrafluoroethane (HCFC-124)	1.0		970	1,1,1-Trifluoroethane (HFC-143a)	1.0
940	Tetrafluoroethane (HFC-134a)	1.0		980	1,1-Difluoroethane (HFC-152a)	1.0
981	cyclic, branched, or linear, completely fluorinated alkenes					1.0
982	cyclic, branched, or linear, completely fluorinated ethers with no unsaturations					1.0
983	cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations					1.0
984	Sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine					1.0

APPENDIX C – ACTIVITY CODES FOR FORMS B3 AND B3U

If you use solvents or coatings, please enter the corresponding Activity Code (column (b) on paper forms) on Form B3 and/or B3U. **If you are reporting printing materials, polyester resin coating materials, or miscellaneous materials, DO NOT select an Activity Code for that material (leave column (b) blank.)**

If you use solvents, please select the appropriate activity from the list below and enter the corresponding Activity Code (column (b) on paper forms) on Form B3 and/or B3U.

CODE	SOLVENT ACTIVITY
0	Surface Preparation / Process Cleaning
1	Thinning
2	Degreasing
3	Hand Wipe Cleaning
999	Other Cleaning Activity

If you use coatings, please select the appropriate activity from the list below and enter the corresponding Activity Code (column (b) on paper forms) on Form B3 and/or B3U.

CODE	COATING ACTIVITY
4	Wood Coating
5	Metal Coating
6	Paper, Fabric, or Film Coating
7	Plastic, Rubber, or Glass Coating
999	Other Coating Activity

APPENDIX D – SOURCE-SPECIFIC VOC RULES FOR FORMS B3 AND B3U

The following is a list of AQMD’s Regulation XI source-specific rule numbers that are relevant to Forms B3 and B3U. For each entry on Forms B3 and B3U, select and enter only one corresponding rule number that best relates to your equipment and primary process. If a rule other than those listed here applies to your equipment / process, please specify rule number.

RULE	DESCRIPTION
Rule 1102	Petroleum Solvent Dry Cleaners
Rule 1103	Pharmaceuticals and Cosmetics Manufacturing Operations
Rule 1104	Wood Flat Stock Coating Operations
Rule 1106	Marine Coating Operations
Rule 1106.1	Pleasure Craft Coating Operations
Rule 1107	Coating of Metal Parts and Products
Rule 1108	Cutback Asphalt
Rule 1108.1	Emulsified Asphalt
Rule 1115	Motor Vehicle Assembly Line Coating Operations
Rule 1122	Solvent Degreasers
Rule 1124	Aerospace Assembly and Component Manufacturing Operations
Rule 1125	Metal Container, Closure, and Coil Coating Operations
Rule 1126	Magnet Wire Coating Operations
Rule 1128	Paper, Fabric and Film Coating Operations
Rule 1129	Aerosol Coatings
Rule 1130	Graphic Arts
Rule 1130.1	Screen Printing Operations
Rule 1136	Wood Products Coatings
Rule 1141	Control of Volatile Organic Compound Emissions from Resin Manufacturing
Rule 1141.1	Coatings and Ink Manufacturing
Rule 1141.2	Surfactant Manufacturing
Rule 1145	Plastic, Rubber and Glass Coatings
Rule 1151	Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations
Rule 1162	Polyester Resin Operations
Rule 1164	Semiconductor Manufacturing
Rule 1168	Control of Volatile Organic Compound Emissions from Adhesive Application
Rule 1171	Solvent Cleaning Operations
Rule 1175	Control of Emissions from the Manufacture of Polymeric Cellular (Foam) Products

APPENDIX E – GUIDE FOR REPORTING WASTE CREDITS

Appendix E provides detailed methodologies for reporting waste credits. You can receive credits for liquid organic waste shipped out for recycling and disposal by completing Forms W, WU, and/or WT. You should only report waste credits on these forms for shipments of material that you reported on corresponding Forms B3, B3U, and/or TAC. You must list all waste shipments from your facility and submit a copy of the waste manifest for each shipment for the six-month transitional reporting period. If you submit a copy of a waste (chemical) analysis performed by a certified laboratory with an environmental laboratory accreditation program (ELAP) number issued by California Department of Health and Services, you can receive 100% credit for that waste shipment. If waste analysis from a certified laboratory is used, please provide the Environmental Laboratory Accreditation Program (ELAP) number for the laboratory and please ensure that the waste analysis establishes a chain of custody between the analyzed sample and the manifested waste type. Preferably, the sample should be labeled with waste manifest number and the row number on the manifest which specifies the waste types, so that the manifest number and the row number will be included in the laboratory analysis report.

Otherwise, a 50% credit for the organic waste emissions or applicable TAC emissions will be given for that waste shipment. In the absence of a certified lab analysis, auto body shops and car dealers can claim 100% waste credit if a 70% standard default solvent percent is applied to their recycled clean-up solvent waste.

(A) If your waste shipment was not analyzed by an ELAP laboratory, then use one of the following methodologies for reporting waste credits: Two different methods are suggested to calculate waste credits from recycled organic liquid waste. If you know the solvent content of your waste shipment, you should report the solvent percent (in decimal fraction) and use the emission factor (liquid density) of that solvent. Otherwise, you can report the amount of liquid material shipped out and use the corresponding emission factor for that material. Please make sure you use consistent units: If you report usage in gallons, use an emission factor in lbs/gal; if you report usage in pounds, use an emission factor in lb/lb. The following example demonstrates the two methods of reporting waste credits. If you know the solvent percent of your waste shipment, use Method 1 for reporting waste credits, otherwise use Method 2.

Example

Consider a 55 gallon drum shipment of waste paint containing 20 percent sludge by volume. The remaining 80 percent of the waste shipment is liquid material of which 30 percent is organic solvent. The emission factor of the organic solvent (liquid density of solvent) is 6.0 pounds per gallon and the emission factor of the waste paint (VOC content of waste paint) is 1.8 pounds per gallon of material.

Method 1: On Form W, enter the liquid material percent as 0.24 for 24% (which is 30% solvent of 80% liquid) in the appropriate column, enter the quantity of material as 55 gallons, and enter the emission factor of the solvent (6.0 lb/gal) in the emission factor column. If the waste shipment was not lab analyzed then only 50% credit can be claimed, and the emission credit can be calculated to be 39.6 lbs. [i.e., $(0.80 \times 0.30) \times 55 \text{ gal} \times 6 \text{ lb/gal} \times 50/100 = 39.6 \text{ lbs}$]

Method 2: On Form W, enter the liquid material percent as 0.80 for 80% by volume (which is the liquid portion of the waste) in the appropriate column, enter the quantity of material as 55 gallons, and enter the emission factor of the waste paint as 1.8 lb/gal in the emission factor column. If the waste shipment was not lab analyzed then only 50% credit can be claimed, and the emission credit can be calculated to be 39.6 lbs. [i.e., $0.80 \times 55 \text{ gal} \times 1.8 \text{ lb/gal} \times 50/100 = 39.6 \text{ lbs}$]

As the example demonstrates, the two different methods of reporting result in the same waste credit. Therefore, use either of these methods depending on the records available to you. **Remember to be consistent: if you report the solvent content in the waste shipment, use the emission factor of the solvent; if you report the liquid material content in the waste shipment, use the emission factor of the material.**

(B) If your waste shipment was analyzed by an ELAP laboratory, then use one of the following methodologies for reporting waste credits: If your lab analysis provides the VOC content of the waste shipment, then report 100 for 100% of liquid waste shipment and report the VOC content of the waste shipment as the emission factor. If your lab analysis provides the solvent content of the waste shipment, then report the solvent content in decimal fraction as the liquid material and use the emission factor of that solvent, as reported on the corresponding Form B3, B3U, and/or TAC. Please make sure you use consistent units: if you report usage in gallons, use an emission factor in lbs/gal; if you report usage in pounds, use an emission factor in lb/lb. You can claim 100% credit for each waste shipment that was analyzed by a certified laboratory.

If you claim credit for waste shipments of material recycled from a process which is vented to a control device, please see the Frequently Asked Questions section (question S) for methodologies on calculating these waste credits. Keep in mind that you should not get negative emissions when you subtract the waste credits claimed on Forms W, WU and/or WT from the emissions reported on corresponding Forms B3, B3U, and/or TAC (**i.e., waste credits claimed can not be greater than emissions reported**).

APPENDIX F – ACTIVITY CODES FOR FORMS B4 AND B4U AND COMMON UNIT CODES

Table 1: Activity Codes for Forms B4 and B4U

<u>Processing/Operations</u>		<u>Manufacturing (continued)</u>	
04	Stripping and sanding operations	33	Catalyst manufacturing
5a	Plating Process – Hexavalent Chromium	34	Asphalt products manufacturing
5b	Plating Process – Nickel	35	Fiberglass manufacturing
5c	Plating Process – Cadmium	43	Rubber products manufacturing
5d	Plating Process – Cadmium rotating barrel	45	Electrical Equipment & Semi-Conductor Mfg.
5e	Plating Process – Copper	51	Textile Products
5f	Plating Process – Silver	54	Chemical Mfg. not specified elsewhere
5g	Plating Process – Gold	55	Pulp & Paper Mfg.
5h	Plating Process – Tin	<u>Pharmaceutical/Food/Fermentation and Related Processes</u>	
5i	Plating Process – Rhodium	12	Fermentation and brewing products
5j	Plating Process – Palladium	15	Baking Products
5k	Plating Process without TAC/ODC involved	26	Pharmaceuticals, food flavoring manufacturing
5m	Plating Process – Other	31	Deep fat frying, charbroilers
06	Blending, mixing and packaging	40	Food production processes
13a	Cement Plant - Vehicle traffic - Paved road	<u>Storage/Handling</u>	
13b	Cement Plant - Vehicle traffic - Unpaved road	2A	Gasoline storage and dispensing
13c	Cement Plant - Limestone crushing/screening	2B	Diesel storage and dispensing
13d	Cement Plant - Silo storage	2C	Other fuel storage and dispensing
13e	Cement Plant - Raw milling	2D	Chemical storage tanks (aboveground and underground)
13f	Cement Plant - Finish grinding	10a	Semi-Open Or Open Storage Pile – Aggregate Plant
13g	Cement Plant - Kilns-natural gas	10b	Semi-Open Or Open Storage Pile – Asphalt Plant
13h	Cement Plant - Kilns-solid fuel	10c	Semi-Open Or Open Storage Pile – Concrete Plant
13i	Cement Plant - Clinker cooler	10d	Semi-Open Or Open Storage Pile – Cement Plant
13x	Cement Plant – Other Activity	10x	Semi-Open Or Open Storage Pile – Other Plant / Operation
14	Plastics processes	17a	Material Handling / Loading / Unloading – Aggregate Plant
16	Woodworking operations	17b	Material Handling / Loading / Unloading – Asphalt Plant
20	Metal processing (non-combustion)	17c	Material Handling / Loading / Unloading – Concrete (Gravel & Sand)
21	Glass processing (non-combustion)	17d	Material Handling / Loading / Unloading – Concrete (Cement and Supplement)
27	Calcining process	17x	Material Handling / Loading / Unloading – Other Operation
29	Solvent reclamation	23	Feed and grain handling, loading, unloading, storage
32	Foam blowing and foam molding	28	Bulk ship/barge material loading and unloading (for solids only)
41	Hydrogen production	52	Tank Degassing
42a	Concrete Plant – Crusher	<u>Dairy and Poultry Operations</u>	
42b	Concrete Plant – Screener / Hopper	58a	Dairy farms – milking cows
42c	Concrete Plant – Mix Truck Loader	58b	Dairy farms – dry cows
42d	Concrete Plant - Vehicle traffic - Paved road	58c	Dairy farms – heifers (4-24 months) – with flush lanes that are NOT flushed with water
42e	Concrete Plant - Vehicle traffic - Unpaved road	58d	Dairy farms – calves (under 3 months)
42x	Concrete Plant – Other Activity	58e	Dairy farms – mature cows
46a	Asphalt Plant – Screener / Hopper	58f	Dairy farms – heifers (4-24 months) – with flush lanes that are flushed with water to a holding pond
46b	Asphalt Plant – Dryer / Mixer (Batch)	59a	Poultry farms – birds (chicken, ducks, etc.) - manure
46c	Asphalt Plant – Dryer / Mixer (Drum)	59b	Poultry farms – birds (chicken, ducks, etc.) - bird feed
46d	Asphalt Plant – Truck Load-Out	<u>Other</u>	
46e	Asphalt Plant – Silo Storage Load-Out	01	Abrasive blasting
46f	Asphalt Plant - Vehicle traffic - Paved road	03	Incineration of waste or reclamation burning
46g	Asphalt Plant – Vehicle traffic - Unpaved road	07	Sewage and waste water treatment
46x	Asphalt Plant – Other Activity	08	Soldering, metallizing or welding
48a	Aggregate Plant – Mining / Drilling	09	Combustion sources not covered elsewhere
48b	Aggregate Plant – Crusher	18	Sulfur plant tail-gas vent (for pollutants not reported on Form R4)
48c	Aggregate Plant – Screener	19	FCCU regenerator (for pollutants not reported on Form R4 or Form R5)
48d	Aggregate Plant – Conveyor / Transfer	22	Soil Remediation
48e	Aggregate Plant – Milling / Grinding	25	Powder coating (VOC)
48f	Aggregate Plant – Flash Drying	30	Automobile metal shredding
48g	Aggregate Plant - Vehicle traffic - Paved road	36	Spraybooth – Particulate emissions
48h	Aggregate Plant - Vehicle traffic - Unpaved road	37	Baghouse – Particulate emissions (not reported elsewhere)
48x	Aggregate Plant – Other Activity	38	Other control equipment (not reported elsewhere)
56	Sterilization Process	39	Paper shredding/recycling
60a	Brick manufacturing – Material dryer	44	Asbestos abatement
60b	Brick manufacturing - Kiln	47	Open Spray
61a	Other Plants - Vehicle traffic - Paved road	49	Cooling towers (not reported on Form R5)
61b	Other Plants – Vehicle traffic - Unpaved road	50	Landfill Operation
<u>Manufacturing</u>		53	Laboratory, R & D Operations
11	Battery manufacturing, lead oxide processes	999	Others (Describe briefly under the code)
24	Paint manufacturing processes		

Table 2: Common Unit Codes

Unit Code	Throughput Units	Corresponding Emission Factor Units
1	pound	lb / lb
2	gallon	lbs / gallon
3	mmscf	lbs / mmscf
4	1000 gallons	lbs / 1000 gallons
5	ton	lbs / ton
6	batch	lbs / batch
7	amp-hour	lbs / amp-hour
8	1000 amp-hour	lbs / 1000 amp-hour
9	cubic yard	lbs / cubic yard
10	1000 gallon per day	lbs / 1000 gallon per day
11	barrel	lbs / barrel
12	1000 barrel	lbs / 1000 barrel
13	square feet	lbs / square feet
14	number of sources	lbs / number of sources
15	millions gallon per day	lbs / millions gallon per day
16	1000 tons	lbs / 1000 tons
17	hour	lbs / hour
18	1000 bbls crude processed	lbs / 1000 bbls crude processed
19	tons of sulfur recovered	lbs / tons of sulfur recovered
20	horse power-hour	lbs / horse power-hour
21	1000 pounds	lbs / 1000 pounds
22	head	lbs / head
999	specified unit	lbs / specified unit

APPENDIX G - PARTICULATE MATTER (PM) EMISSION FACTORS FOR SPRAY COATING OPERATIONS

The following default emission factors can be used to calculate PM emissions from spray coating operations and to report on Forms B4 and/or B4U.

TYPE OF OPERATION

EMISSION FACTORS

- A. Open Spray 1.05 lbs/gal (or 0.131 lb/lb)
- B. Enclosed Booth Spray (*with conventional filters at 90% control efficiency*) 0.105 lb/gal (or 0.0131 lb/lb)
- C. Enclosed Booth Spray (*Three-stage Aerospace NESHAP-compliant filters at 95% control efficiency*) 0.053 lb/gal (or 0.0066 lb/lb)
- D. Enclosed Booth Spray (*with High Efficient Particle Arrest (HEPA) filters at 99.97% control efficiency*)* 0.000315 lb/gal (or 0.00004 lb/lb) or 0.315 lb/1,000 gal (or 0.04 lb/1,000 lbs)

* The HEPA filters used shall be individually dioctyl phthalate [DOP] tested with 0.3 micron particles and certified to have an efficiency of not less than 0.9997.

The above factors were derived with the following assumptions:

- One gallon of coating contains approximately 3 lbs. (or 37.5 %) of solid.
- Spray gun transfer efficiency = 65%

NOTE: If you want to use the specific design parameters from spray booth/spray gun specifications and data from Material Safety Data Sheets (MSDS) to calculate PM emissions (including toxic metals such as Chromium and Lead), contact the Help Hotline at (714) 596-7456 for a copy of the **GUIDELINES FOR PARTICULATE MATTER (PM) EMISSION CALCULATIONS FOR SPRAY COATING OPERATIONS.**

APPENDIX H - DEFAULT EMISSION FACTORS FOR PLATING OPERATIONS, ASBESTOS ABATEMENT (DEMOLITION) AND ABRASIVE BLASTING

Plating Emissions:

Table C-1 lists uncontrolled emission factors for hexavalent chromium (Cr+6), nickel (Ni), cadmium (Cd) and total particulate matter (PM). The factors are provided in pounds per 1000 ampere-hours. Table C-2 lists the certified wetting-agent chemical fume suppressant with usage restrictions to meet 0.01 milligram per ampere-hour limit (or 0.000022 lb/1000 ampere-hr). Table C-3 provides the control efficiencies for various add-on control devices. If your process is controlled with a combination of up to 3 control methods, you are allowed to apply the control efficiency (CE) additively **except for HEPA filter** as follows:

$$\text{Overall CE} = 1 - [(1-CE_1) \times (1-CE_2) \times (1-CE_3)]$$

The maximum control efficiency for any combination of control methods is 99.97%. If your process is controlled by more than 3 control methods, please contact the Help Hotline at (714) 596-7456 for assistance. The emission factors and control efficiencies given in Tables C-1, C-2, and C-3 are for reporting emissions under the Emission Reporting program **only**. For permit applications, please consult with permit processing engineers for specific instructions regarding control methods and control efficiencies.

It is expected that many facilities have greater levels of control; therefore, facilities are encouraged to use emission factors specific to their operations. Please provide supporting documentation for your emission factors. **If any of your plating processes has a district-approved source test, then use the emission factors developed from the source tests for calculating emissions.**

Table C-1. Emission Factors for Plating Operations

TAC/Process	Emission factor (lb/1000 ampere-hr)	
	Toxic Metal	Total PM ^[5]
Uncontrolled hexavalent chromium (Cr ⁺⁶) plating emission factor ^[1]	0.0097	0.020
Uncontrolled nickel (Ni) plating emission factor ^[2]	0.00051	0.0011
Uncontrolled cadmium (Cd) plating emission factor ^[3]	0.0057	0.012
Uncontrolled Cadmium rotating barrel plating ^[4]	0.000020	0.000041

[1] Estimated from the equation, $EF = 0.505(w)(100-N)$ where, EF = emission factor in mg/amp-hr,

w = weight fraction of hexavalent chromium in solution, and

N = plating efficiency in percent

The representative chrome plating bath contains a chromic acid of 32 to 34 oz/gal, which equates to a weight fraction of approximately 10.9%. The assumed plating efficiency is 20%. $EF = 4.4 \text{ mg/amp-hr} = 0.0097 \text{ lb/1000 amp-hr}$.

[2] SCAQMD and Metal Finishers Association of Southern California, 1998 (Source Test No. 98-109 through 111)

[3] AP-42 Table 12.20-4, July 1996.

[4] SCAQMD (Source Test No. 02-0192)

[5] Assumes that 48% of particulate matter consists of the toxic metal. The relationship is derived from Table 12.20-1 of AP-42 dated July 1996 for plating operations with add-on control equipment.

Table C-2. Certified Wetting-Agent Chemical Fume Suppressants, Companies, and Usage Restrictions for Hexavalent Chromium Electroplating and Chromic Acid Anodizing Operations

Product	Company	Usage Limitations	Controlled Emission factor (lb/1000 ampere-hr)	
			Hexavalent Chromium ^[1]	Total PM ^[2]
Fumetrol 140	Atotech USA	Shall be used at or below 40 dynes/cm	0.000022	0.000045
Fumetrol 140 + Dis-Mist NP	Atotech USA	Both products shall be used in combination at or below 45 dynes/cm. A foam blanket of not less than one inch shall be maintained while plating, with foam blanket coverage of not less than 95% of the tank surface area.	0.000022	0.000045
Benchbrite CR-1800	Benchmark Products	Shall be used at or below 40 dynes/cm	0.000022	0.000045
Zero Mist Liquid R	Enthone, Cookson Electronics	Shall be used at or below 32 dynes/cm	0.000022	0.000045
Clepo Chrome Mist Control 74095	MacDermid	Shall be used at or below 40 dynes/cm	0.000022	0.000045

[1] Assumes 99.77% control efficiency

[2] Assumes that 48% of particulate matter consists of the toxic metal. The relationship is derived from Table 12.20-1 of AP-42 dated July 1996 for plating operations with add-on control equipment.

Table C-3. Approved Control Efficiencies for Plating Operations

Control Method	Control Efficiency (%)
Mist eliminator	50%
Packed Bed Scrubber	70%
Mesh pad	95%
Chemical Fume Suppressants	95-99%
HEPA Filter and Certified Fume Suppressants or others ^[1]	99.97%

[1] Use 99.97% for any combination of HEPA filter and other control methods.

Report the PM emissions on Form B4 or B4U: Choose appropriate Activity Code for your plating operations, list the ampere-hr used during the six-month transitional reporting period in 1000 ampere-hr under throughput (divide ampere-hr by 1000), then calculate your controlled PM emission factor (EF). If specific data is not available for controlled PM emission factor, then use the “Total PM” emission factors in Tables C-1 and C-2 and the control efficiencies given in Table C-3 for any additional control you might have. As stated earlier, the overall control efficiency cannot exceed the HEPA control efficiency of 99.97%. For example, if you are reporting PM controlled emissions for hex. chromium plating using Fumetrol 140 fume suppressant, your controlled default PM emission factor for B4 or B4U would be 0.000045 lb/1000 amp-hr.

Then report your toxic metal (Hex. Chromium or Nickel or Cadmium) emissions on Form TAC by using B4 or B4U emission reference for plating operations, the same throughput used on form B4 or B4U (ampere-hr used during the six-month transitional reporting period in 1000 ampere-hr), the uncontrolled toxic metal emission factor and the Overall Control Efficiency in decimal format, or the controlled default toxic metal emission factor. For example, if you are reporting toxic metal emissions for hex. chromium plating with Fumetrol 140 fume suppressant for Form TAC, the controlled default emission factor for toxic metal would be 0.000022 lb/1000 amp-hr. If you have add-on control devices, use control efficiency in Table C-3, calculate the overall control efficiency from the above equation and list it under “Overall Control Efficiency” column.

DEFAULT EMISSION FACTORS FOR ASBESTOS ABATEMENT (DEMOLITION)

PM and asbestos emissions from asbestos abatement operations:

If site specific data is not available, you can use the following default emissions factors for PM and asbestos emission calculations resulting from a demolition/renovation (asbestos abatement) operation:

First report the resulting PM emissions on Form B4: Choose the Activity Code “44- Asbestos abatement”, list the amount of the building material removed in tons under the throughput, and use the following controlled default emission factor (HEPA filter efficiency is already built into the listed emission factor):

PM: emission factor = 0.006 lb/ton of building material removed

Next, report the asbestos emissions on Form TAC by using B4 emission reference for asbestos abatement, the same throughput used on Form B4 (tons of building material removed) and the following controlled default emission factor (HEPA filter efficiency is already built in the listed emission factor). Since the control is accounted for in the emission factor, list “0.00” under the Overall Control Efficiency:

Asbestos: emission factor = 0.0015 lb/ton of building material removed

Assumptions used in determining default emission factors:

- All operations controlled by HEPA filter with 99.97% efficient,
- PM airborne factor = 1% (AQMD),
- Average asbestos debris concentration = 25% (EPA).

DEFAULT EMISSION FACTORS FOR ABRASIVE BLASTING

For abrasive blasting operation, facility must report particulate matter (PM) emissions based on the total amount of blasting medium on Form B4/B4U; and emissions from fuel burned in the portable Internal Combustion Engine (ICE) on Form B2/B2U. If the abrasive blasting work is done by portable equipment which is registered under the CARB Registration Program, facility is exempt from reporting under AER program. Table C-4 lists the uncontrolled and controlled Emission Factors (EF), for typical abrasive to estimate the PM emissions. The emission factors are provided in pounds of PM per ton of abrasive material (lbs/ton). The uncontrolled EFs is used for outdoor dry blasting. The controlled EFs are provided for different types of controlled blasting work such as wet blasting, indoor blasting in abrasive blasting housing/cabinet, or blasting in a room which is vented to an Air Pollution Control Device such as filter or baghouse.

Table C-4., Emission Factors for Abrasive Blasting Operation

Abrasive Material	Abrasive Blasting PM Emission Factors (lb/ton)			
	Uncontrolled	Controlled		
	Outdoor, Dry Material (0% reduction)	Wet (50% reduction)	Indoor (Housing, Cabinet, etc.) (85% reduction)	Indoor (with Baghouse) (99% reduction)
Sand	82.00	41.00	12.30	0.82
Grit, Slag/Other Materials	19.68	9.84	2.95	0.20
Shot	8.20	4.10	1.23	0.08

APPENDIX I - COMMON CONVERSION FACTORS

1 therm = 0.0000952 mmscf
 1 pound/gallon = 120 grams/liter

Unit weight of material in lbs per gallon (i.e. density) = (Specific Gravity) X 8.34 lbs/gal

<u>Material</u>	<u>Density (lbs/gal)</u>	<u>Material</u>	<u>Density (lbs/gal)</u>
1,1,1-Trichloroethane	11.05 lbs/gal	Polyester resins:	
Methylene chloride	11.13 lbs/gal	General resin	9.2 lbs/gal
Freon 11	12.5 lbs/gal	Isophthalic	8.9 lbs/gal
Freon 12	12.4 lbs/gal	Vinyl ester	8.7 lbs/gal
Freon 113	13.0 lbs/gal	Colored gel coat	10.5 lbs/gal
Perchloroethylene	13.53 lbs/gal	Clear gel coat	9.0 lbs/gal

EXAMPLES:

a) To Calculate VOC content: If the MSDS does not include the VOC content, you can calculate the VOC content based on the weight percent of VOC compound reported on the MSDS. Using the weight percentage (W%) of VOC compounds and density or specific gravity (from the MSDS), the emission factor can be calculated as:

$$\text{VOC (lbs/gal)} = \text{W\%/100} \times \text{Density (lbs/ gal)}$$

where: Density = Specific gravity x 8.34 lbs/gal and W%= Total weight percent of VOC compounds

b) To change VOC emission factor from lbs/gal to lbs/lb, use the following formula:

$$\frac{\text{lbs}}{\text{lb}} = \frac{\text{lbs}}{\text{gal}} \times \frac{1}{(\text{Specific Gravity} \times 8.34)}$$

If, for instance, you have a coating with a listed VOC content of 2.5 lbs/gallon, and a specific gravity of 1.05, you will need to set up the following equation to come up with an emission factor to match your usage measured in pounds.

$$\text{Emission Factor in lbs/lb} = \frac{2.5 \text{ lbs VOC}}{\text{gal Coating}} \times \frac{1 \text{ gal Coating}}{(1.05 \times 8.34) \text{ lbs Coating}} = 0.285 \frac{\text{lbs VOC}}{\text{lb Coating}}$$

c) To change VOC emission factor from grams per liter of material (g/l) to pounds per gallon (lbs/gal) of material, use the following formula:

1 pound/gallon = 120 grams/liter

If, for instance, you have a paint with a listed VOC content of 250 grams per liter, you will need to set up the following equation to come up with an emission factor to match your usage measured in gallons.

$$\frac{250 \text{ grams/liter of Paint}}{120} = 2.083 \text{ pounds per gallon VOC}$$

Note: The number $\frac{1}{120} = \frac{3.785 \text{ liters}}{1 \text{ gallon}} \times \frac{1 \text{ lb of VOC}}{454 \text{ g VOC}}$

d) To change from lbs/MMBTU to lbs/mmscf for natural gas, use the following formula:

$$\frac{\text{lbs}}{\text{MMBTU}} \times \frac{1050 \text{ MMBTU}^*}{\text{mmscf}} = \frac{\text{lbs}}{\text{mmscf}}$$

*If specific heat content data is not available.

APPENDIX J - LIST OF TOXIC AIR CONTAMINANTS (TACs) AND OZONE DEPLETING COMPOUNDS (ODCs) FOR FORM TACS AND SPECIAL INSTRUCTIONS FOR REPORTING SELECT TOXIC AIR CONTAMINANTS

Table 1 provides the complete list of toxic air contaminants and ozone depleters from Form TACS including TAC Code, TAC group name, CAS#, and the name of each specific substance classified under each TAC group. The last column “Type of TAC/ODC” identifies each of the listed components as VOC or PM.

Table 1 lists the family name and the individual species within the family for the following toxic air contaminants (TACs):

- Chlorinated dioxins and dibenzofurans (TAC code #7)
- Fluorocarbons (chlorinated and brominated) (TAC code #22)
- PAHs (TAC code #19)

It is important when reporting emissions for these families of compounds that emissions are not double-counted thus adversely affecting the facility’s emissions and/or fees. Emissions reported for the overall family and each of the species within the family are summed for the purpose of calculating total facility emissions and/or assigning fees and prioritizing facility risks. Therefore, it is important that you either report emissions by individual species or overall emissions for the toxic family. It is always preferable to report emissions by individual species if that information is available. Table 2 considers each toxic family and several other toxics such as, arsenic (CAS #7440382), asbestos (CAS #1332214), hexavalent chromium (CAS #18540299), lead (CAS #7439921), and nickel (CAS #7440020), and provides recommendations for emissions reporting. All TAC emissions must be reported on Form TAC as well as on Form TACS. It is important that the directions provided in Table 2 be read carefully before calculating TAC emissions.

Table 1: Form TACS Toxic Air Contaminants and Ozone Depleters

TAC Code	Group	CAS#	Substance	Type of TAC/ODC
32	Ammonia	7664417	Ammonia	Only TAC
1	Asbestos	1332214	Asbestos	TAC and PM
2	Benzene	71432	Benzene	TAC and VOC
3	Beryllium	7440417	Beryllium	TAC and PM
4	1,3-Butadiene	106990	1,3-Butadiene	TAC and VOC
5	Cadmium	7440439	Cadmium	TAC and PM
6	Carbon tetrachloride	56235	Carbon tetrachloride	TAC and VOC
7	Chlorinated dioxins and dibenzofurans	1080	Dibenzofurans (Polychlorinated dibenzofurans) {PCDFs} [POM]	TAC and VOC
		1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin {TCDD} [POM]	TAC and VOC
		3268879	1,2,3,4,5,6,7,8-Octachlorodibenzo-p-dioxin [POM]	TAC and VOC
		19408743	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin [POM]	TAC and VOC
		35822469	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin [POM]	TAC and VOC
		39001020	1,2,3,4,5,6,7,8-Octachlorodibenzofuran [POM]	TAC and VOC
		39227286	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin [POM]	TAC and VOC
		40321764	1,2,3,7,8-Pentachlorodibenzo-p-dioxin [POM]	TAC and VOC
		51207319	2,3,7,8-Tetrachlorodibenzofuran [POM]	TAC and VOC
		55673897	1,2,3,4,7,8,9-Heptachlorodibenzofuran [POM]	TAC and VOC
		57117314	2,3,4,7,8-Pentachlorodibenzofuran [POM]	TAC and VOC
		57117416	1,2,3,7,8-Pentachlorodibenzofuran [POM]	TAC and VOC
		57117449	1,2,3,6,7,8-Hexachlorodibenzofuran [POM]	TAC and VOC
		57653857	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin [POM]	TAC and VOC
		60851345	2,3,4,6,7,8-Hexachlorodibenzofuran [POM]	TAC and VOC
		67562394	1,2,3,4,6,7,8-Heptachlorodibenzofuran [POM]	TAC and VOC
70648269	1,2,3,4,7,8-Hexachlorodibenzofuran [POM]	TAC and VOC		
72918219	1,2,3,7,8,9-Hexachlorodibenzofuran [POM]	TAC and VOC		

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TAC Code	Group	CAS#	Substance	Type of TAC/ODC
8	1,4-Dioxane	123911	1,4-Dioxane	TAC and VOC
9	Ethylene dibromide	106934	Ethylene dibromide {1,2-Dibromoethane}	TAC and VOC
10	Ethylene dichloride	107062	Ethylene dichloride {1,2-Dichloroethane}	TAC and VOC
11	Ethylene oxide	75218	Ethylene oxide	TAC and VOC
12	Formaldehyde	50000	Formaldehyde	TAC and VOC
13	Hexavalent chromium	18540299	Chromium, hexavalent (and compounds)	TAC and PM
14	Inorganic arsenic	7440382	Arsenic	TAC and PM
15	Lead	7439921	Lead compounds (inorganic)	TAC and PM
16	Methylene chloride	75092	Methylene chloride {Dichloromethane}	Only TAC
17	Nickel	7440020	Nickel	TAC and PM
18	Perchloroethylene	127184	Perchloroethylene {Tetrachloroethene}	Only TAC
19	Polynuclear aromatic hydrocarbons (PAHs)	1151	PAHs, total, w/o individ. components reported [PAH, POM]	TAC and VOC
		50328	Benzo[a]pyrene [PAH, POM]	TAC and VOC
		53703	Dibenz[a,h]anthracene [PAH, POM]	TAC and VOC
		56553	Benz[a]anthracene [PAH, POM]	TAC and VOC
		83329	Acenaphthene [PAH, POM]	TAC and VOC
		85018	Phenanthrene [PAH, POM]	TAC and VOC
		86737	Fluorene [PAH, POM]	TAC and VOC
		91203	Naphthalene [PAH, POM]	TAC and VOC
		91576	2-Methyl naphthalene [PAH, POM]	TAC and VOC
		120127	Anthracene [PAH, POM]	TAC and VOC
		129000	Pyrene [PAH, POM]	TAC and VOC
		189559	Dibenzo[a,i]pyrene [PAH, POM]	TAC and VOC
		189640	Dibenzo[a,h]pyrene [PAH, POM]	TAC and VOC
		191242	Benzo[g,h,i]perylene [PAH, POM]	TAC and VOC
		191300	Dibenzo[a,l]pyrene [PAH, POM]	TAC and VOC
		192654	Dibenzo[a,e]pyrene [PAH, POM]	TAC and VOC
		192972	Benzo[e]pyrene [PAH, POM]	TAC and VOC
		193395	Indeno[1,2,3-cd]pyrene [PAH, POM]	TAC and VOC
		198550	Perylene [PAH, POM]	TAC and VOC
		205823	Benzo[j]fluoranthene [PAH, POM]	TAC and VOC
205992	Benzo[b]fluoranthene [PAH, POM]	TAC and VOC		
206440	Fluoranthene [PAH, POM]	TAC and VOC		
207089	Benzo[k]fluoranthene [PAH, POM]	TAC and VOC		
208968	Acenaphthylene [PAH, POM]	TAC and VOC		
218019	Chrysene [PAH, POM]	TAC and VOC		
20	Trichloroethylene	79016	Trichloroethylene	TAC and VOC
21	Vinyl chloride	75014	Vinyl chloride	TAC and VOC
22	Chlorofluorocarbons (CFCs)	1104	Fluorocarbons (chlorinated)	Only ODC
		75434	Dichlorofluoromethan {Freon 12}	Only ODC
		75694	Trichlorofluoromethane {Freon 11}	Only ODC
		76131	Trichlorotrifluoroethane {Freon -113}	Only ODC
23	1,1,1-trichloroethane	71556	Methyl chloroform {1,1,1-Trichloroethane}	Only ODC

Table 2. Special Instructions for Reporting Select Toxic Air Contaminants

TAC code	Substance	Reporting recommendations
14	Arsenic and compounds	Be sure to consider the inorganic arsenic weight fraction in inorganic arsenic containing materials such as arsine when calculating the inorganic arsenic emissions. The arsenic weight fraction for arsine (CAS# 7784421) is 0.9612.
1	Asbestos	Be sure to consider the asbestos weight fraction in mineral fibers such as erionite, talc, etc. when calculating the asbestos emissions.
13	Hexavalent chromium and compounds	Be sure to consider the hexavalent chromium weight fraction in coating materials such as barium chromate, calcium chromate, lead chromate, sodium chromate, strontium chromate, and chromium trioxide (as chromic acid mist) when calculating the hexavalent chromium emissions. The hexavalent chromium weight fractions for these compounds are as follows: barium chromate (CAS# 10294403) – 0.2053; calcium chromate (CAS# 13765190 – 0.3332; lead chromate (CAS# 7758976) – 0.1609; sodium dichromate (CAS# 10588019) – 0.397; strontium chromate (CAS# 7789062) – 0.2554; chromium trioxide (as chromic acid mist) (CAS# 1333820) – 0.52; zinc chromate (CAS # 13530659) – 0.2867.
7	Chlorinated dioxins and dibenzofurans	Report emissions as either a family total or by individual species on Form TAC. Do not double count the same emissions. Emissions from individual species with the same TAC code are added together on Form TACS or TACSO to calculate the family total emissions.
22	Fluorocarbons (chlorinated and brominated)	Report emissions as either a family total or by individual species on Form TAC. Do not double count the same emissions. Emissions from individual species with the same TAC code are added together on Form TACS or TACSO to calculate the family total emissions.
15	Lead compounds (inorganic)	Be sure to consider the lead weight fraction in lead containing materials such as lead oxide, lead acetate, lead phosphate, lead subacetate, and lead chromate, when calculating the lead emissions. The lead weight fractions for these materials are as follows: lead oxide (CAS# 1314-41-6) – 0.9066; lead acetate (CAS# 301042) – 0.637; lead phosphate (CAS# 7446277) – 0.7659; lead subacetate (CAS# 1335326) – 0.7696; and lead chromate (CAS# 7758976) – 0.6411.
17	Nickel	Be sure to consider the nickel weight fraction in nickel containing materials such as nickel acetate, nickel carbonate, nickel carbonyl, nickel hydroxide, nickelocene, nickel oxide, nickel subsulfide and refinery dust when calculating the nickel emissions. The nickel weight fractions for these materials are as follows: nickel acetate (CAS# 373024) – 0.3321; nickel carbonate (CAS# 3333673) – 0.4945; nickel carbonyl (CAS# 13463393) – 0.3438; nickel hydroxide (CAS# 12054487) – 0.6332; nickelocene (CAS# 1271289) – 0.4937; nickel oxide (CAS# 1313991) – 0.7859; nickel subsulfide (CAS# 12035722) – 0.2443.
19	PAHs	Report emissions as either a family total or by individual species on Form TAC. Do not double count the same emissions. Emissions from individual species with the same TAC code are added together on Form TACS or TACSO to calculate the family total emissions.

APPENDIX K - VOC EMISSIONS CALCULATIONS FOR FUEL DISPENSING AND SMALL LIQUID ORGANIC STORAGE TANKS (<10,000 GALLONS)

VOC emissions can be calculated using the following equation:

where: E = VOC emissions (lb/reporting period)
 $E = EF * Q$
 Q = throughput (Mgal/reporting period or 1,000 gallons/reporting period)
 EF = emission factor (lb/Mgal)

Throughput is the amount of the liquid loaded in the tank during the six-month transitional reporting period.

A. Fuel Dispensing and Storage Tanks (including non-retail service stations)

Gasoline (use Activity Code 2A): $EF = 1.8$ lb/Mgal (controlled)
Diesel (use Activity Code 2B): $EF = 0.028$ lb/Mgal

NOTE: Report BENZENE emission from gasoline tank loss on Form TAC using a default factor of 1% or 0.018 lb/Mgal of throughput. Diesel tank benzene loss is negligible and does not have to be reported.

B. Small Fuel and Other Liquid Organic Storage Tanks (< 10,000 gallons) (use Activity Code 2D)

Small liquid storage tank is defined as a tank with a storage capacity of less than 10,000 gallons and operated at ambient temperature and pressure.

Under-Ground tank: EF (lb/Mgal) = loss factor f

Above-Ground tank

$$EF(\text{lb} / \text{Mgal}) = \frac{a * (C / Q)}{[1 + (b * H)]} + f$$

where: C = tank size or capacity (Mgal or 1,000 gallons)
 Q = throughput (Mgal/reporting period or 1,000 gallons/reporting period)
 H = tank height (feet)
 a, b, f = loss factors a, b, f (see attached table "Loss Factors for Small Storage Tanks")

NOTE: If you need assistance with tank calculation, please contact Help Hotline at (714) 596-7456.

* Gasoline (RVP 6) is the most common type of gasoline in SCAQMD jurisdiction.

TOXIC AIR CONTAMINANT (TAC) CALCULATION

Toxic air contaminant emissions associated with storage tanks must be calculated and reported. In general, the emission factor and emission rate for each component can be estimated by:

where: EF_{TAC} = emission factor for TAC component, lbs/1,000 gallons

$$EF_{TAC} = Z_{TAC} * EF \quad \text{and} \quad E_{TAC} = Z_{TAC} * E_T$$

EF = VOC emission factor, lbs/1,000 gallons
 Z_{TAC} = weight fraction of TAC component
 E_{TAC} = emission rate of TAC component, lbs/reporting period
 E_T = total tank VOC emissions, lbs/ reporting period

Emissions for each TAC component must be calculated and reported individually on Form TAC.

Loss Factors for Small Storage Tanks

Material	CAS#	a	b	f
Crude oil (RVP 5)		0.064	0.084	2.863
Distillate fuel oil no. 2		0.00015	0.00020	0.0241
Residual oil no. 6		0.000001	0.000001	0.000241
Jet naphtha (JP-4)		0.028	0.038	2.725
Jet kerosene		0.00019	0.00026	0.0306
Gasoline (RVP 6)*		0.089	0.087	5.423
Gasoline (RVP 7)		0.122	0.103	6.332
Gasoline (RVP 8)		0.156	0.119	7.334
Gasoline (RVP 9)		0.199	0.136	8.226
Gasoline (RVP 10)		0.235	0.152	9.099
Gasoline (RVP 11)		0.312	0.169	9.952
Gasoline (RVP 12)		0.387	0.186	10.783
Gasoline (RVP 13)		0.470	0.203	11.408
Acetaldehyde	75070	6.572	0.360	14.328
Acetic acid	64197	0.00201	0.00531	0.289
Acetic anhydride	108247	0.00102	0.00172	0.159
Acetonitrile	75058	0.013	0.034	1.277
Acrylamide	79061	0.000001	0.000003	0.0002
Acrylic acid	79107	0.00059	0.00143	0.0932
Acrylonitrile	107131	0.024	0.043	2.047
Allyl alcohol	107186	0.00347	0.00859	0.452
Allyl chloride	107051	0.291	0.143	9.929
Aniline	62533	0.00011	0.00021	0.0173
Benzene	71432	0.027	0.036	2.512
Butanol-(1)	71363	0.00082	0.00188	0.126
Butyl alcohol (-tert)	75650	0.00833	0.014	0.945
Butyl chloride (-n)	109693	0.040	0.041	3.399
Carbon disulfide	75150	0.280	0.143	9.826
Carbon tetrachloride	56235	0.069	0.044	6.091
Chlorobenzene	108907	0.00288	0.00418	0.426
Chloroform	67663	0.134	0.074	7.959
Chloroprene	126998	0.116	0.082	6.587
Cresol (-m)	108394	0.00003	0.00005	0.0047
Cresol (-o)	95487	0.00004	0.00006	0.0061
Cresol (-p)	106445	0.00001	0.00002	0.0022
Cyclohexane	110827	0.032	0.037	2.798
Cyclohexanol	108930	0.00004	0.00006	0.0058
Cyclohexanone	108941	0.00096	0.00169	0.150
Cyclohexene	110838	0.026	0.033	2.477
Cyclopentane	287923	0.198	0.125	7.925
Cyclopentanone	120923	0.00211	0.00412	0.314
Cyclopentene	142290	0.125	0.098	6.037
Decane (-n)	124185	0.00080	0.00099	0.128
Dichloroethane (1,1)	75343	0.156	0.088	7.924
Dichloroethane (1,2)	107062	0.030	0.029	2.589
Dichloroethylene (cis-1,2)	540590	0.130	0.081	7.130
Dichloroethylene (-trans-1,2)	156605	0.311	0.129	11.348
Diethoxymethane	462953	0.022	0.025	2.336
Diethyl (n,n) anilin	91667	0.00005	0.00006	0.0077
Diethyl ether	60297	0.712	0.211	14.158
Diethyl ketone	96220	0.00779	0.013	0.975
Diethyl sulfide	352932	0.016	0.021	1.749
Diethylamine	109897	0.129	0.089	5.906
Di-isopropyl ether	108203	0.090	0.065	5.974
Dimethyl formamide	68122	0.00055	0.00130	0.086
Dimethyl hydrazine (1,1)	57147	0.047	0.058	3.151
Dimethyl phthalate	131113	0.000000002	0.000000002	0.0000003
Dioxane (1,4)	123911	0.009	0.014	1.078
Dipropyl ether	111433	0.023	0.026	2.370
Di-t-butyl ether	6163662	0.020	0.020	2.321
Epichlorohydrin	106898	0.00354	0.00603	0.505

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Material	CAS#	a	b	f
Ethanolamine (mono-)	141435	0.00003	0.00009	0.0048
Ethyl acetate	141786	0.031	0.035	2.768
Ethyl acrylate	140885	0.011	0.015	1.330
Ethyl alcohol	64175	0.00805	0.021	0.862
Ethyl chloride	75003	0.195	0.486	28.425
Ethylamine	75047	0.117	0.418	17.070
Ethylbenzene	100414	0.00219	0.00342	0.329
Ethylcyclopentane	1640897	0.011	0.015	1.296
Ethyleneoxide	75218	0.143	0.525	20.911
Fluorobenzene	462066	0.025	0.029	2.482
Formic acid	64186	0.00545	0.016	0.662
Freon 11	75694	6.863	0.321	39.980
Furan	110009	0.984	0.236	14.573
Furfural	96011	0.00025	0.00046	0.0404
Heptane (-n)	142825	0.013	0.017	1.534
Hexane (-n)	110543	0.063	0.058	4.501
Hexanol (-1)	111273	0.00014	0.00024	0.022
Hydrogen cyanide	74908	0.867	0.294	7.191
Iso-butyl alcohol	78831	0.00285	0.00588	0.395
Isooctane	26635643	0.017	0.018	1.908
Isopentane	78784	2.662	0.299	19.511
Isoprene	78795	0.917	0.230	14.176
Isopropyl alcohol	67630	0.007	0.015	0.830
Isopropyl benzene	98828	0.00114	0.00163	0.177
Methacrylonitrile	126987	0.016	0.027	1.634
Methyl acetate	79209	0.113	0.082	5.479
Methyl acrylate	96333	0.026	0.032	2.458
Methyl alcohol	67561	0.018	0.045	1.296
Methyl ethyl ketone	78933	0.022	0.033	2.173
Methyl isobutyl ketone	108101	0.00434	0.00667	0.605
Methyl methacrylate	80626	0.010	0.013	1.179
Methyl propyl ether	557175	0.351	0.179	12.029
Methyl styrene (alpha)	98839	0.00053	0.00079	0.084
Methylcyclohexane	108872	0.013	0.017	1.519
Methylcyclopentane	96377	0.051	0.052	3.992
Methyldichlorosilane	75547	0.724	0.170	19.816
Methylene chloride	75092	0.449	0.168	12.912
Methyl-tert-butyl ether (MTBE)	1634044	0.158	0.097	7.754
Mineral Spirits	8052413	0.00043	0.00061	0.069
Morpholine	110918	0.00181	0.00344	0.271
Nitrobenzene	98953	0.00005	0.00008	0.0087
Nitromethane	75525	0.00502	0.011	0.623
Nonane (-n)	111842	0.00145	0.00197	0.228
n-Propyl nitrate	627134	0.00574	0.00818	0.778
o-Chlorotoluene	95498	0.00089	0.00122	0.140
Octane (-n)	111659	0.00304	0.00442	0.457
Pentachloroethane	76017	0.00130	0.00112	0.206
Pentane (-n)	109660	0.612	0.202	13.213
Phosgene	75445	0.355	0.579	51.836
Picoline (-2)	108996	0.00219	0.00385	0.325
Propylamine (-n)	107108	0.170	0.125	6.673
Propylene glycol	57556	0.00001	0.00003	0.0023
Propylene oxide	75669	0.562	0.201	10.558
Pyridine	110861	0.00377	0.00729	0.522
Resorcinol	108463	0.000002	0.000003	0.0003
Styrene	100425	0.00138	0.00226	0.214
Tetrachloroethane (1,1,1,2)	630206	0.00428	0.00416	0.632
Tetrachloroethane (1,1,2,2)	79345	0.00136	0.00140	0.213
Tetrachloroethylene	127184	0.00686	0.00645	0.969
Tetrahydrofuran	109999	0.059	0.062	4.019
Toluene	108883	0.00644	0.01021	0.852
Trichloro(1,1,2)trifluoroethane	76131	0.597	0.130	22.145
Trichloroethane (1,1,1)	71556	0.074	0.050	6.048
Trichloroethane (1,1,2)	79005	0.00674	0.00766	0.925

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Material	CAS#	a	b	f
Trichloroethylene	79016	0.030	0.025	2.996
Trichloropropane (1,2,3)	96184	3.639	3.975	530.740
Trimethylchlorosilane	75774	0.168	0.091	8.918
Vinyl acetate	108054	0.039	0.043	3.320
Vinylidene chloride	75354	1.355	0.240	20.935
Xylene (-m)	1330207	0.00180	0.00285	0.274
Xylene (-o)	95476	0.00140	0.00225	0.216
1,1-Diethoxyethane	105577	0.010	0.012	1.306
1,1-Dimethylcyclopentane	1638262	0.022	0.028	2.243
1,2,4-Trimethylbenzene	95636	0.00045	0.00066	0.072
1,2-Dibromopropane	78751	0.00334	0.00278	0.509
1,2-Diethylbenzene		0.00023	0.00031	0.038
1,2-Dimethoxyethane	110714	0.081	0.065	5.291
1,2-Pentadiene		0.267	0.144	8.869
1,3-Dibromopropane	109648	0.00100	0.00087	0.160
1,3-Diethylbenzene		0.00025	0.00034	0.041
1,4-Diethylbenzene	105055	0.00024	0.00031	0.038
1,4-Pentadiene	591935	2.207	0.295	18.199
1,5-Hexadiene	592427	0.117	0.086	6.429
1-Chlorobutane	109639	0.036	0.038	3.207
1-Heptene		0.017	0.021	1.842
1-Methyl-2-isopropylbenzene	527844	0.00035	0.00046	0.056
1-Octanol	111875	0.00002	0.00003	0.0034
1-Pentene	109671	1.261	0.256	16.265
1-Pentyne	627190	0.390	0.169	10.408
1-Propanethiol	107039	0.057	0.059	4.040
1-Propanol	71238	0.003	0.007	0.371
2,2,3-Trimethylpentane		0.009	0.012	1.204
2,2,4-Trimethylpentane	540841	0.016	0.018	1.884
2,2-Dimethylpentane	590352	0.041	0.040	3.609
2,3,3-Trimethylpentane		0.00757	0.0098	1.011
2,3-Dimethylbutane	79298	0.135	0.091	7.124
2,3-Dimethylpentane	565593	0.022	0.026	2.324
2,3-Pentadiene		0.198	0.124	7.668
2,4-Dimethylpentane	108087	0.048	0.044	3.994
2-Chlorobutane	78864	0.072	0.060	5.055
2-Methyl-1-butene	563462	0.205	0.131	8.345
2-Methylhexane	591764	0.021	0.024	2.212
2-Methylpentane	107835	0.112	0.082	6.384
2-Propanethiol		0.165	0.107	7.410
3,3-Dimethylpentane	562492	0.029	0.031	2.828
3,4-Dichlorotoluene	95750	0.00009	0.0001	0.014
3-Ethylpentane		0.018	0.021	1.942
3-Methylhexane	589344	0.019	0.023	2.063
Trimethylphosphite		0.004	0.006	0.655
MAA	124583	0.0003	0.0005	0.047
Chloral	75876	0.0087	0.0107	1.429
Monomethylamine 50%		0.026	0.164	4.627
Dimethylamine 40%		0.016	0.066	2.700
Dichlorvos		0.00023	0.000186	0.0371
Dicrotophos	62737	0.0077	0.0058	1.2525
Metam Sodium		0.00002	0.00003	0.003
Dimethylchloroacetoacetate		0.010	0.0121	1.636
Dimethylformamide		0.0049	0.012	0.800
Nitrochlorobenzene		0.00002	0.00003	0.0038
Aromatic 150 Fluid	64742945	0.0102	0.01296	1.6665
Texanol	25265774	0.00004	0.00003	0.0068
Naphthalene	91203	0.008	0.00005	0.00007

*Most common type of gasoline in SCAQMD jurisdiction.

APPENDIX L - RULE 301(e) - EMISSIONS FEE

AQMD Rule 301(e) - For Reference Only

The Lewis/Presley Air Quality Management Act made provisions for annual permit fees based on emissions. The South Coast Air Quality Management AQMD Board activated this provision of State Law in June 1977, and amended it on January 6, 1978; June 16, 1978; April 4, 1980; September 5, 1980; June 5, 1981; July 9, 1982; December 3, 1982; June 3, 1983; May 4, 1984; July 6, 1984; November 2, 1984; December 6, 1985; May 1, 1987; June 3, 1988; December 2, 1988; January 6, 1989; June 2, 1989; June 1, 1990; June 7, 1991; December 6, 1991; June 5, 1992; July 10, 1992; June 11, 1993; October 8, 1993; June 10, 1994; May 12, 1995; October 13, 1995; May 10, 1996; May 9, 1997; May 8, 1998; May 14, 1999; May 19, 2000; May 11, 2001; May 3, 2002; June 6, 2003, ; July 9, 2004; June 3, 2005; June 9, 2006; May 4, 2007; May 2, 2008. AQMD Rule 301(e) and 301(k)(10) applicable for the 2007-2008 Annual Emissions Report read as follows:

(e) Annual Operating Emissions Fee

(1) Annual Operating Emission Fee Applicability

In addition to the annual operating permit renewal fee, the owner/operator of all equipment operating under permit shall pay an annual emissions fee based on the total weight of emissions of each of the contaminants specified in Table III from all equipment used by the operator at all locations, including total weight of emissions of each of the contaminants specified in Table III resulting from all products which continue to passively emit air contaminants after they are manufactured, or processed by such equipment, with the exception of such product that is shipped or sold out of the District so long as the manufacturer submits records which will allow for the determination of emissions within the District from such products.

(2) Emissions Reporting and Fee Calculation

For the reporting period July 1, 2000 to June 30, 2001, and all preceding reporting periods, emissions from equipment not requiring a written permit pursuant to Regulation II shall be reported but not incur a fee for emissions so long as the owner/operator keeps separate records which allow the determination of emissions from such non-permitted equipment. Beginning with the reporting period of July 1, 2001 to June 30, 2002, and for subsequent reporting periods, each facility with total emissions including emissions from equipment or processes not requiring a written permit pursuant to Regulation II greater than or equal to the threshold amount of contaminants listed in paragraph (e)(5) shall report all emissions and incur an emissions fee as prescribed in Table III which shall be phased in over a three year period for the purpose of emission fee calculations according to the following table:

Fiscal Year	Total Facility Emissions for Emissions Fee Calculation
2001-2	Permitted + 33% of Total Non-Permitted
2002-3	Permitted + 66% of Total Non-Permitted
2003-4 and later	Permitted + 100% of Total Non-Permitted

Non-permitted emissions which are not regulated by the District shall not be reported and shall be excluded from emission fees if the facility provides a demonstration that the emissions are not regulated and maintains sufficient records to allow the accurate demonstration of such non-regulated emissions.

(3) Exception for the Use of Clean Air Solvents

An owner/operator shall not pay a fee for emissions from the use of Clean Air Solvents issued a valid Certificate from the District so long as the facility submits separate records which allow the determination of annual emissions, usage, and identification of such products. A copy of the Clean Air Solvent certificate issued to the manufacturer or distributor shall be submitted with the separate records.

(4) Flat Annual Operating Emission Fee

The owner/operator of all equipment operating under at least one permit (not including certifications, registrations or plans) shall each year be assessed a flat annual emissions fee of \$90.08 in FY 06-07, \$99.09 in FY 07-08 and \$109.00 in FY 08-09.

(5) Emission Fee Thresholds

Each facility with emissions greater than or equal to the threshold amount of the contaminant listed below shall be assessed a fee as prescribed in Table III. For the six-month transitional reporting period pursuant to subparagraph (e)(8)(B) (July 1, 2007 through December 31, 2007), the fee shall be assessed on emissions greater than or equal to one-half (1/2) of the threshold amount listed below.

Air contaminant(s)	Annual emissions threshold (TPY)
Gaseous sulfur compounds (expressed as sulfur dioxide)	≥4 TPY
Total organic gases (excluding methane, exempt compounds as specified in paragraph (e)(13), and specific organic gases as specified in paragraph (b)(28))	≥4 TPY
Specific organic gases	≥4 TPY
Oxides of nitrogen (expressed as nitrogen dioxide)	≥4 TPY
Total particulate matter	≥4 TPY
Carbon monoxide	≥100 TPY

(6) Clean Fuels Fee Thresholds

Each facility emitting 250 tons or more per year (≥250 TPY) of any of the above referenced contaminants shall pay an annual clean fuels fee as prescribed in Table V (California Health and Safety Code Section 40512).

(7) Fees for Toxic Air Contaminants or Ozone Depleters

Each facility emitting a toxic air contaminant or ozone depleter greater than or equal to the annual thresholds listed in Table IV shall be assessed an annual emissions fee as indicated therein. For the six-month transitional reporting period pursuant to subparagraph (e)(8)(B)

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(July 1, 2007 through December 31, 2007), the fee shall be assessed on emissions greater than or equal to one-half (1/2) of the threshold amount listed in Table IV. The annual emissions fee for toxic air contaminants and ozone depleters shall be based on the total weight of emissions of these contaminants associated with all equipment and processes including, but not limited to, material usage, handling, processing, loading/unloading; combustion byproducts, and fugitives (equipment/component leaks).

- (A) Any dry cleaning facility that emits less than two (2) tons per year of perchloroethylene or less than one (1) ton per year for the six-month transitional reporting period from July 1, 2007 through December 31, 2007, and qualifies as a small business as defined in the general definition of Rule 102, shall be exempt from fees listed in Table IV. This provision shall be retroactive to include the July 10, 1992, rule amendment which included perchloroethylene in Table IV.
 - (B) Any facility that emits less than two (2) tons per year, or less than one (1) ton per year for the six-month transitional reporting period from July 1, 2007 through December 31, 2007 of formaldehyde, perchloroethylene, or methylene chloride, may petition the Executive Officer, at least thirty (30) days prior to the official submittal date of the annual emissions report as specified in paragraph (e)(10), for exemption from formaldehyde, perchloroethylene, or methylene chloride fees as listed in Table IV. Exemption from emissions fees shall be granted if the facility demonstrates that no alternatives to the use of these substances exist, no control technologies exist, and that the facility qualifies as a small business as defined in the general definition of Rule 102.
- (8) Reporting of Total Emissions from Preceding Reporting Period and Unreported or Under-reported Emissions from Prior Reporting Periods
- (A) The owner/operator of equipment subject to paragraph (e)(1), (e)(2), (e)(5), (e)(6), and (e)(7) shall report to the Executive Officer the total emissions for the immediate preceding reporting period of each of the air contaminants concerned from all equipment. The report shall be made at the time and in the manner prescribed by the Executive Officer. The permit holder shall report the total emissions for the twelve (12) month period reporting for each air contaminant concerned from all equipment or processes, regardless of the quantities emitted.
 - (B) During the period of July 1, 1994, through December 31, 2007, the reporting period for annual operating emissions fees shall be from July 1 of a given year through June 30 of the following year. A six-month emissions report and fees will be due for the reporting period from July 1, 2007 through December 31, 2007. Beginning January 1, 2008, the reporting period for annual operating emissions fees shall be from January 1 through December 31 of each year.
 - (C) The Executive Officer will determine default emission factors applicable to each piece of permitted equipment or group of permitted equipment, and make them available to the owner/operator in a manner specified by the Executive Officer and provide them to the owner/operator upon request. In determining emission factors, the Executive Officer will use the best available data. A facility owner/operator can provide alternative emission factors that more accurately represent actual facility operations subject to the approval of the Executive Officer.
 - (D) A facility owner/operator shall report to the Executive Officer, in the same manner, and quantify any emissions of air contaminants in previous reporting periods which had not been reported correctly and should have been reported under the requirements in effect in the reporting period in which the emissions occurred.
- (9) Request to Amend Emissions Report and Refund of Emission Fees
- (A) A facility owner/operator shall submit a written request (referred to as an "Amendment Request") for any proposed revisions to previously submitted annual emissions reports. Amendment requests with no fee impact, submitted after one (1) year and sixty (60) days from the official due date (July 1 or January 1 as applicable) of the subject annual emissions report shall include a non-refundable standard evaluation fee of \$221.62 in FY 06-07, \$243.78 in FY 07-08 and \$268.16 in FY 08-09 for each subject facility and reporting period. Evaluation time beyond two hours shall be assessed at the rate of \$110.83 in FY 06-07, \$121.91 in FY 07-08 and \$134.10 in FY 08-09 per hour and shall not exceed ten (10) hours. Amendment requests received within one year (1) and sixty (60) days from the official due date (July 1 or January 1 as applicable) of a previously submitted annual emissions report shall not incur any such evaluation fees. The Amendment Request shall include all supporting documentation and copies of revised applicable forms.
 - (B) A facility owner/operator shall submit a written request (referred to as a "Refund Request") to correct the previously submitted annual emissions reports and request a refund of overpaid emission fees. Refund Requests must be submitted within one (1) year and sixty (60) days from the official due date (July 1 or January 1 as applicable) of the subject annual emissions report to be considered valid. The Refund Request shall include all supporting documentation and copies of revised applicable forms. If the Refund Request is submitted within one (1) year and sixty (60) days from the official due date (July 1 or January 1 as applicable) of the subject annual emissions report, and results in no fee impact, then the facility owner/operator shall be billed for the evaluation fee pursuant to subparagraph (e)(9)(A).
- (10) Notice to Pay and Late Filing Surcharge
- (A) A notice to report emissions and pay the associated emission fees will be mailed annually to the owners/operators of all equipment (as shown in District records) to which this subdivision applies. A notice to pay the semi-annual fee specified in paragraph (e)(11) will also be mailed to facilities which in the preceding reporting year emitted any air contaminant equal to or greater than the emission thresholds specified in subparagraph (e)(11)(A). Emissions reports and fee payments are the responsibility of the owner/operator regardless of whether the owner/operator was notified. The due dates to submit the emissions fees and reports for:
 - (i) Semi-annual reports are January 1 for fiscal year reporting during July 1, 1994 through December 31, 2007, and July 1 for calendar year reporting beginning January 1, 2008 and after.
 - (ii) Annual reports are July 1 for fiscal year reporting during July 1, 1994 through December 31, 2007, and January 1 for calendar year reporting beginning January 1, 2008 and after.If both the fee payment and the completed emissions report are not received by the sixtieth (60th) day following January 1 or July 1 as applicable (for semi-annual reports), or July 1 or January 1 as applicable (for annual reports), they shall be considered late, and surcharges for late payment shall be imposed as set forth in subparagraph (e)(10)(B). For the purpose of this subparagraph, the emissions fee payment and the emissions report shall be considered to be timely received by the District if it is postmarked on or before the sixtieth (60th) day following the official due date (July 1 or January 1 as applicable). If the sixtieth (60th) day falls on a Saturday, Sunday, or a state holiday, the fee payment and emissions report may be postmarked on the next

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business day following the Saturday, Sunday, or the state holiday with the same effect as if they had been postmarked on the sixtieth (60th) day.

- (B) If fee payment and emissions report are not received within the time prescribed by subparagraph (e)(10)(A), a surcharge shall be assessed and added to the original amount of the emission fee due according to the following schedule:

Less than 30 days	5% of reported amount
30 to 90 days	15% of reported amount
91 days to 1 year	25% of reported amount
More than 1 year	(See subparagraph (e)(10)(D))
- (C) If an emission fee is timely paid, and if, within one year after the sixtieth (60th) day from the official due date is determined to be less than ninety percent (90%) of the full amount that should have been paid, a fifteen percent (15%) surcharge shall be added, and is calculated based on the difference between the amount actually paid and the amount that should have been paid, to be referred to as underpayment. If payment was ninety percent (90%) or more of the correct amount due, the difference or underpayment shall be paid but with no surcharges added. The fee rate to be applied shall be the fee rate in effect for the year in which the emissions actually occurred. If the underpayment is discovered after one (1) year and sixty (60) days from the official fee due date, fee rates and surcharges will be assessed based on subparagraph (e)(10)(D).
- (D) The fees due and payable for the emissions reported or reportable pursuant to subparagraph (e)(8)(D) shall be assessed according to the fee rate for that contaminant specified in Tables III, IV, and V, and further increased by fifty percent (50%). The fee rate to be applied shall be the fee rate in effect for the year in which the emissions are actually reported, and not the fee rate in effect for the year the emissions actually occurred.
- (E) If one hundred twenty (120) days have elapsed since January 1st, July 1st, or as applicable, and all emission fees including any surcharge have not been paid in full, the Executive Officer may take action to revoke all Permits to Operate for equipment on the premises, as authorized in Health and Safety Code Section 42307.

(11) Semi-Annual Emissions Fee Payment

- (A) For facilities emitting the threshold amount of any contaminant listed below, the Executive Officer will estimate one half (1/2) of the previous annual emission fees and request that the permit holder pay such an amount as the first installment on annual emission fees for the current reporting period. The installment payment for calendar year 2008 annual emission fees will be based on one half (1/2) of the emissions reported for fiscal year 2006-2007.

Air contaminant(s)	Annual emissions threshold (TPY)
Gaseous sulfur compounds (expressed as sulfur dioxide)	≥10 TPY
Total organic gases (excluding methane, exempt compounds as specified in paragraph (e)(12), and specific organic gases as specified in paragraph (b)(26))	≥10 TPY
Specific organic gases	≥10 TPY
Oxides of nitrogen (expressed as nitrogen dioxide)	≥10 TPY
Total particulate matter	≥10 TPY
Carbon monoxide	≥100 TPY

- (B) In lieu of payment of one half the estimated annual emission fees, the owner/operator may choose to report and pay on actual emissions for the first six months (July 1 through December 31 for fiscal year reporting prior to January 1, 2008 or January 1 through June 30 for calendar year reporting beginning January 1, 2008 and thereafter). By July 1 or January 1 as applicable, the permit holder shall submit a final Annual Emission Report together with the payment of the balance; the annual emission fees less the installment previously paid. For fiscal year reporting prior to January 1, 2008, the report shall contain an itemization of emissions from July 1 through June 30 of the applicable year. For calendar year reporting beginning January 1, 2008 and thereafter, the report shall contain an itemization of emissions for the preceding twelve (12) months of the reporting period (January 1 through December 31.)
- (C) An installment fee payment is considered late and is subject to a surcharge if not received within sixty (60) days of the due date (July 1 or January 1 as applicable) pursuant to paragraph (e)(10).

(12) Fee Payment Subject to Validation

Acceptance of a fee payment does not constitute validation of the emission data.

(13) Exempt Compounds

Emissions of acetone, ethane, methyl acetate, parachlorobenzotrifluoride (PCBTF), and volatile methylated siloxanes (VMS), shall not be subject to the requirements of Rule 301(e).

(14) Reporting Emissions and Paying Fees

For the six-month reporting period of July 1, 2007 through December 31, 2007 and calendar year 2008, emission fees shall be determined in accordance with fee rates specified in Tables III, IV and V, and paragraph (e)(2). Installment fees that have been paid for Semi-Annual Emission Fees by March 1, 2008 shall not be subject to this provision.

(15) Deadline for Filing Annual Emissions Report and Fee Payment

The deadline for filing annual emissions reports and fee payments is as follows:

- (A) Notwithstanding any other applicable Rule 301(e) provisions regarding the annual emissions report and emission fees, for the reporting period of July 1, 2007 through December 31, 2007, the fee payment and the completed annual emissions report shall be received by the District, or postmarked, on or before September 1, 2008 to avoid any late payment surcharges specified in

subparagraph (e)(10)(B), or

- (B) The deadline for filing the calendar year 2008 Annual Emissions Report and fee payment shall be March 2nd, 2009. For any facility that is subject to the Regulation for the Mandatory Reporting of Greenhouse Gas (GHG) emissions adopted by the CARB on December 6, 2007, or subsequent revisions that voluntarily elects to report the GHG emissions to the District in the manner prescribed by the Executive Officer, the deadline for filing Annual Emissions Reports and fee payments shall coincide with the deadlines set forth in the Regulation for the Mandatory Reporting of GHG emissions adopted by the CARB on December 6, 2007, or subsequent revisions.

(k) RECLAIM Facilities

(10) RECLAIM Pollutant Emission Fee

At the end of the reporting period specified in subparagraph (e)(8)(B), RECLAIM facilities shall pay a RECLAIM Pollutant Emission Fee based on the facilities' total certified RECLAIM pollutant emissions. For facilities emitting ten (10) tons per year or more of any contaminant the previous year, the Facility Permit holders shall pay a semi-annual installment equal to one half (1/2) of the total estimated fee with final balance due at the end of the reporting period.

- (A) The Facility Permit Holder shall pay emission fees according to the provisions of subdivision (e) for all emissions that are not accounted for with RECLAIM pollutant emissions. The Facility Permit holder shall add non-RECLAIM emissions to applicable RECLAIM emissions to determine the appropriate fee rate from Table III fee rate per ton of emissions.
- (B) Facility Permit Holders shall pay RECLAIM Pollutant Emission Fees according to the provisions of subdivision (e), except that:
 - (i) Fees based on emissions of RECLAIM pollutants as defined in Rule 2000(c)(58) for annual payments shall be calculated based on certified emissions as required by paragraph (b)(2) or (b)(4) of Rule 2004, as applicable;
 - (ii) RECLAIM Pollutant Emission Fees shall be due as established by subdivision (e) of this rule for both Cycle 1 and Cycle 2 Facilities;
 - (iii) Facilities emitting ten (10) tons per year or more of a RECLAIM pollutant during the previous annual reporting period, shall also pay a semi-annual installment based on either (a) one-half (1/2) of the facility's RECLAIM pollutant fees for the previous annual reporting period; or (b) emissions certified pursuant to paragraph (b)(2) and (b)(4) of Rule 2004 in the two (2) quarters falling in the time period that coincides with the first six (6) months of the current reporting period, by the deadline as established by subdivision (e) of this rule for both Cycle 1 and Cycle 2 Facilities.
 - (iv) A fee payment is considered late and subject to the late payment surcharge of paragraph (e)(10) if not received within sixty (60) days of the due date specified in this paragraph.
- (C) If the Executive Officer determines that the APEP emissions reported by a Facility Permit Holder are less than the amount calculated as specified in Rule 2004(b)(2) and (b)(4), the Facility Permit Holder shall pay RECLAIM Pollutant Emission Fees on the difference between the APEP total as determined by the Executive Officer and the reported APEP total as specified in subparagraph (k)(10)(A).
- (D) In the event that certified emissions determined pursuant to Rule 2004(b)(2) and (b)(4), for compliance year beginning January 1, 1995 and after, include emissions calculated using missing data procedures, and these procedures were triggered pursuant to Rule 2011(c)(3) or 2012(c)(3) solely by a failure to electronically report emissions for major sources due to a problem with transmitting the emission data to the District which was beyond the control of the Facility Permit holder, such portion of the emissions may be substituted by valid emission data monitored and recorded by a certified CEMS, for the purpose of RECLAIM pollutant emission fee determination only, provided that a petition is submitted to the Executive Officer with the appropriate processing fee by the Facility Permit holder. The petition must be made in writing and include all relevant data to clearly demonstrate that the valid emission data were recorded and monitored by a certified CEMS as required by Rules 2011 and 2012 and the only reason for missing data procedures being triggered was due to a problem with transmitting the emission data to the District which was beyond the control of the Facility Permit holder. In addition to the RECLAIM pollutant emission fee, the petitioner shall pay a minimum processing fee of \$324.90 for FY 06-07, \$393.12 for FY 07-08 and \$522.86 for FY 08-09; and additional fees will be assessed at a rate of \$110.83 for FY 06-07, \$121.91 for FY 07-08 and \$134.10 for FY 08-09 per hour for time spent on evaluation in excess of 3 hours.
- (E) The Executive Officer may establish a special operating fee for petroleum refineries (Standard Industrial Classification No. 2911) up to an amount based on \$0.07 per pound in FY 07-08 and \$0.07 per pound in FY 08-09 of the initial SO_x RECLAIM allocation (initial allocation of the original operator if a change of operator has occurred since the assignment of the initial allocation) to cover the cost of a technology assessment to reduce SO_x emissions from the RECLAIM universe. Fee payment is due upon notification by the Executive Officer. If the fee payment is not received by the sixtieth (60th) day following the due date a surcharge shall be added to the original amount according to the schedule in subparagraph (e)(10)(B).

TABLE III - EMISSION FEES
For emissions in the Six-Month period (July 1, 2007 through December 31, 2007)

Emissions (tons/yr)	Organic Gases* (\$/ton)	Specific Organics** (\$/ton)	Nitrogen Oxides (\$/ton)	Sulfur Oxides (\$/ton)	Carbon Monoxide (\$/ton)	Particulate Matter (\$/tons)
2- 13	\$517.08	\$92.52	\$302.52	\$358.65	-	\$395.41
>13 - 38	\$839.53	\$146.58	\$480.53	\$579.77	-	\$640.70
>38	\$1,256.68	\$219.87	\$723.70	\$870.45	-	\$959.28
≥50	-	-	-	-	\$6.18	-

* Excluding methane, exempt compounds as specified in paragraph (e)(13), and specific organic gases as specified in paragraph defined in subdivision (b) of this rule.

** See specific organic gases as defined in subdivision (b) of this rule.

TABLE IV
TOXIC AIR CONTAMINANTS AND OZONE DEPLETERS
For emissions in the Six-Month period (July 1, 2007 through December 31, 2007)

TOXIC COMPOUNDS	Fee \$/1 lb	Emission Thresholds (lbs)
Ammonia	\$0.03	100
Asbestos	\$5.42	0.00005
Benzene	\$1.81	1.0
Cadmium	\$5.42	0.005
Carbon tetrachloride	\$1.81	0.5
Chlorinated dioxins and dibenzofurans (26 species)	\$9.01	0.00001
Ethylene dibromide	\$1.81	0.25
Ethylene dichloride	\$1.81	1.0
Ethylene oxide	\$1.81	0.25
Formaldehyde	\$0.39	2.5
Hexavalent chromium	\$7.21	0.00005
Methylene chloride	\$0.08	25.0
Nickel	\$3.58	0.05
Perchloroethylene	\$0.39	2.5
1,3-Butadiene	\$5.42	0.05
Inorganic arsenic	\$5.42	0.005
Beryllium	\$5.42	0.0005
Polynuclear aromatic hydrocarbons (PAHs)	\$5.42	0.1
Vinyl chloride	\$1.81	0.25
Lead	\$1.81	0.25
1,4-Dioxane	\$0.39	2.5
Trichloroethylene	\$0.16	10.0
OZONE DEPLETERS	Fee \$/1 lb	Emission Thresholds (lbs)
Chlorofluorocarbons (CFCs)	\$0.33	---
1,1,1-trichloroethane	\$0.05	---

APPENDIX M - EMISSION FEE TABLE (EMISSION FEES PER POLLUTANT)

When Column (c), Form S (tons) Is	Organic Gas Fee Is	Specific Organics Fee Is	Nitrogen Oxides Fee Is	Sulfur Oxides Fee Is	Particulate Matter Fee Is
2	\$517.08	\$92.52	\$302.52	\$358.65	\$395.41
3	\$1,034.16	\$185.04	\$605.04	\$717.30	\$790.82
4	\$1,551.24	\$277.56	\$907.56	\$1,075.95	\$1,186.23
5	\$2,068.32	\$370.08	\$1,210.08	\$1,434.60	\$1,581.64
6	\$2,585.40	\$462.60	\$1,512.60	\$1,793.25	\$1,977.05
7	\$3,102.48	\$555.12	\$1,815.12	\$2,151.90	\$2,372.46
8	\$3,619.56	\$647.64	\$2,117.64	\$2,510.55	\$2,767.87
9	\$4,136.64	\$740.16	\$2,420.16	\$2,869.20	\$3,163.28
10	\$4,653.72	\$832.68	\$2,722.68	\$3,227.85	\$3,558.69
11	\$5,170.80	\$925.20	\$3,025.20	\$3,586.50	\$3,954.10
12	\$5,687.88	\$1,017.72	\$3,327.72	\$3,945.15	\$4,349.51
13	\$6,204.96	\$1,110.24	\$3,630.24	\$4,303.80	\$4,744.92
14	\$7,044.49	\$1,256.82	\$4,110.77	\$4,883.57	\$5,385.62
15	\$7,884.02	\$1,403.40	\$4,591.30	\$5,463.34	\$6,026.32
16	\$8,723.55	\$1,549.98	\$5,071.83	\$6,043.11	\$6,667.02
17	\$9,563.08	\$1,696.56	\$5,552.36	\$6,622.88	\$7,307.72
18	\$10,402.61	\$1,843.14	\$6,032.89	\$7,202.65	\$7,948.42
19	\$11,242.14	\$1,989.72	\$6,513.42	\$7,782.42	\$8,589.12
20	\$12,081.67	\$2,136.30	\$6,993.95	\$8,362.19	\$9,229.82
21	\$12,921.20	\$2,282.88	\$7,474.48	\$8,941.96	\$9,870.52
22	\$13,760.73	\$2,429.46	\$7,955.01	\$9,521.73	\$10,511.22
23	\$14,600.26	\$2,576.04	\$8,435.54	\$10,101.50	\$11,151.92
24	\$15,439.79	\$2,722.62	\$8,916.07	\$10,681.27	\$11,792.62
25	\$16,279.32	\$2,869.20	\$9,396.60	\$11,261.04	\$12,433.32
26	\$17,118.85	\$3,015.78	\$9,877.13	\$11,840.81	\$13,074.02
27	\$17,958.38	\$3,162.36	\$10,357.66	\$12,420.58	\$13,714.72
28	\$18,797.91	\$3,308.94	\$10,838.19	\$13,000.35	\$14,355.42
29	\$19,637.44	\$3,455.52	\$11,318.72	\$13,580.12	\$14,996.12
30	\$20,476.97	\$3,602.10	\$11,799.25	\$14,159.89	\$15,636.82
31	\$21,316.50	\$3,748.68	\$12,279.78	\$14,739.66	\$16,277.52
32	\$22,156.03	\$3,895.26	\$12,760.31	\$15,319.43	\$16,918.22
33	\$22,995.56	\$4,041.84	\$13,240.84	\$15,899.20	\$17,558.92
34	\$23,835.09	\$4,188.42	\$13,721.37	\$16,478.97	\$18,199.62
35	\$24,674.62	\$4,335.00	\$14,201.90	\$17,058.74	\$18,840.32
36	\$25,514.15	\$4,481.58	\$14,682.43	\$17,638.51	\$19,481.02
37	\$26,353.68	\$4,628.16	\$15,162.96	\$18,218.28	\$20,121.72
38	\$27,193.21	\$4,774.74	\$15,643.49	\$18,798.05	\$20,762.42
39	\$28,032.74	\$4,921.32	\$16,124.02	\$19,377.82	\$21,403.12
40	\$28,872.27	\$5,067.90	\$16,604.55	\$19,957.59	\$22,043.82
41	\$29,711.80	\$5,214.48	\$17,085.08	\$20,537.36	\$22,684.52
42	\$30,551.33	\$5,361.06	\$17,565.61	\$21,117.13	\$23,325.22
43	\$31,390.86	\$5,507.64	\$18,046.14	\$21,696.90	\$23,965.92
44	\$32,230.39	\$5,654.22	\$18,526.67	\$22,276.67	\$24,606.62
45	\$33,069.92	\$5,800.80	\$19,007.20	\$22,856.44	\$25,247.32
46	\$33,909.45	\$5,947.38	\$19,487.73	\$23,436.21	\$25,888.02
47	\$34,748.98	\$6,093.96	\$19,968.26	\$24,015.98	\$26,528.72
48	\$35,588.51	\$6,240.54	\$20,448.79	\$24,595.75	\$27,169.42
49	\$36,428.04	\$6,387.12	\$20,929.32	\$25,175.52	\$27,810.12
50	\$37,267.57	\$6,533.70	\$21,409.85	\$25,755.29	\$28,450.82

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When Column (c), Form S (tons) Is	Organic Gas Fee Is	Specific Organics Fee Is	Nitrogen Oxides Fee Is	Sulfur Oxides Fee Is	Particulate Matter Fee Is
51	\$43,530.05	\$7,633.05	\$25,051.59	\$30,113.90	\$33,233.06
52	\$44,786.73	\$7,852.92	\$25,775.29	\$30,984.35	\$34,192.34
53	\$46,043.41	\$8,072.79	\$26,498.99	\$31,854.80	\$35,151.62
54	\$47,300.09	\$8,292.66	\$27,222.69	\$32,725.25	\$36,110.90
55	\$48,556.77	\$8,512.53	\$27,946.39	\$33,595.70	\$37,070.18
56	\$49,813.45	\$8,732.40	\$28,670.09	\$34,466.15	\$38,029.46
57	\$51,070.13	\$8,952.27	\$29,393.79	\$35,336.60	\$38,988.74
58	\$52,326.81	\$9,172.14	\$30,117.49	\$36,207.05	\$39,948.02
59	\$53,583.49	\$9,392.01	\$30,841.19	\$37,077.50	\$40,907.30
60	\$54,840.17	\$9,611.88	\$31,564.89	\$37,947.95	\$41,866.58
61	\$56,096.85	\$9,831.75	\$32,288.59	\$38,818.40	\$42,825.86
62	\$57,353.53	\$10,051.62	\$33,012.29	\$39,688.85	\$43,785.14
63	\$58,610.21	\$10,271.49	\$33,735.99	\$40,559.30	\$44,744.42
64	\$59,866.89	\$10,491.36	\$34,459.69	\$41,429.75	\$45,703.70
65	\$61,123.57	\$10,711.23	\$35,183.39	\$42,300.20	\$46,662.98
66	\$62,380.25	\$10,931.10	\$35,907.09	\$43,170.65	\$47,622.26
67	\$63,636.93	\$11,150.97	\$36,630.79	\$44,041.10	\$48,581.54
68	\$64,893.61	\$11,370.84	\$37,354.49	\$44,911.55	\$49,540.82
69	\$66,150.29	\$11,590.71	\$38,078.19	\$45,782.00	\$50,500.10
70	\$67,406.97	\$11,810.58	\$38,801.89	\$46,652.45	\$51,459.38
71	\$68,663.65	\$12,030.45	\$39,525.59	\$47,522.90	\$52,418.66
72	\$69,920.33	\$12,250.32	\$40,249.29	\$48,393.35	\$53,377.94
73	\$71,177.01	\$12,470.19	\$40,972.99	\$49,263.80	\$54,337.22
74	\$72,433.69	\$12,690.06	\$41,696.69	\$50,134.25	\$55,296.50
75	\$73,690.37	\$12,909.93	\$42,420.39	\$51,004.70	\$56,255.78
76	\$74,947.05	\$13,129.80	\$43,144.09	\$51,875.15	\$57,215.06
77	\$76,203.73	\$13,349.67	\$43,867.79	\$52,745.60	\$58,174.34
78	\$77,460.41	\$13,569.54	\$44,591.49	\$53,616.05	\$59,133.62
79	\$78,717.09	\$13,789.41	\$45,315.19	\$54,486.50	\$60,092.90
80	\$79,973.77	\$14,009.28	\$46,038.89	\$55,356.95	\$61,052.18
81	\$81,230.45	\$14,229.15	\$46,762.59	\$56,227.40	\$62,011.46
82	\$82,487.13	\$14,449.02	\$47,486.29	\$57,097.85	\$62,970.74
83	\$83,743.81	\$14,668.89	\$48,209.99	\$57,968.30	\$63,930.02
84	\$85,000.49	\$14,888.76	\$48,933.69	\$58,838.75	\$64,889.30
85	\$86,257.17	\$15,108.63	\$49,657.39	\$59,709.20	\$65,848.58
86	\$87,513.85	\$15,328.50	\$50,381.09	\$60,579.65	\$66,807.86
87	\$88,770.53	\$15,548.37	\$51,104.79	\$61,450.10	\$67,767.14
88	\$90,027.21	\$15,768.24	\$51,828.49	\$62,320.55	\$68,726.42
89	\$91,283.89	\$15,988.11	\$52,552.19	\$63,191.00	\$69,685.70
90	\$92,540.57	\$16,207.98	\$53,275.89	\$64,061.45	\$70,644.98
91	\$93,797.25	\$16,427.85	\$53,999.59	\$64,931.90	\$71,604.26
92	\$95,053.93	\$16,647.72	\$54,723.29	\$65,802.35	\$72,563.54
93	\$96,310.61	\$16,867.59	\$55,446.99	\$66,672.80	\$73,522.82
94	\$97,567.29	\$17,087.46	\$56,170.69	\$67,543.25	\$74,482.10
95	\$98,823.97	\$17,307.33	\$56,894.39	\$68,413.70	\$75,441.38
96	\$100,080.65	\$17,527.20	\$57,618.09	\$69,284.15	\$76,400.66
97	\$101,337.33	\$17,747.07	\$58,341.79	\$70,154.60	\$77,359.94
98	\$102,594.01	\$17,966.94	\$59,065.49	\$71,025.05	\$78,319.22
99	\$103,850.69	\$18,186.81	\$59,789.19	\$71,895.50	\$79,278.50
100	\$105,107.37	\$18,406.68	\$60,512.89	\$72,765.95	\$80,237.78

For emissions over 100 tons, calculate your fees from the following formulas:

Organic Gases

$$\text{Fee} = ((\text{Tons} - 100) \times \$ 1,256.68) + \$ 105,107.37$$

Specific Organics

$$\text{Fee} = ((\text{Tons} - 100) \times \$ 219.87) + \$ 18,406.68$$

Nitrogen Oxides

$$\text{Fee} = ((\text{Tons} - 100) \times \$ 723.70) + \$ 60,512.89$$

Sulfur Oxides

$$\text{Fee} = ((\text{Tons} - 100) \times \$ 870.45) + \$ 72,765.95$$

Carbon Monoxide

$$\text{Fee} = (\text{Tons} - 49) \times \$ 6.18 \quad \text{Fee for CO only applies to emissions of 50 tons and more.}$$

Particulate Matter

$$\text{Fee} = ((\text{Tons} - 100) \times \$ 959.28) + \$ 80,237.78$$

APPENDIX N - LIST OF EMISSION AND FEE FORMS

CATEGORY I - These forms should be submitted even if there are no emissions or fees due. Perc from dry cleaners should only be reported on Form DC, and not on Forms TAC and WT.

S	Fees Due Summary
X	Signature Sheet
ES	List of Emission Sources
A	Status Update, Exemption Request, Refund Request, and Use of Alternative Emission Factors
CF	Information on Work Done by Contractors
C	Permitted Emissions Summary
CU	Non-Permitted Emissions Summary
CR	RECLAIM Emissions Summary (applies to RECLAIM facilities only)
TACS	Toxic Air Contaminants and Ozone Depleters Emissions/Fee Summary
TAC	Toxic Air Contaminants & Ozone Depleters Emissions by Reference Number
WT	Credits for Waste Shipments -Toxic Air Contaminants/Ozone Depleters

CATEGORY II - These forms should be used to calculate emissions. Use only the forms that are applicable to your operation.

DC	Dry Cleaning Operations - Perchloroethylene Emissions
DCB	Dry Cleaning Operations - Boiler Emissions From Natural Gas Combustion
AB	Auto Body Operations - Oven/Dryer Emissions From Natural Gas Combustion
B1	Permitted Emissions from Fuel Combustion in Boilers, Ovens, Furnaces, and Heaters
B1U	Non-Permitted Emissions from Fuel Combustion in Boilers, Ovens, Furnaces, and Heaters
B2	Permitted Emissions from Fuel Combustion - Internal Combustion Engines and Turbines
B2U	Non-Permitted Emissions from Fuel Combustion - Internal Combustion Engines and Turbines
B3	Permitted Emissions from the Use of Organics
W	Permitted Credits for Waste Shipments - Liquid Organic Materials
B3U	Non-Permitted Emissions from the Use of Organics
WU	Non-Permitted Credits for Waste Shipments - Liquid Organic Materials
B4	Permitted Equipment Emissions from Miscellaneous Sources
B4U	Non-Permitted Equipment Emissions from Miscellaneous Sources
B6	Permitted Internal/External Floating Roof Tank Calculation Sheet
B7	Permitted Fixed Roof Tank Calculation Sheet
B7U	Non-Permitted Fixed Roof Tank Calculation Sheet
B8	Permitted Equipment Emissions from Bulk Loading
B8U	Non-Permitted Equipment Emissions from Bulk Loading
E1	Permitted Emissions from Power Generating Facilities
E1U	Non-Permitted Emissions from Power Generating Facilities
P1	Permitted Fugitive Emissions Summary - Oil/Gas Production and Chemical Plants
P1U	Non-Permitted Fugitive Emissions Summary - Oil/Gas Production and Chemical Plants
P2	Permitted Misc. Emissions Summary - Oil/Gas Production
P2U	Non-Permitted Misc. Emissions Summary - Oil/Gas Production
R1	Permitted Emissions Summary from Refinery, Oil/Gas Production, Marketing, and Chemical Plants
R1U	Non-Permitted Emissions Summary from Refinery, Oil/Gas Production, Marketing, and Chemical Plants
R2	Permitted Emissions from Fuel Combustion - Refinery
R3	Permitted Refinery Fugitive Emissions Summary
R4	Permitted Non-Fuel Emissions Summary
R5	Permitted Miscellaneous Refinery Emissions Summary
R6	Permitted Flare Emissions Summary - Process Upsets
R7	Permitted Process/APC Upset Operation Emissions Summary
T1	Permitted Fugitive Emissions Summary - Terminals/Depots

APPENDIX O - EXAMPLES

Company "A" manufactures metal products and operates the following equipment:

- Two natural gas-fired boilers (7.5 MMBTU/HR and 15 MMBTU/HR respectively),
- One natural gas-fired thermal oxidizer (rated at 28.5 MMBTU/HR and 96.7% overall efficiency) controlling VOC emissions from the spray booths,
- Two stationary gasoline-fired non-permitted generators Internal Combustion Engine (ICE): a 25 HP 2 stroke-lean burn ICE without catalyst, and a 48 HP 4 stroke-lean burn ICE with catalyst,
- Two permitted spray booths where products are coated with enamels and primers (Conventional PM filters, 90% overall control efficiency),
- MEK solvent for surface preparation,
- One hard-chrome plating process,
- One 2,000 gallons above-ground storage tank for MEK,
- One permitted solvent degreaser using perchloroethylene (PERC).

The following procedure can be used to facilitate the emissions calculation and reporting:

1. Report each equipment / process type on the appropriate forms (each emissions record **will be automatically transferred to form ES** by the software as illustrated in Example F):
 - Natural gas combustion in 2 boilers and the thermal oxidizer (afterburner)- Form B1 (Example A),
 - 2 Internal Combustion Engines (ICE) - Form B2U (Example B), (Refer to SCAQMD Rule 219 for a list of equipment not requiring an AQMD written permit),
 - Coatings in spray booths - Form B3 for reporting the use of solvents and coating materials (Example C),
 - Recycling of organic liquid waste generated from coating operations – Form W (Example D),
 - PM emissions from coating and plating operations Form B4 (Example E),
 - VOC emissions (MEK) from above-ground small storage tank Form B4 (Example E),
 - PERC degreaser - Form TAC (Example G),
 - PERC recycling credit - Form WT (Example H).
2. Report other TAC/ODC emissions on Form TAC (Example G).
3. Toxic emissions from form TAC will be automatically transferred to Form TACS and emission fees calculated (Example I).
4. Emissions in tons from Forms B1, B3, and B4 will be automatically transferred to Form C (Example J).
5. Emissions in tons from Form B2U will be automatically transferred to Form CU (Example K).
6. Emissions from Forms C and CU will be automatically transferred to Form S (Example L).
7. Facility total emissions and applicable fees will be automatically calculated on Form S (Example L).
8. Submit any facility updates, or refund or amendment requests using Form A (Example M).
9. Print and submit the signed Forms X (Example N).

Detailed instructions on how to complete individual forms for this example are provided in the following pages.

Example (A): Form B1 - Permitted Emissions from Fuel Combustion in Boilers, Ovens, Furnaces, and Heaters

During 2007-2008 six-month transitional reporting period (07/01/07-12/31/07), Company "A" burned a total of 359,191 therms of natural gas (from the Gas bills) in two different size boilers and a thermal oxidizer. In addition to the gas company meter (total gas consumption), Company "A" has a separate meter for thermal oxidizer that recorded a usage of 6,283,200 standard cubic feet. STEPS TO FOLLOW:

1. Form B1: This form can be opened by selecting (single click) the designated (highlighted) button.
2. **Equipment and Fuel Code:** On the first row, enter equipment code "1a" for the 7.5 MMBTU/HR boiler. On the second row, enter "1b" for the 15 MMBTU/HR boiler (boiler larger than 10 MMBTU/hr). Enter code "7b" for thermal oxidizer on third row. For a list of combustion equipment codes, click on the cell to access the drop down list. Please note the different equipment codes for different sizes of external combustion equipment.

In the "Fuel Code" column, enter fuel code "1" for natural gas in all three rows since both boilers and thermal oxidizer burned natural gas.

3. **Fuel Usage:** Convert total natural gas usage from therms to million standard cubic feet (mmscf) using the conversion tool by clicking on "Calc" button in the menu bar. Enter 359,191 therms in the first box and hit "CONVERT" button to obtain 34.19 mmscf.

Convert gas usage for thermal oxidizer from scf to mmscf.

$6,283,200 \text{ scf} \times 1/1,000,000 = 6.28 \text{ mmscf}$. Record a gas usage of 6.28 mmscf for thermal oxidizer on row 3 of "Fuel Usage" column.

Calculate total gas usage for both boilers: $34.19 \text{ mmscf} - 6.28 \text{ mmscf} = 27.91 \text{ mmscf}$, then estimate the fuel usage for each boiler using the boiler's size or rating (MMBTU/HR):

Boiler-1: $27.91 \text{ mmscf} \times [(7.5 / (7.5 + 15))] = 9.3 \text{ mmscf}$

Boiler-2: $27.91 \text{ mmscf} \times [(15 / (7.5 + 15))] = 18.61 \text{ mmscf}$

Record 9.3 mmscf as a gas usage for boiler-1 on row 1. Record 18.61 mmscf as a gas usage for boiler-2 on row 2.

4. **Emission Factors and Emissions:** To use the default emission factors in this example, click on the checkbox in the last column. Operators should use equipment specific emission factors if available.
5. **Total Emissions:** Total emissions in pounds and tons are automatically calculated by the software and displayed in the bottom of the screen. Emissions in tons are automatically transferred to form C, line 1 (Example J).
6. Two screen shots of Form B1 are shown on the next page displaying emission factors and emissions for each equipment, respectively.
7. **Emission sources (natural gas–7.5 MMBTU/HR boiler, natural gas–15 MMBTU/HR boiler and natural gas–28.5 MMBTU/HR thermal oxidizer) from this form are automatically transferred to Form ES (Example F).**

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AER 2007-2008 - [123456 - Company A]

File Edit Options Help

Start Interview Select Fill-In Summary Check Submit Print Calc Help Exit

123456 - Company A
C:\Documents and Settings\chov\My Documents\COMPANY A.AER

TAC WT B1 B1U B2 B2U B3 W B3U WU B4 B4U B6 B7 B7U B8 B8U E1 E1U P1
P1U P2 P2U R2 R3 R4 R5 R6 R7 T1 AB DC DCB CR ES TACS

Click this bar to view Net Emissions. Currently viewing Emission Factors.

B1 - Permitted Emissions from Fuel Combustion in Boilers, Ovens, Furnaces, and Heaters (7/1/07-12/31/07)

Equipment Code	Fuel Code	Fuel Usage	Organic Gases Emission Factor	Methane Emission Factor	Nitrogen Oxides Emission Factor	Sulfur Oxides Emission Factor	Carbon Monoxide Emission Factor	Particulate Matter Emission Factor	Use Default Emission Factor
1 1a. Boiler ...	1. Natural Ga...	9.30	5.50	2.30	100.00	0.60	84.00	7.60	<input checked="" type="checkbox"/>
2 1b. Boiler 10...	1. Natural Ga...	18.61	5.50	2.30	100.00	0.60	84.00	7.60	<input checked="" type="checkbox"/>
3 7b. Afterburn...	1. Natural Ga...	6.28	7.00	2.30	130.00	0.60	35.00	7.50	<input checked="" type="checkbox"/>
4									<input type="checkbox"/>
5									<input type="checkbox"/>
6									<input type="checkbox"/>
7									<input type="checkbox"/>
8									<input type="checkbox"/>
9									<input type="checkbox"/>
10									<input type="checkbox"/>

Total Emissions in Pounds 197.47 78.63 3,607.40 20.52 2,564.24 259.22
Total Emissions in Tons 0.10 0.04 1.80 0.01 1.28 0.13

05/22/2008 84.00

AER 2007-2008 - [123456 - Company A]

File Edit Options Help

Start Interview Select Fill-In Summary Check Submit Print Calc Help Exit

123456 - Company A
C:\Documents and Settings\chov\My Documents\COMPANY A.AER

TAC WT B1 B1U B2 B2U B3 W B3U WU B4 B4U B6 B7 B7U B8 B8U E1 E1U P1
P1U P2 P2U R2 R3 R4 R5 R6 R7 T1 AB DC DCB CR ES TACS

Click this bar to view Emission Factors. Currently viewing Net Emissions.

B1 - Permitted Emissions from Fuel Combustion in Boilers, Ovens, Furnaces, and Heaters (7/1/07-12/31/07)

Equipment Code	Fuel Code	Fuel Usage	Organic Gases Emission	Methane Emission	Nitrogen Oxides Emission	Sulfur Oxides Emission	Carbon Monoxide Emission	Particulate Matter Emission	Use Default Emission Factor
1 1a. Boiler <1...	1. Natural Ga...	9.30	51.15	21.39	930.00	5.58	781.20	70.68	<input checked="" type="checkbox"/>
2 1b. Boiler 10...	1. Natural Ga...	18.61	102.36	42.80	1,861.00	11.17	1,563.24	141.44	<input checked="" type="checkbox"/>
3 7b. Afterburn...	1. Natural Ga...	6.28	43.96	14.44	816.40	3.77	219.80	47.10	<input checked="" type="checkbox"/>
4									<input type="checkbox"/>
5									<input type="checkbox"/>
6									<input type="checkbox"/>
7									<input type="checkbox"/>
8									<input type="checkbox"/>
9									<input type="checkbox"/>
10									<input type="checkbox"/>

Total Emissions in Pounds 197.47 78.63 3,607.40 20.52 2,564.24 259.22
Total Emissions in Tons 0.10 0.04 1.80 0.01 1.28 0.13

05/22/2008 100.00

Example (B): Form B2U - Non-Permitted Emissions from Fuel Combustion in Internal Combustion Engines and Turbines

During 2007-2008 six-month transitional reporting period (07/01/07-12/31/07), Company "A" burned 8,510 gallons of gasoline in its 2 small stationary engines (generators): a 25 HP 2 stroke-lean burn ICE without catalyst, and a 48 HP 4 stroke-lean burn ICE, with catalyst. **Do not report emissions from burning fuel in forklifts or other off-road or on-road mobile sources.**

STEPS TO FOLLOW:

1. **Form B2U:** This form can be opened by select (single click) the designated (highlighted) button.
2. **Equipment and Fuel Code:** On the first row, enter equipment code "11a" for the 25 HP 2 stroke-lean burn stationary ICE without catalyst (ICE-1). On the second row, enter "11d" for the 48 HP 4 stroke-lean burn stationary ICE with catalyst (ICE-2). For both rows, enter fuel code "4" for gasoline.

3. **Fuel Usage:** Convert gasoline usage to thousand gallons:

$$4,255 \text{ gallons} / 1,000 \text{ gallons} = 4.26 \text{ 1000 gallons}$$

Estimate the fuel usage for each ICE using the engine size or rating (HP):

$$\text{ICE-1: } 4.26 \text{ 1000 gallons} \times [(25 / (25 + 48))] = 1.46 \text{ 1000 gallons}$$

$$\text{ICE-2: } 4.26 \text{ 1000 gallons} \times [(48 / (25 + 48))] = 2.8 \text{ 1000 gallons, or}$$

$$(4.26 \text{ 1000 gallons} - 1.46 \text{ 1000 gallons}) = 2.8 \text{ 1000 gallons}$$

Record 1.46 as a gasoline usage for ICE-1 on row 1 of "Fuel Usage" column. Record 2.8 as a gasoline usage for ICE-2 on row 2.

4. **Emission Factors and Emissions:** To use the default emission factors in this example, click on the checkbox in the last column. Operators should use specific emission factors, if available.
5. **Total Emissions:** Total emissions in pounds and tons are automatically calculated by the software and displayed in the bottom of the screen. Emissions in tons are automatically transferred to form CU, line 2 (Example K).

Emission sources (gasoline fired–stationary ICE, 2 stroke-lean burn and gasoline fired–stationary ICE, 4 stroke-lean burn, with catalyst) from this form are automatically transferred to Form ES (Example F).

B2U - Non-Permitted Emissions from Fuel Combustion - Internal Combustion Engines and Turbines (7/1/07-12/31/07)

Equipment Code	Fuel Code	Fuel Usage	Organic Gases Emission Factor	Methane Emission Factor	Nitrogen Oxides Emission Factor	Sulfur Oxides Emission Factor	Carbon Monoxide Emission Factor	Particulate Matter Emission Factor	Use Default Emission Factor
1 11a. Stationary...	4. Gasoline (...)	1.46	206.00	0.00	102.00	5.30	3,940.00	6.50	<input checked="" type="checkbox"/>
2 11d. Stationary...	4. Gasoline (...)	2.80	206.00	0.00	102.00	5.30	3,940.00	6.50	<input checked="" type="checkbox"/>
3									<input type="checkbox"/>
4									<input type="checkbox"/>
5									<input type="checkbox"/>
6									<input type="checkbox"/>
7									<input type="checkbox"/>
8									<input type="checkbox"/>
9									<input type="checkbox"/>
10									<input type="checkbox"/>

Total Emissions in Pounds	877.56	0.00	434.52	22.58	16,784.40	27.69
Total Emissions in Tons	0.44	0.00	0.22	0.01	8.39	0.01

05/22/2008

Example (C): Form B3 - Permitted Emissions from the Use of Organics

During 2007-2008 six-month transitional reporting period (07/01/07-12/31/07),, company "A" sprayed 540 gallons of enamel and 1,125 gallons of primer **inside** the spray booths. Company "A" also used 1,607 gallons of MEK for surface preparation (density = 6.7 lbs/gal). Material Safety Data Sheets (MSDS) indicate that the primer (VOC content = 3.67 lbs/gal, material density = 8.6 lbs/gal, and solid content = 45%) contains 2.7% by weight hexavalent chromium (Cr⁺⁶) and the enamel (VOC content = 2.20 lbs/gal, material specific gravity = 0.895, and solid content = 33%) contains 25% by weight 1,1,1-TCA. STEPS TO FOLLOW:

1. Material Code, Activity Code, Material Description, Contains Organic TAC/ODC, and Rule:

In "Material Code" column, enter codes "112" for enamel, "120" for primer, and "336" for MEK.

For Activity Codes, enter "5" (metal coating) for both enamel and primer. Enter "0" for MEK since the solvent is used in preparing the surface of the products.

Describe the materials by trade, commercial, or chemical names of the materials in the "Material Description" column.

Checkmark the "Contains Organic TAC/ODC" box to indicate the presence of the 1,1,1-TCA as toxic organic in enamel. The primer contains PM (particulate) toxic (i.e., hexavalent chromium) not organic toxic, therefore, leave the "Contains Organic TAC/ODC" column unchecked on line 2. MEK does not contain toxics.

Note that the presence of any organic TAC/ODC (1,1,1-TCA in this case) in the enamel must be identified on this Form B3; the TAC/ODC emissions associated with 1,1,1-TCA must be reported on Form TAC using B3 reference. The PM emissions associated with the primer spray coating operation must be reported on Form B4, whereas, the toxic portion of the PM emissions must be reported on Form TAC using B4 reference.

Enter "1107" as the applicable rule for this example for the usage of coating materials in the spray booth, i.e., enamel and primer. Enter "1171" (solvent cleaning rule) for MEK.

2. Usage and Unit: Enter material usage (540 for enamel, 1,125 for primer, and 1,607 for MEK) and unit code "2" for unit in gallons.

3. Emission Factors, Overall Control Efficiency and Emissions: Enter appropriate VOC emission factors (i.e., 2.20 for enamel, 3.67 for primer, and 6.70 for MEK.) MEK is pure solvent with 100% VOC, its emission factor = density of 6.7 lbs/gal. This value can also be found as default factor by checking the box under Default Factor column.

Enter control system VOC overall efficiency (thermal oxidizer) in decimal number (0.967) for primer and enamel only.

Organic Gases Emissions are calculated by multiplying the usages by emissions factors and reduced by the overall control efficiencies of the control equipments. Note that MEK was used outside the spray booths and was not being controlled by the thermal oxidizer.

4. Total Emissions: Total emissions in pounds and tons are automatically calculated by the software and displayed in the bottom of the screen. Emissions in tons are automatically transferred to form C, line 3 (Example J). Emission credit from Form W (Example (D)) is automatically transferred to form B3.

5. An image of completed Form B3 is shown. Emission sources (112-enamel, 120-primer, and 336-MEK) from this form are automatically transferred to Form ES (Example F).

AER 2007-2008 - [123456 - Company A]

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TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B6	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS				

Material Codes

B3 - Permitted Emissions from the Use of Organics (7/1/07-12/31/07) Export to Excel

	Material Code	Activity Code	Material Description	Contains Organic TAC/ODC	Rule	Usage	Units (lbs or gal)	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Organic Gases Emission	Specific Organics Emission
1	112	5. Met...	Enamel Z304	<input checked="" type="checkbox"/>	1107	540.00	2. gallon	2.2	<input type="checkbox"/>	0.967	39.20	
2	120	5. Met...	Primer X101	<input type="checkbox"/>	1107	1,125.00	2. gallon	3.67	<input type="checkbox"/>	0.967	136.25	
3	336	0. Surf...	MEK Solvent	<input type="checkbox"/>	1171	1,607.00	2. gallon	6.7	<input type="checkbox"/>		10,766.90	
4				<input type="checkbox"/>					<input type="checkbox"/>			
5				<input type="checkbox"/>					<input type="checkbox"/>			
6				<input type="checkbox"/>					<input type="checkbox"/>			
7				<input type="checkbox"/>					<input type="checkbox"/>			
8				<input type="checkbox"/>					<input type="checkbox"/>			
9				<input type="checkbox"/>					<input type="checkbox"/>			
10				<input type="checkbox"/>					<input type="checkbox"/>			

Total Emissions in Pounds	10,942.35	0.0
Total Emissions in Tons	5.47	0.0
Waste Credit (lbs) from Form W	1,289.75	
Net Emissions in Pounds	9,652.60	
Net Emissions in Tons	4.83	

05/22/2008

Example (D): Form W - Permitted Credits for Waste Shipments - Liquid Organic Materials

During 2007-2008 six-month transitional reporting period (07/01/07-12/31/07), Company "A" shipped out for recycling 550 gallons of waste MEK solvent. The waste manifest indicated that the MEK waste shipment is approximately 70% solvent by volume and 30% solids. STEPS TO FOLLOW:

1. **Manifest Number and Material Description:** Enter manifest numbers for each shipment and type of waste. Briefly describe the type of waste material.
2. **Liquid Material, Quantity, and Unit:** Enter the liquid percentage for MEK waste in decimal fraction (0.70 for 70% MEK). Enter the quantity of waste shipped (550 gallons). Indicate "2" as for waste reported in gallons.
3. **Emission Factors and Credit %:** The manifest indicated this is waste MEK. Therefore, VOC content of MEK (6.70 lbs/gal) can be used as emission factor for this waste stream. The software program assumes that the waste stream is not analyzed for actual VOC content and automatically populates the credit column with 50%. In this example, Company A did not analyze the waste stream so it can only claim 50% credit.
4. **Emission Credit:** Emission credit is automatically calculated as follows:

$$0.70 \times 550 \text{ gallons} \times 6.70 \text{ lbs/gal} \times (50/100) = 1,289.75 \text{ lbs.}$$

Total credits in pounds and tons are automatically calculated by the software and displayed in the bottom of the screen. Total Credits in pounds are automatically transferred to form B3 (Example C).

W - Permitted Credits for Waste Shipments - Liquid Organic Materials (7/1/07-12/31/07)

Manifest Number	Material Description	Liquid Material [Decimal Fraction]	Quantity	Units (lbs or gal)	Emission Factor	Credit(%)	Lab Analyzed	Emission Credit (lbs)
1 M123456	Waste MEK	0.7	550.00	2. gallon	6.7	50.00	<input type="checkbox"/>	1,289.75
2							<input type="checkbox"/>	
3							<input type="checkbox"/>	
4							<input type="checkbox"/>	
5							<input type="checkbox"/>	
6							<input type="checkbox"/>	
7							<input type="checkbox"/>	
8							<input type="checkbox"/>	
9							<input type="checkbox"/>	
10							<input type="checkbox"/>	

Total Credits in Pounds **1,289.75**
 Total Credits in Tons **0.64**

05/22/2008

Example (E): Form B4 - Permitted Emissions from Miscellaneous Sources

This example illustrates how PM emissions from coating and plating operations, and VOC emissions from a small above-ground storage tank are calculated and reported on this form. During 2007-2008 six-month transitional reporting period (07/01/07-12/31/07), Company "A" pumped 1,875 gallons of MEK through its storage tank (tank capacity = 2000 gallons, tank height = 8 ft). This company also recorded 668,375 ampere-hours for hard-chrome plating process using chemical fume suppressant solution Fumetrol 140. **Operators should use specific material properties and equipment design parameters, if available, to determine emission factors; otherwise, use default factors provided in the instructions.** STEPS TO FOLLOW:

- 1. Activity Code and TAC/ODC Presence:** Enter code "36" for PM emissions from spray booth activity for both enamel and primer; enter code "5a" for Plating Process - Hexavalent Chromium, and code "2D" for Chemical Storage Tanks.

In the "Contains TAC/ODC" column, do not mark the checkbox on the first line for enamel since the 1,1,1-TCA contained in the enamel is already identified on Form B3 (Example C). Mark the checkboxes for both primer and plating because of the presence of chromium (Cr⁺⁶) in the materials. Do not mark the checkbox on line four since there is no toxic organic presence in MEK in storage tank.

- 2. Throughput, Unit Codes, and Rule:** Enter Rule number "1107" for enamel and primer in metal products coating operations. Enter Rule "1469" for plating operation. Enter Rule "463" for liquid organic storage equipment.

The throughputs and unit codes are as follows:

- ENAMEL: Throughput = 540; Unit Code = 2 (for gallons)
- PRIMER: Throughput = 1,125; Unit Code = 2 (for gallons)
- PLATING: Throughput = 668.38; Unit Code = 8 (for 1000 Amp-hr)
- TANK: Throughput = 1.88; Unit Code = 4 (for Mgal or 1,000 gallons)

- 3. Emission Factors and Emissions:** Please refer to APPENDIX G for default PM emission factors for coating operations, APPENDIX H for default PM emission factors for plating operations, and APPENDIX K for more detailed explanation of tank emissions calculation methodology and loss factors.

Enter appropriate default PM emission factors for coating and plating operations. Do not forget to incorporate control efficiency to the uncontrolled emission factor. In this sample, the controlled emission factor for plating with the use of Fumetrol 140 is 0.000045 lbs/1000 Amp-hr.

In this tank example, throughput Q = 1.88 Mgal, tank capacity C = 2.00 Mgal, tank height H = 8 ft. From Appendix K, the loss factors for MEK are: a = 0.022, b = 0.033, and f = 2.173. Substitute these parameters in Equation 2 of Appendix K to calculate and record the VOC emission factor for your tank:

$$EF = \frac{0.022 * (2.00 / 1.88)}{[1 + (0.033 * 8.0)]} + 2.173 = 2.1915 \text{ lb/Mgal}$$

- 4. Total Emissions:** Total emissions in pounds and tons are automatically calculated by the software and displayed in the bottom of the screen. Emissions in tons are automatically transferred to form C, line 4 (Example J).
- Two screen shots of Form B4 are shown on the next page displaying emission factors and emissions for each equipment, respectively.
- 6. Emission sources (36-PM in enamel, 36-PM in primer, 5a-plating operation, and 2D-liquid organic storage tank) from this form are automatically transferred to Form ES (Example F).**

General Instruction Book for the AQMD 2007-2008 Six-Month Transitional Emissions Reporting Program

AER 2007-2008 - [123456 - Company A]

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123456 - Company A
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TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B6	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS				

Click this bar to view Net Emissions. Currently viewing Emission Factors.

B4 - Permitted Equipment Emissions from Miscellaneous Sources (7/1/07-12/31/07)

Activity Code	Contains TAC/ODC	Rule	Throughput or Operating Hours	Unit Code	Organic Gases Emission Factor	Specific Organics Emission Factor	Nitrogen Oxides Emission Factor	Sulfur Oxides Emission Factor	Carbon Monoxide Emission Factor	Particulate Matter Emission Factor
1 36. Sprayboo...	<input type="checkbox"/>	1107	540.00	2. gallon						0.105
2 36. Spraybooth ...	<input checked="" type="checkbox"/>	1107	1,125.00	2. gallon						0.105
3 5a. Plating Proc...	<input checked="" type="checkbox"/>	1469	668.38	8. 1000 am...						0.000045
4 2D. Chemical st...	<input type="checkbox"/>	463	1.88	4. 1000 gall...	2.1915					
5	<input type="checkbox"/>									
6	<input type="checkbox"/>									
7	<input type="checkbox"/>									
8	<input type="checkbox"/>									
9	<input type="checkbox"/>									
10	<input type="checkbox"/>									
Total Emissions in Pounds					4.12	0.00	0.00	0.00	0.00	174.86
Total Emissions in Tons					0.00	0.00	0.00	0.00	0.00	0.09

06/04/2008

AER 2007-2008 - [123456 - Company A]

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123456 - Company A
C:\Documents and Settings\chow\My Documents\COMPANY A.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B6	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS				

Click this bar to view Emission Factors. Currently viewing Net Emissions.

B4 - Permitted Equipment Emissions from Miscellaneous Sources (7/1/07-12/31/07)

Activity Code	Contains TAC/ODC	Rule	Throughput or Operating Hours	Unit Code	Organic Gases Emission	Specific Organics Emission	Nitrogen Oxides Emission	Sulfur Oxides Emission	Carbon Monoxide Emission	Particulate Matter Emission
1 36. Sprayboo...	<input type="checkbox"/>	1107	540.00	2. gallon						56.70
2 36. Spraybooth ...	<input checked="" type="checkbox"/>	1107	1,125.00	2. gallon						118.13
3 5a. Plating Proc...	<input checked="" type="checkbox"/>	1469	668.38	8. 1000 am...						0.03
4 2D. Chemical st...	<input type="checkbox"/>	463	1.88	4. 1000 gall...	4.12					
5	<input type="checkbox"/>									
6	<input type="checkbox"/>									
7	<input type="checkbox"/>									
8	<input type="checkbox"/>									
9	<input type="checkbox"/>									
10	<input type="checkbox"/>									
Total Emissions in Pounds					4.12	0.00	0.00	0.00	0.00	174.86
Total Emissions in Tons					0.00	0.00	0.00	0.00	0.00	0.09

06/04/2008 36. Spraybooth - Particulate emissions

Example (F): Form ES – Emission Source List

This form is designed for listing all the emission sources reported on all the criteria emissions reporting forms, as well as organic solvents that are exclusively reported on Form TAC. Each row of emission data reported on each form represents an Emission Source. **Form ES is automatically created by the software based on the information previously reported on criteria and TAC forms.**

The screenshot shows the 'AER 2007-2008 - [123456 - Company A]' application window. The menu bar includes File, Edit, Options, and Help. The toolbar contains icons for Start, Interview, Select, Fill-In, Summary, Check, Submit, Print, Calc, Help, and Exit. The status bar shows the file path: C:\Documents and Settings\chow\My Documents\COMPANY A.AER. Below the toolbar is a grid of tabs for various forms: TAC, WT, B1, B1U, B2, B2U, B3, W, B3U, WU, B4, B4U, B6, B7, B7U, B8, B8U, E1, E1U, P1, P1U, P2, P2U, R2, R3, R4, R5, R6, R7, T1, AB, DC, DCB, CR, ES, and TACS. The 'ES' tab is selected, displaying the 'ES - List of Emission Sources (7/1/07-12/31/07)' table.

Reference #	Emission Source Category Description	Contains TAC/ODC
1 B1-1	1a. Boiler <10 MMBTU/HR,1. Natural Gas (mmscf)	<input checked="" type="checkbox"/>
2 B1-2	1b. Boiler 10-100 MMBTU/HR,1. Natural Gas (mmscf)	<input checked="" type="checkbox"/>
3 B1-3	7b. Afterburner 10-100 MMBTU/HR,1. Natural Gas (mmscf)	<input checked="" type="checkbox"/>
4 B2U-1	11a. Stationary ICE, 2 Stroke-Lean Burn,4. Gasoline (10 RVP)	<input checked="" type="checkbox"/>
5 B2U-2	11d. Stationary ICE, 4 Stroke-Lean Burn, with Catalyst,4. Gasoline (10 RVP)	<input checked="" type="checkbox"/>
6 B3-1	Material 112-Enamel Z304	<input checked="" type="checkbox"/>
7 B3-2	Material 120-Primer X101	<input type="checkbox"/>
8 B3-3	Material 336-MEK Solvent	<input type="checkbox"/>
9 B4-1	Activity Code-36. Spraybooth - Particulate emissions	<input type="checkbox"/>
10 B4-2	Activity Code-36. Spraybooth - Particulate emissions	<input checked="" type="checkbox"/>
11 B4-3	Activity Code-5a. Plating Process - Hexavalent Chromium	<input checked="" type="checkbox"/>
12 B4-4	Activity Code-2D. Chemical storage tanks (aboveground and underground)	<input type="checkbox"/>
13 TAC-29	TAC 18,CAS 127184	<input checked="" type="checkbox"/>
14		<input type="checkbox"/>

The bottom status bar shows the date 05/22/2008.

Example (G): Form TAC - Toxic Air Contaminants/Ozone Depleters Emission by Emission Source

TAC/ODC emissions associated with reference numbers identified on Form ES are calculated on Form TAC. During 2007-2008 six-month transitional reporting period (07/01/07-12/31/07), Company "A" also operated a solvent degreaser and used 212.5 gallons (make-up solvent) of perchloroethylene (PERC). Form TAC is automatically populated with toxics associated with **combustion processes** reported on criteria forms **only** if default toxic emission factors are available (see Appendix A, Default Emission Factors for Fuel Combustion) and calculates toxic emissions, otherwise they have to be entered manually. Emission factors for other emission sources must be manually added to form TAC. STEPS TO FOLLOW:

1. **Combustion toxics:** Form TAC is automatically populated with toxics associated with fuel combustion sources (i.e., boilers, afterburner, ICEs) as shown in Reference Points B1-1, B1-2, B1-3, B2U-1, and B2U-2. Note that Reference Points are repeated for the default toxic air contaminants.

Default emission factors for ammonia (TAC code 32) correspond to combustion sources equipped with Selective Non Catalytic Reduction (SNCR). Since Company A's equipment is not equipped with SNCR or SCR (Selective Catalytic Reduction), these values are replaced with default values for equipment without SNCR or SCR. This can be done by selecting the correct value from the drop down list under the same sell.

2. **Other toxics:**

Reference (Form Row): Reference numbers for other emission sources that contain TAC/ODC, as identified on form ES, can be selected from the pull down list under the same cell. One row is assigned to 1,1,1-TCA associated with reference number B3-1. Two rows are for Cr⁺⁶ with reference numbers B4-2 and B4-3.

Because PERC solvent is not linked to any emission sources, it must be manually added to the last row by selecting OTHER from the drop down list under the same cell. In this example, Reference Point TAC-29 is created for PERC on the last row of this form and Form ES.

TAC Code and CAS number: Enter the TAC Code and CAS number (if not automatically populated after the TAC code was selected) for toxic contaminants by selecting them from the pull down menu under the same cell. TAC Codes and CAS numbers of 24 TAC/ODCs are also listed in Appendix J of the General Instruction Book.

Usage, Unit Code, and Emission Factor: Except for PERC on the last row (TAC-29 in this example), Usages and Unit Codes for each reference point in this example are automatically transferred by the software based on the information provided on the criteria forms.

Other than combustion sources, toxic emission factors for other emission sources are determined as follows:

<u>TAC Code</u>	<u>CONTAMINANT</u>	<u>Emission Factor</u>	<u>Unit</u>	<u>Source</u>
<i>Reference # B3-1</i>				
23	1,1,1-TCA	1.87	lbs/gal	Calculated
	Emission factor (e.f.) is calculated as follows: e.f. = 8.34 lbs/gal x material specific gravity x weight fraction of solvent e.f. = 8.34 lbs/gal x 0.895 x 0.25 = 1.87 lbs/gal			
<i>Reference # B4-2</i>				
13	Hex Chromium	0.23	lbs/gal	Calculated
	Emission factor (e.f.) is calculated as follows: e.f. = material density x weight fraction of chrome in material e.f. = 8.6 lbs/gal x 0.027 = 0.23 lbs/gal			
<i>Reference # B4-3</i>				
13	Hex Chromium	0.000022	lbs/ 1000 Amp-Hr	default (Appendix H)
<i>Reference # TAC-29</i>				
18	Perchloroethylene	13.53	lbs/gal	PERC density

Overall Control Efficiency, Gross Emissions, and Waste Credit: As indicated in Example (C), reference point B3-1 (with 1,1,1-TCA) is controlled by the thermal oxidizer with 96.7% overall efficiency, which is recorded in the corresponding column in decimal fraction.

Hexavalent Chromium (Cr^{+6}) is a toxic particulate in coating material (primer - reference point B4-2), which is captured and controlled by spray gun's transfer efficiency (65%) and spray booth's default filter efficiency (90%). In this example, the overall control efficiency for Cr^{+6} is: $1 - [(1 - 0.65) * (1 - 0.90)] = 0.965$

Hexavalent Chromium (Cr^{+6}) is also a toxic particulate resulting from the chrome plating operation (reference point B4-3), which is reduced by Fumetrol 140 suppressant. The controlled default emission factor from Appendix H is used in this case.

Record the overall control efficiency in decimal fraction (0.967 for B3-1, 0.965 for B4-2 and 0 for B4-3 since for B4-3 controlled default EF has been used) in "Overall Control Efficiency" column. Gross emissions for each toxic contaminant are automatically calculated by the software.

In this example, waste PERC solvent is properly disposed off (recycled). To claim waste credit on recycled toxics, mark the corresponding checkbox and see example H for calculation of PERC waste credit using Form WT.

These toxic emissions are automatically transferred and summarized on Form TACS (Example I). See a screen-shot of the completed Form TAC:

General Instruction Book for the AQMD 2007-2008 Six-Month Transitional Emissions Reporting Program

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TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B6	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS				

TAC - Toxic Air Contaminants & Ozone Depleters by Reference Numbers (7/1/07-12/31/07) Toggle View Export to Excel

#	Reference (Form-Row)	TAC Code	CAS#	Usage	Unit Code	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Gross Emissions	Waste Credit (Yes/No)
1	B1-1	02	71432	9.30	3. mmscf	0.008	<input checked="" type="checkbox"/>		0.0744	<input type="checkbox"/>
2	B1-1	12	50000	9.30	3. mmscf	0.017	<input checked="" type="checkbox"/>		0.1581	<input type="checkbox"/>
3	B1-1	19	1151	9.30	3. mmscf	0.0001	<input checked="" type="checkbox"/>		0.00093	<input type="checkbox"/>
4	B1-1	19	91203	9.30	3. mmscf	0.0003	<input checked="" type="checkbox"/>		0.00279	<input type="checkbox"/>
5	B1-1	32	7664417	9.30	3. mmscf	3.2	<input checked="" type="checkbox"/>		29.76	<input type="checkbox"/>
6	B1-2	02	71432	18.61	3. mmscf	0.0058	<input checked="" type="checkbox"/>		0.107938	<input type="checkbox"/>
7	B1-2	12	50000	18.61	3. mmscf	0.0123	<input checked="" type="checkbox"/>		0.228903	<input type="checkbox"/>
8	B1-2	19	1151	18.61	3. mmscf	0.0001	<input checked="" type="checkbox"/>		0.001861	<input type="checkbox"/>
9	B1-2	19	91203	18.61	3. mmscf	0.0003	<input checked="" type="checkbox"/>		0.005583	<input type="checkbox"/>
10	B1-2	32	7664417	18.61	3. mmscf	3.2	<input checked="" type="checkbox"/>		59.552	<input type="checkbox"/>
11	B1-3	02	71432	6.28	3. mmscf	0.0058	<input checked="" type="checkbox"/>		0.036424	<input type="checkbox"/>
12	B1-3	12	50000	6.28	3. mmscf	0.0123	<input checked="" type="checkbox"/>		0.077244	<input type="checkbox"/>
13	B1-3	19	1151	6.28	3. mmscf	0.0001	<input checked="" type="checkbox"/>		0.000628	<input type="checkbox"/>
14	B1-3	19	91203	6.28	3. mmscf	0.0003	<input checked="" type="checkbox"/>		0.001884	<input type="checkbox"/>
15	B1-3	32	7664417	6.28	3. mmscf	3.2	<input checked="" type="checkbox"/>		20.096	<input type="checkbox"/>
16	B2U-1	02	71432	1.46	4. 1000 gallons	3.8061	<input checked="" type="checkbox"/>		5.556906	<input type="checkbox"/>
17	B2U-1	04	106990	1.46	4. 1000 gallons	0.9183	<input checked="" type="checkbox"/>		1.340718	<input type="checkbox"/>
18	B2U-1	12	50000	1.46	4. 1000 gallons	3.452	<input checked="" type="checkbox"/>		5.03992	<input type="checkbox"/>
19	B2U-1	17	7440020	1.46	4. 1000 gallons	0.0033	<input checked="" type="checkbox"/>		0.004818	<input type="checkbox"/>
20	B2U-1	19	91203	1.46	4. 1000 gallons	0.1438	<input checked="" type="checkbox"/>		0.209948	<input type="checkbox"/>
21	B2U-2	02	71432	2.80	4. 1000 gallons	0.1564	<input checked="" type="checkbox"/>		0.43792	<input type="checkbox"/>
22	B2U-2	04	106990	2.80	4. 1000 gallons	0.0322	<input checked="" type="checkbox"/>		0.09016	<input type="checkbox"/>
23	B2U-2	12	50000	2.80	4. 1000 gallons	0.1007	<input checked="" type="checkbox"/>		0.28196	<input type="checkbox"/>
24	B2U-2	17	7440020	2.80	4. 1000 gallons	0.0033	<input checked="" type="checkbox"/>		0.00924	<input type="checkbox"/>
25	B2U-2	19	91203	2.80	4. 1000 gallons	0.0029	<input checked="" type="checkbox"/>		0.00812	<input type="checkbox"/>
26	B3-1	23	71556	540.00	2. gallon	1.67	<input type="checkbox"/>	0.967	29.7594	<input type="checkbox"/>
27	B4-2	13	18540299	1,125.00	2. gallon	0.23	<input type="checkbox"/>	0.965	9.05625	<input type="checkbox"/>
28	B4-3	13	18540299	668.38	8. 1000 amp...	0.000022	<input type="checkbox"/>	0	0.014704	<input type="checkbox"/>
29	TAC-29	18	127184	212.50	2. gallon	13.53	<input type="checkbox"/>		2,875.125	<input type="checkbox"/>
30							<input type="checkbox"/>			<input type="checkbox"/>

TAC	01. Asb...	02. Benz...	03. Beryl...	04. 1,3-B...	05. Cad...	06. Carb...	07. Chlor...	08. 1,4-Di...	09. Ethyl...	10. Ethyl...	11. Ethyl...
Gross Emissions in pounds	0	6.213588	0	1.430878	0	0	0	0	0	0	0

06/04/2008

Example (H): Form WT - Credits for Waste Shipments for TAC/ODC:

During 2007-2008 six-month transitional reporting period (07/01/07-12/31/07), Company "A" also shipped 375 gallons of waste from the degreaser for recycle. The manifest indicated that PERC content in the waste is approximately 15% by volume (listed as 0.15 in decimal fraction). Since this is single waste from the degreaser, density of PERC (13.53 lbs/gal) is used as emission factor. Since the waste is not analyzed for the solvent content, only 50% credit is allowed and automatically populated by the software. PERC (TAC Code "18") emission credit is automatically calculated based on the following formula:

$$\text{PERC fraction in waste} \times \text{waste amount} \times \text{Perc density} \times 50\% \text{ credit}$$

$$0.15 \times 375 \text{ gallons} \times 13.53 \text{ lbs/gal} \times 0.50 = 380.53 \text{ lbs.}$$

Emission credits on this page are automatically calculated by the software and transferred to form TACS under TAC code "18".

Manifest Document Number	TAC Code	Material (TAC/ODC) [Decimal Fraction]	Quantity	Units (lbs or gal)	TAC/ODC Density	Credit [%]	Lab Analyzed	Emission Credit
1 M 98765	18	0.1500	375.00	2. gallon	13.53	50.00	<input type="checkbox"/>	380.53
2							<input type="checkbox"/>	
3							<input type="checkbox"/>	
4							<input type="checkbox"/>	
5							<input type="checkbox"/>	
6							<input type="checkbox"/>	
7							<input type="checkbox"/>	
8							<input type="checkbox"/>	
9							<input type="checkbox"/>	
10							<input type="checkbox"/>	

Creditable TAC	06. Car...	08. 1,4-Di...	09. Ethyl...	10. Ethyl...	11. Ethyl...	12. Form...	16. Meth...	18. Perc...	20. Trichl...	22. Chlor...	23. 1,1,1-...
Total Credits	0.00	0.00	0.00	0.00	0.00	0.00	0.00	380.53	0.00	0.00	0.00

05/22/2008

Example (I): Form TACS - Toxic Air Contaminants/Ozone Depleters Emission/Fee Summary

This form is designed to summarize TAC/ODC emissions for 24 compounds on Form TAC that are subject to fees per Rule 301(e). Emissions on Form TACS are totaled by TAC code and rounded to the whole pound for fee purposes. If specific TAC Code emissions are below the thresholds listed in Rule 301(e) Table IV, there will be no fees. Note that Nickel emission is less than the threshold and the fee is zero. Form TACS is automatically filled out by the software based on information reported on forms TAC and WT. This example shows a credit for PERC emissions as calculated on Form WT (see Example H). The fee dues are totaled and transferred to Form S, line 2 (Example L).

AER 2007-2008 - [123456 - Company A]

File Edit Options Help

Start Interview Select Fill-In Summary Check Submit Print Calc Help Exit

123456 - Company A
C:\Documents and Settings\chow\My Documents\COMPANY A.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B6	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS				

TACS - Toxic Air Contaminants and Ozone Depleters Emissions / Fee Summary (7/1/07-12/31/07)

TAC Code	Toxic Air Contaminants (TAC)/Ozone Depleters (ODC)	References	Gross Emissions (lbs)	Recycling Credit (lbs)	Net Emissions (lbs)	Fee (\$/lb)	Fee Due
1 32	Ammonia		109.408		109	\$0.03	\$3.27
2 01	Asbestos					\$5.42	
3 02	Benzene		6.213588		6	\$1.81	\$10.86
4 03	Beryllium					\$5.42	
5 04	1,3-Butadiene		1.430878		1	\$5.42	\$5.42
6 05	Cadmium					\$5.42	
7 06	Carbon Tetrachloride					\$1.81	
8 07	Chlorinated Dioxins & Dibenzof...					\$9.01	
9 08	1,4-Dioxane					\$0.39	
10 09	Ethylene Dibromide					\$1.81	
11 10	Ethylene Dichloride					\$1.81	
12 11	Ethylene Oxide					\$1.81	
13 12	Formaldehyde		5.786127		6	\$0.39	\$2.34
14 13	Hexavalent Chromium		9.070954		9	\$7.21	\$64.89
15 14	Inorganic Arsenic					\$5.42	
16 15	Lead					\$1.81	
17 16	Methylene Chloride					\$0.08	
18 17	Nickel		0.014058		0	0.00	\$0.00
19 18	Perchloroethylene		2,875.125	380.53	2,495	\$0.39	\$973.05
20 19	Polynuclear Aromatic Hydrocar...		0.231744		0	\$5.42	\$0.00
21 20	Trichloroethylene					\$0.16	
22 21	Vinyl Chloride					\$1.81	
23 22	Chlorofluorocarbons (CFCs/Fre...					\$0.33	
24 23	1,1,1-Trichloroethane (Methyl ...		29.7594		30	\$0.05	\$1.50
						Fee Due	1,061.33

06/04/2008

Example (J): Form C - Permitted Emissions Summary

Based on the information reported on different forms as shown in the previous examples for Company A, Form C is automatically completed by the software. Total emissions (tons) for each of the selected forms reporting permitted emissions are transferred to the corresponding rows on form C. Except for Methane, pollutants are totaled in line 7 and transferred to Form S (Example L).

AER 2007-2008 - [123456 - Company A]

File Edit Options Help

Start Interview Select Fill-In Summary Check Submit Print Calc Help Exit

123456 - Company A
C:\Documents and Settings\chow\My Documents\COMPANY A.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B6	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS				

C - Emissions Summary - Permitted (7/1/07-12/31/07)

	Organic Gases (tons)	Methane (tons)	Specific Organics (tons)	Nitrogen Oxides (tons)	Sulfur Oxides (tons)	Carbon Monoxide (tons)	Particulate Matter (tons)
1 Form B1, DCB or AB	0.10	0.04		1.80	0.01	1.28	0.13
2 Form B2							
3 B3 - W	4.83		0.00				
4 Form B4	0.00		0.00	0.00	0.00	0.00	0.09
5 Form E1							
6 Form R1							
7 Total Permitted Emissions	4.93	0.04	0.00	1.80	0.01	1.28	0.22

B3 Net Emissions	Total
Form B3 (pounds)	10,942.35
Form W (pounds)	1,289.75
Form B3 - Form W (pounds)	9,652.60
Form B3 - Form W (tons)	4.83

06/04/2008

1. Example (K): Form CU - Non-Permitted Emissions Summary

Similar to Form C, Form CU is automatically completed by the software. Un-permitted emissions (tons) are totaled and transferred to the corresponding rows on form CU. Except for Methane, pollutants are totaled in line 7 and transferred to Form S (Example L).

CU - Emissions Summary - Non-Permitted (7/1/07-12/31/07)

	Organic Gases (tons)	Methane (tons)	Specific Organics (tons)	Nitrogen Oxides (tons)	Sulfur Oxides (tons)	Carbon Monoxide (tons)	Particulate Matter (tons)
1 Form B1U, DCB or AB							
2 Form B2U	0.44	0.00		0.22	0.01	8.39	0.01
3 B3U - WU							
4 Form B4U							
5 Form E1U							
6 Form R1U							
7 Total Non-Permitted Emissions	0.44	0.00	0.00	0.22	0.01	8.39	0.01

	Total
B3U Net Emissions	
Form B3U (pounds)	
Form WU (pounds)	
Form B3U - Form WU (pounds)	
Form B3U - Form WU (tons)	

06/04/2008

Example (L): Form S - Fees Due Summary

Based on the examples shown earlier for Company A, Form S is automatically completed by the software (except for installments paid – line 4 and 5) as follows:

- Total Emissions:** Emissions from Line 7 of both Forms C and CU are transferred to appropriate columns on Form S. Company A is not identified as a RECLAIM facility; therefore, “Total Emissions from Form CR (tons)” column is blank. Total emissions are summed up and rounded off according to the following instructions: if the total emissions for VOC, SPOG, NOx, SOx, and PM are less than 2 tons (less than 50 tons for CO), the software populates the cells with 0; otherwise, it rounds off to the nearest ton as shown.
- Emission Fee:** In this example, NOx and VOC emissions exceed 2 tons. The software calculates the corresponding “Emission Fees Due” according to the Emission Fee Table in Appendix M of the General Instruction Book.

Total Fees Due are the sum of total emission fees for all criteria pollutants in line 1 and toxic air contaminants/ozone depleter fees transferred from form TACS in line 2.

In this example, Company "A" made installment payment in the amount of \$875.00 for toxic emissions, which is accounted for on Line 5 and deducted from total fee due. The installment payments must be tracked and entered by facility here. The balance is displayed on Line 6.

Company "A" filed the report and paid emission fees on time; therefore, no late payment surcharge incurred. The amount due (\$2,557.17) is issued by check #1234 and submitted with the report. Enter the check number in the corresponding pop-up window.

Submittal Date: No later than September 2, 2008	Total Permitted Emissions from Form C, Line 7 (tons)	Total Non-Permitted Emissions from Form CU, Line 7 (tons)	Total Emissions from Form CR (tons)	Total Emissions	Emission Fees Due
ORGANIC GASES	4.93	0.44		5	\$2,068.32
SPECIFIC ORGANICS	0.00			0	\$0.00
NITROGEN OXIDES	1.80	0.22		2	\$302.52
SULFUR OXIDES	0.01	0.01		0	\$0.00
CARBON MONOXIDE	1.28	8.39		0	\$0.00
PARTICULATE MATTER	0.22	0.01		0	\$0.00

Enter any installment paid in Line 4 and 5 and calculate the late payment surcharge, if any.		
1	TOTAL EMISSION FEES FOR ALL CRITERIA POLLUTANTS	\$2,370.84
2	TOXIC AIR CONTAMINANTS/OZONE DEPLETER FEES	\$1,061.33
3	TOTAL FEES DUE	\$3,432.17
4	Installments Paid For FY 2007-2008 (if any) -- All Criteria Pollutants	\$0.00
5	Installments Paid For FY 2007-2008 (if any) -- Toxic Air Contaminants/Ozone Depleters	\$875.00
6	Balance Due (Line 3 - Line 4 - Line 5)	\$2,557.17
7	Late Payment Surcharge (if any)	\$0.00
8	Amount Due (Line 6 + Line 7)	\$2,557.17
9	Amount Enclosed (please write Facility ID#(s) and 2007-2008 AER on the check)	\$2,557.17

Please Enter Your Check#
1234
 Please check this box if amount enclosed is different than amount due on Line 8.

Example (M): Form A - Status Update, Exemption Request, Refund Request, and Use of Alternative Emission Factors

Form A is designed to collect information from different screens during the Interview process such as Status Update, Exemption Request, Refund Request, and Use of Alternative Factors or Calculation Methodologies. The user can complete Form A by entering the information in the applicable Interview screens. The user can print Form A at anytime by using the "Print" menu.

An image of Form A is shown below.

<i>Form A - Status Update</i>	<i>AQMD 2007-2008 AER (7/1/07-12/31/07)</i>
Facility ID : 123456	
Facility Name : Company A	
STATUS UPDATES	
Shutdown Facility : not applicable	
Change Of Ownership : not applicable	
Change in Equipment Location : not applicable	
Variance/Abatement Case Number : not applicable	
Other Reason for Zero Emissions : (see below)	
VOC emissions were reduced by 55% by switching to Low-VOC Materials.	
REFUND REQUEST	
Request refund for overpayment : not applicable	
EXEMPTION REQUEST	
Request for exemption : not applicable	
USE OF ALTERNATIVE EMISSION FACTORS OR CALCULATION METHODOLOGIES	
Not Applicable	
CONTRACTOR INFORMATIONS	
Not Applicable	
123456 Company A	Page 2
	5/22/2008 3:21:38 PM

Example (N): Form X - Signature Sheet

Form X must be signed by an authorized person for the report to be valid.

Form X is designed to collect information from different screens during the Interview process such as Mailing Information, Contact Information, Preparer Information, Authorized Person Information, Equipment Location Information, NAICS, Business Operating Hours and Brief Description of Operation. The user can complete Form X by entering the information in the applicable Interview screens. The user can print Form X at anytime by using the "Print" menu.

In this example, company A's business operating hours are 10 hours per day, 5 days per week, and 50 weeks per year. Company A's main operation is automobile metal parts manufacturing, and their NAICS code is 336111. An image of completed Form X for Company A is shown below.

Form X must be signed and included with the report, which can be submitted to the AQMD by one of the following options:

- **ONLINE:** data file can be submitted through internet (this option is only available from July 1 through October 17.) A copy of the Submittal Confirmation must be included with the signed Form X and supporting documentation.
- **Data Diskette / CD:** Data file can be created and submitted with the signed Form X and supporting documentation.

<i>Form X - Signature Sheet</i>	<i>AQMD 2007-2008 AER (7/1/07-12/31/07)</i>	
<p>Software Submittal Signature Sheet Submittal Date : No later than 9/2/2008</p>		
<p>Facility ID : 123456 NAICS Code : 336111</p> <p>MAILING INFORMATION JOHN DOE PRESIDENT COMPANY A 456 E GRAND AVE, B SUNNY CITY, CA 98764 Contact Telephone : (714) 123-1234 Contact Fax : (714) 123-1235 Contact Email : johnd@companya.com</p> <p>BUSINESS OPERATING HOURS Hours per day : 10 Days per week : 5 Weeks per year : 50</p> <p><small>I declare under penalty of perjury that the data submitted truly represents throughput and emissions for this reporting period, and that the emission factors represent the best available data for my company in the calculation of annual emission figures.</small></p>	<p>EQUIPMENT LOCATION Facility Name : Company A Equipment Location : 789 N BROADWAY City : RIVERSIDE</p> <p>BRIEF DESCRIPTION OF OPERATION METAL PARTS MANUFACTURING</p>	
<p>Authorized Name : JOHN DOE Title : PRESIDENT Phone : (714) 123-1234 Fax : (714) 123-1235 Email : johnd@companya.com</p>	<p>Authorized Signature <u>Doef.</u> Date <u>8-20-08</u></p>	
<p>Preparer Name : JOHN DOE Preparer Title : PRESIDENT Preparer Organization : COMPANY A Preparer Phone : (714) 123-1234 Preparer Fax : (714) 123-1235 Preparer Email : johnd@companya.com</p>	<p>Preparer Signature <u>Doef.</u> Date <u>8-20-08</u></p>	
<p><small>S.C.A.Q.M.D reserves the right to audit the reported emissions. All records and calculations used in completing this summary are recommended to be retained a minimum of five years.</small></p>		
123456 Company A	Page 1	5/22/2008 3:21:38 PM

APPENDIX P – THE AER EMISSIONS REPORTING SOFTWARE INSTRUCTIONS

Introduction

Emissions Reporting Software includes the forms and some of the information you need to complete your 2007-2008 six-month transitional Emissions Report. These instructions will help you to quickly install, start-up, and use the Emissions Reporting Software. Please review carefully these instructions before proceeding. Once you have installed the software, you can refer to on-line help for more assistance.

Computer Requirements

The software is designed to run on computers meeting these specifications:

- PC-Compatible Computer (e.g., IBM, Compaq, Dell, clone, etc., **software for Macintosh is not available.**)
- Microsoft Windows 98, 2000, Me, NT, & XP*
- 64 MB of RAM (Memory) Minimum
- 40MB of Storage (Hard Drive Space) Minimum
- Internet Explorer 5.0 or higher
- CD-ROM drive
- Monitor
- Mouse, Keyboard, & Printer (Laser printer preferred)

Warning to Windows Vista Users: Currently Microsoft Windows Vista does not fully support VB (Visual Basic) the programming tool used in the AER software, consequently installing and operating the AER software program on Windows Vista operating system is not recommended.

***Warning to Windows XP Users:** The Windows XP operating system may cause the Emission Reporting Program software to under-report emissions and fees. In the Windows XP operating system, numbers are rounded differently than they are in all other versions of Windows (such as, Microsoft Windows 2000, Microsoft Windows NT, Microsoft Windows Millennium Edition, Microsoft Windows 98, or Microsoft Windows 95). In order for the District to take into consideration this potential problem while reviewing your Emissions Report, please indicate in the software that you are using Windows XP. More explanation on the issue can be found at the following Microsoft web page: <http://support.microsoft.com/default.aspx?scid=kb;en-us;321047>

Overview

The procedure below will help guide you through the process of completing your six-month transitional Emissions Report using the Emissions Reporting Software. The process is similar to using Paper Forms, but simplified since the software does the calculations for you and verifies that your submittal is complete. The Help system is available through the question mark icon.

1. Read the instructions thoroughly.
2. Gather the facility data you need to complete your six-month transitional Emissions Report, such as gas meter readings, material use throughputs, Material Safety Data Sheets, hazardous waste manifests, etc.
3. Keep the pre-printed Form X from the package you received from AQMD that shows your facility information since you will need to enter this information into the software.
4. Install the software (see “How To Install”).
5. Follow the program prompts to create your facility data file. You will be prompted to provide:
 - A name for your file, and
 - The facility ID.
6. Complete the interview. The first section “Form X” is used to provide basic information about your facility. This includes the type of operations at your facility, mailing address, contact name, and so on. The second section “Form Selection” will assist you with selecting forms based on your facility type and answers to a series of questions about your equipment and operations. The third section “Form A” collects data on status change, exemption request, refund request (if you overpaid due to installments paid), and alternative emission factors or methodology used. It is recommended that you revisit this section after completing your report. The fourth section “Form CF” collects basic information about your contractors (e.g., name, address and type of work performed by contractors.) Please refer to Help for step-by-step instructions. You can move between different sections by clicking on the forward or backward arrow icons.
7. Based on your answers during the interview, the software will automatically select corresponding forms. Verify that the software has selected all the forms that you need and modify the selection if needed using the “Select” section.
8. Click on the “Fill-In” button to display the selected forms. **First complete all criteria emission forms, then complete toxic emission forms.**
9. Enter your facility data in the software forms.
10. Review the summary forms to check for data entry errors.

11. Review the “Errors Check” results. “Warnings” alert you of potential problems and should be reviewed. Warnings will not prevent you from creating a submittal file. “Errors” are data problems that MUST be fixed before creating the submittal file.
12. Submit on-line or create your Submittal Data Disk after checking all “Errors Check” warnings and fixing all “Errors Check” errors.
13. Print Forms S, X, and the Submittal Checklist. Print Form A/CF, if applicable.
14. Prepare supporting documentation as shown on the Submittal Checklist.
15. Submit to AQMD the on-line submittal confirmation form or Submittal Data Disk, Form X, Form S, a company check (if fees are due), and supporting documentation materials, and, if applicable, Form A/CF. Form X MUST have appropriate signature.
16. Print paper copies of all forms for your files.
17. Keep a backup data file for future use and reference.

How To Install

Notes: (1) The program must be installed on your computer’s hard drive. It is not recommended to install the program on a network drive.

(2) We recommend that you accept all defaults during installation.

(3) Some memory resident programs (such as screen savers, pop-ups, desktop organizers, virus protection, etc.) can interfere with installations. Try to exit all programs you are running before installing the software.

Insert CD-ROM. Setup should launch automatically. If not, open the Add/Remove Programs applet from the Control Panel and click on the install button. Follow the instructions on the screen to complete installation. The program will be installed by default in C:\Program Files\AQMD 07-08 Emissions Report. We recommend that you keep the default directory. The program icon will be automatically placed on your desktop.

The following items will be installed on your computer and can be started by double-clicking on their icons in the AQMD 07-08 Program Group:

- AER 07-08 - This is the 2007-2008 software executable file (AQMD0708.exe)
- Help 07-08 - This is the help file for the 2007-2008 Emissions Report software (Help0708.hlp)

If for any reason you have to uninstall the Emissions Reporting program, use the Add/Remove Programs applet from the Control Panel. Follow the instructions on the screen to complete uninstalling the program.

If you wish to use the EPA TANKS Program, you can obtain a copy by calling (919) 541-5285 or downloading it from the EPA Info CHIEF Website at: <http://www.epa.gov/ttn/chief/software/tanks/>.

Software Features

The software will walk you through the process of preparing your Emissions Report from start to finish. You can stop a session at any time since your data is automatically stored in the data file when entered. The software lets you pick up where you left off in your last session. You can also jump around between data entry, summaries, and “Errors Check” to check your progress as you go. If you ever get lost, just select the START button.

The step-by-step process is represented by buttons with symbols. The feature is activated by clicking on the button with your mouse. You can also access these features from the menu choices at the top of the screen. Many screens have navigation buttons that help you proceed through the reporting process. Selecting these buttons will jump you to the feature. You can always return by clicking on the corresponding button at the top of the screen.



HELP- On-line Help includes instructions on how to use the software and how to fill out the forms. Help is also available through the key F1.



START- Takes you to the main navigational screen. Each time you start the program, the software will open your data file at the START screen. The START screen is used as your launching point to resume your last session or maintain your data files. Data file options include:

- OPEN FILE - Opens a data file different from the file currently open. Use this button to access the data from a different file.
- NEW FILE - Creates a new facility file. You will be prompted to provide a file name and the facility ID.
- SAVE AS - Saves the currently open data file under a different file name and facility ID. This creates a template data file that can be saved so that common data is entered only once. After you select the Save As button, the program will ask you for a new file name. The new file will be created and opened for immediate use.
- IMPORT LAST YEAR - Imports your 2006-2007 Emissions Report data or submittal file and uses it as the starting point for your 2007-2008 Emissions Report. This feature imports most of last year's data so you only need to update information rather than enter all the information again. You can access detailed instructions for the import process by choosing "Import Last Year" and then "Help" in the first pop-up window. "Continue" button will lead you to the next step. The program will ask you to specify the file to import. Based on the data imported from last year's file, a new file will be created for immediate use. In general, fuel codes, emission factors, equipment codes, material codes, activity codes will be imported through this process. The exceptions are listed below. Please verify and update the imported data as necessary.
 - Data from a number of forms: Form CR, WT, W, WU, TAC, DC, R7, and Summary forms; Fugitive emissions forms (P1, P1U, R3 and T1) if last year you indicated that you used Correlation Equation/Screening Value Range Method; and imports from EPA TANKS (B6, B7 and B7U) are not imported.
 - This reporting period, due to changes to combustion forms (B1, B1U, B2, B2U, E1, E1U and R2) equipment and fuel codes, "999a-other external combustion <10 MMBTU/hr equipment", "999b-other external combustion 10-100 MMBTU-hr equipment", "999c- other external combustion >100 MMBTU/hr equipment" and "999d- other internal combustion equipment" and "999- other fuel" Codes data sets for combustion forms will not be imported.
 - This reporting period – due to the fact that this is a six-month transitional reporting period – for sources that use annual emission factors instead of emission factors based on throughput - number of sources have to be adjusted (please see additional instructions in software Help for the following forms: B4, B4U, P1, P1U, P2, P2U, R3 and R5 to determine if applicable on your sources).



INTERVIEW – Gathers information about your facility. Simply click on the forward arrow. The first section "Form X" is used to collect basic information about your facility that is shown on the pre-printed Form X you received from AQMD. Enter the Equipment Location information exactly as shown on the pre-printed Form X. If the pre-printed Equipment Location is incorrect, you will need to contact AQMD Customer Service to process the correction. Equipment Location cannot be corrected through the Emissions Report. The second section "Form Selection" will assist you with form selection based on your selection of facility type and answers to a number of questions about your equipment and operations. The third section "Form A" collects data on status change, exemption request, refund request (if you overpaid your final fee due to paid installments), and alternative emission factors or methodology used. It is recommended to revisit this section after completing your report. The fourth section "Form CF" collects basic information about your contractors (e.g., name, address and type of work performed by contractors.) Please refer to Help for step-by-step instructions.



SELECT - Shows you the forms that have been automatically selected for your facility based on the information you provided in the INTERVIEW section. You can add or delete form selections, if necessary, by clicking on the "selected" box. You can always return to this screen and update the list later. Any data entered on a form is erased when that form is deselected.



FILL-IN - Takes you to each form to enter your facility data. When you click on "Fill-in" button, two rows listing all the forms will appear on the top of the screen, selected forms are displayed in bold letters. To move to a selected form simply click on the appropriate button. Another way to navigate through the forms is by selecting the appropriate form from the "Fill-in" pull down menu button. Complete as much information as you wish during your session. You can always return to a form later if you need to complete or edit your data. Go to SUMMARY if you want to see the results of your data entry after completing a form.



CALCULATOR - Provides easy unit conversions and standard calculator functions. The unit conversion calculator helps the user to convert data into necessary units. Please note that it is recommended to clear the values prior to the next conversion.



SUMMARY - Shows you the summary forms. This allows you to review your report to ensure accurate data entry and reasonable results and fees. You can return to FILL-IN or SELECT if you need to edit any data.



ERRORS CHECK - Checks your report for possible problems, such as missing information. This is a critical step that helps you minimize problems with your Emissions Report before submittal. Two types of problems are flagged by the “Errors Check”:

- Warnings - These are potential problems that must be checked and fixed if necessary. Warnings will not prevent you from creating a Submittal Data Disk.
- Errors - These are serious problems that must be fixed before creating a Submittal Data file. Common examples of Errors include incomplete data entry, and incorrect data entry.



SUBMIT - Allows you to submit your data file using the electronic on-line option, or create a submittal diskette. If you choose the on-line option, you will receive a confirmation upon successful submission of your file. Please enclose a copy of the confirmation form with your report. A separate confirmation is required for each facility. The on-line option will not be available after October 17, 2008. If you are unable to submit your data online or choose to create a submittal disk, please enclose your Submittal Data Disk created by the Emissions Reporting Software with your report. Label the disk with: 2007-2008 Emissions Report, your Facility Name, and Facility ID. A separate Submittal Data Disk is required for each facility. A copy of your submittal data file will be automatically created in your data directory on your hard drive if space allows. Keep this file for future reference.



PRINT - Allows you to print copies of the forms for your files. You do not need to submit paper forms other than S, X, and, if applicable, Form A/CF since you are submitting an electronic file through the on-line submit option or Submittal Data Disk.

How To Get Started

From the Start menu, select “AER 07-08” from the AQMD 07-08 Emissions Report menu item, or simply double-click on the icon on your desktop. (See Tips on p.74 to auto-hide the Windows taskbar to keep it out of your way while running programs.)

The first time you start the software, you will be asked for:

- 1) A file name to store your facility data: We recommend that you name your file the same as your facility ID for easier tracking of your files, especially if you have more than one facility. For example, a facility with ID # 123456 would have a facility file named 123456.aer.
- 2) Your facility ID: Please make sure you type in the facility ID exactly as shown on the pre-printed Form X that came with your package from AQMD.

After you create your facility file, the software will first ask you if you would like to import last year’s data file. If you choose “Yes”, please follow step-by-step instructions listed bellow. If you answer “No”, the program will take you directly to the INTERVIEW screens to provide facility information. Simply proceed by completing each section of the program.

If you are planning to import last year’s data:

- When you create your file, the software will ask you if you want to import last year’s data, click on “Yes” to initiate the import process (you can also initiate the import process by clicking on “Import Last Year” button at the START screen at any time, but please keep in mind that import will overwrite any data already entered),
- Follow step-by-step instructions. A browse window that allows you to locate your last year’s data or submittal file (.aer or .sub extension) will open by default this year’s data file, you have to locate and select your LAST year file. Select last year’s file by double-clicking on the file. Please make sure that the selected file ID matches the displayed ID.

You will be informed once the import is completed. Return to the INTERVIEW screens (click “Interview” icon) to provide the facility information. Then proceed by completing each section of the program.

Tips

- Periodically check out the support web site at <http://www.aqmd.gov/aer/aer.html>. Support files and software updates are posted on the web site for easy download.
- The software display has been optimized for monitors with a resolution of 1024 x 768 (monitor settings). The software will still operate with other monitor settings, but the display may not be optimal. Monitor settings can be changed: from the Start menu, select Settings, then Control Panel, then Display.
- The Windows Taskbar can cover part of the software screen, which may block access to some buttons and on-screen information. Activate the auto-hide feature of the Taskbar to access the full screen. Use your mouse to click on the Windows Start menu. Choose Settings, then choose Taskbar to display the Taskbar properties dialog box. On the Taskbar Options tab, click the Auto-hide box to activate this feature. After activation, the Taskbar will only appear when you move your mouse to the bottom of the screen. You can also use the auto-hide feature for other toolbars on your screen, such as Microsoft Office. Use your mouse to click on the Office toolbar logo to display a menu of options and select the Auto Hide choice.
- Keep a copy of your data file for the next year.
- The “Errors Check” feature tells you the row and column on a form that is causing the Error or Warning. The rows are counted from the first row on the first page of the form to the last row on the last page of the form. To find the row of interest, just count from the top of the form until you reach that row number. You can also jump directly to that row from the “Errors Check” section by using your mouse to click on the Error or Warning.
- During installation, if you receive error messages similar to “Corrupted File”, call the Hotline for instructions or request a replacement CD.
- While printing, if you receive an error message “Printer Already Printing”, reboot your computer and turn your printer off and then on.
- When creating the Submittal Disk, a “Disk Full” error usually means that your computer hard drive is full, or sometimes that your data diskette does not have enough storage space. Check the free disk space on your hard drive. If disk free space is less than 1 megabyte (MB), you will need to delete some unnecessary files from your hard drive and try again. Also verify that the data diskette does not have any unnecessary files, and that it is a 1.44 MB capacity diskette.
- When creating the Submittal Data Disk, if you receive an error #57 “Device I/O Error”, your data diskette is either not formatted or is corrupted. Use Windows Explorer to try to view the diskette. Explorer will offer to format the diskette if needed. If the disk is corrupted, you will need to use a different diskette for submittal.
- Rebooting your computer will many times fix a problem. Windows users can reboot by selecting Shut Down from the Start menu, and selecting “Restart”.

Technical Support

Workshops: Workshops have been scheduled to provide software training and help facilities prepare their six-month transitional Emissions Report. See the Workshop Flyer that came with your Emissions Report Package from the AQMD for the workshop schedule and other details.

On-line Help: You can use the built-in help system by clicking on the HELP button, choosing Help from the program Menu, or by pressing the <F1> key.

Assistance: Many answers to common questions can be found in these instructions and on the web site. If you need assistance with the software or your six-month transitional Emissions Report, support is available from AQMD’s contractor Ecotek by:

- Telephone (8:00 to 5:00, Mon. - Fri.) (714) 596 - 7456
- Fax-In Questions: (714) 596 - 8837
- e-mail: aer@ecotek.com
- Internet (Ecotek) <http://www.ecotek.com/aqmd>
- Internet (AQMD) <http://www.aqmd.gov/aer/aer.html>

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For information, contact: Ecotek, 8840 Warner Ave., Suite 304, Fountain Valley, CA 92708