

United States  
Environmental Protection  
Agency

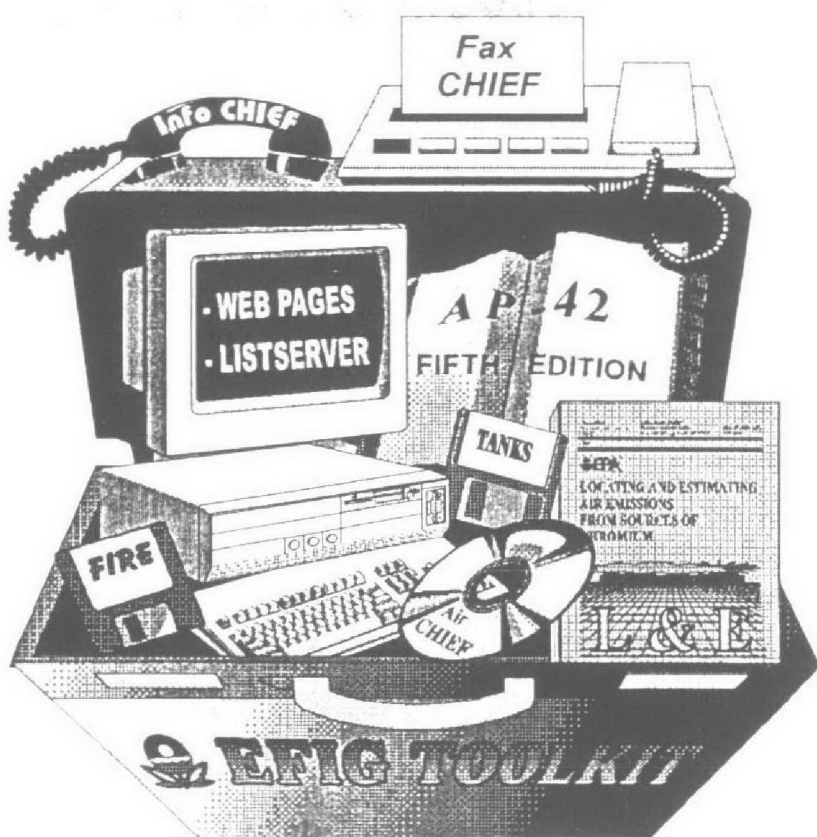
EPA-454/F-98-002  
January 1998

Office Of Air Quality Planning And Standards  
Research Triangle Park, NC 27711



# TOOLS

## FOR ESTIMATING CRITERIA AND TOXIC AIR POLLUTANTS



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Emission Factor and Inventory Group  
Emissions, Monitoring, and Analysis Division  
Office Of Air Quality Planning and Standards  
U. S. Environmental Protection Agency

## **Emissions Estimation Tools**

This brochure provides an overview of the U. S. Environmental Protection Agency's (EPA) air toxics and criteria emission estimating tools. EPA develops air emission inventory tools for point and area sources to support many activities, including: Clean Air Act requirements, State Implementation Plans (SIP), SARA 313 reporting requirements, and other emission estimating and assessment activities. Most of these tools are developed and maintained by the Emission Factor and Inventory Group (EFIG) within EPA's Office of Air Quality Planning and Standards (OAQPS).

This brochure describes each tool and its intended use. Users should select the tool(s) best suited to their projects and obtain the reports or computer databases necessary. For further information on any of these tools, call *Info CHIEF* at (919) 541-5285, or write:

### ***Info CHIEF***

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Emission Factor and Inventory Group  
(MD-14)**

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These estimating tools should be used with discretion. Actual emissions from individual sources may vary considerably from values estimated by using emission and speciation factors. Source-specific emission test data are generally preferred, when available. EFIG welcomes any emission data that would help improve the emissions estimating tools presented in this brochure.

## To Order Tools

Copies of the tools mentioned in this brochure are available from different sources and under differing conditions related to requester status (government agency, commercial entity, nonprofit organization, Freedom of Information Act requestor, etc.).

Tools with stock numbers (for example, 055-000-00501-0) are available for a fee from the Government Printing Office (GPO), Superintendent of Documents, P. O. Box 371954, Pittsburgh, PA 15250-7954. Call (202) 512-1800 to order.

Tools with order numbers (for example, PB94-500584) are available for a fee from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161. Call (703) 487-4650 to order.

To learn more about any items mentioned here, especially about their use, contact the **Info CHIEF** Help Desk, (919) 541-5285 or visit our website at <http://www.epa.gov/ttn/chief/>.



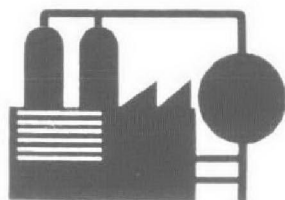
# COMPUTER TOOLS



The *Air CHIEF* CD-ROM is the most comprehensive tool for retrieving emission estimation data. The disc contains a wealth of information, including the AP-42 Volume I, EIIIP documents, *L&E* series, *FIRE*, RTECS Chemical Synonym List, the SCC list, and the SIC list. A user manual and installable copies of *FIRE*, *TANKS*, *PC BEIS*, *Water 8* and *Chemdat 8* are also included. *Air CHIEF* is available from GPO for \$15.00, stock number 055-000-00580-0. Contact *Info CHIEF* for more information about the *Air CHIEF* CD-ROM.



The *Factor Information And Retrieval Data System (FIRE)* is a PC program containing EPA's recommended criteria and hazardous air pollutant emission estimation factors. Users can browse through records in the database or select specific emission factors. *FIRE* is available from the *CHIEF Website* and is on the *Air CHIEF* CD-ROM. A *FIRE* brochure may be obtained from *Info CHIEF*.



*TANKS* is a PC software program for estimating volatile organic compound (VOC) emissions from both fixed and floating roof storage tanks. Call *Info CHIEF* for a brochure describing *TANKS*. The *TANKS* program is available from the CHIEF Website.



The *National Emission Trends (NET) Viewer* CD-ROM presents the US EPA's estimates of national and regional emissions for criteria air pollutants: (CO, NO<sub>x</sub>, VOC, SO<sub>2</sub>, PM-10, Lead and TSP). The emissions of each pollutant are estimated for many different source categories, which collectively account for all anthropogenic emissions. The *NET Viewer* CD-ROM is available from GPO for \$15.00, stock number 055-000-00559-1. Call *Info CHIEF* for more information about the *NET Viewer* CD-ROM.



*WATER8* is an analytical model for estimating compound-specific air emissions from wastewater collection & treatment systems. *CHEMDAT8* is a spreadsheet that includes analytical models for estimating VOC emissions from treatment, storage and disposal facility processes.



The *Personal Computer version of the Biogenic Emissions Inventory System (PC BEIS)* allows users to estimate hourly emissions of biogenic volatile organic compound and soil nitrogen oxide emissions. *PC BEIS* is available from the *CHIEF Website*.



Get connected with emission factor and inventory information on the Internet World Wide Web! The *EFIG Home Page* serves as a gateway to many related sites, including the Emission Inventory Improvement Program (EIIP) website, the Office of Mobile Sources and the Unified Air Toxics Website. To access most of the tools featured in this brochure, such as AP-42, the L&E documents, *FIRE* and *TANKS*, visit the *CHIEF Website*. Here is a list of our most popular websites:

EFIG Home Page .....	<a href="http://www.epa.gov/oar/oaqps/efig/">www.epa.gov/oar/oaqps/efig/</a>
CHIEF Website .....	<a href="http://www.epa.gov/ttn/chief/">www.epa.gov/ttn/chief/</a>
EIIP Website .....	<a href="http://www.epa.gov/oar/oaqps/eiip/">www.epa.gov/oar/oaqps/eiip/</a>
Unified Air Toxics Website .....	<a href="http://www.epa.gov/ttn/uatw/">www.epa.gov/ttn/uatw/</a>
National Air Pollutant Trends Report .....	<a href="http://www.epa.gov/oar/emtrnd/">www.epa.gov/oar/emtrnd/</a>
1996 Emission Inventory Website .....	<a href="http://www.epa.gov/oar/oaqps/efig/ei/">www.epa.gov/oar/oaqps/efig/ei/</a>

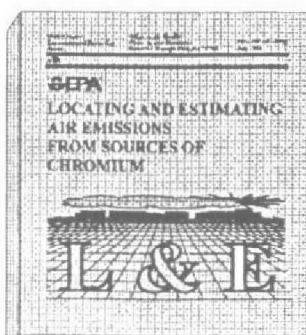
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The *Compilation of Air Pollutant Emission Factors*, AP-42 is the recommended source of air pollutant emission factors for both criteria and toxic emissions. AP-42 Volume I addresses hundreds of stationary, point, and area sources and Volume II deals with mobile sources. EPA emission rates for many polluting activities are obtained from source tests, material balance studies, and engineering estimates and then collected, approved, and compiled into the AP-42 document. AP-42 is available on the *CHIEF* website and from GPO, Stock No. 055-000-00500-1.



The Emission Inventory Improvement Program (EIIP) is a joint program of the EPA, SAEWG, and STAPPA/ALAPCO. The ultimate goal of the EIIP is to provide cost-effective, reliable inventories by improving the quality of emissions data collected and provide for uniform reporting of this information. Their findings are available in a seven volume set of guidance reports, which are available on the EIIP website and from EFIG. For more information, call *Info CHIEF*.

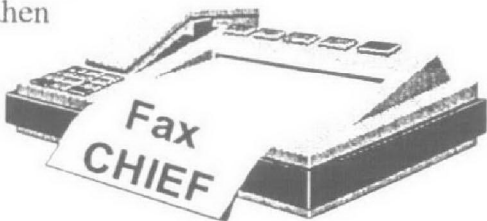


This report series, titled *Locating And Estimating* (L&E) *Air Toxic Emissions From (or of) (Source Category or Substance)* (e.g., *Locating And Estimating Air Emissions From Sources Of Mercury*) characterize the source categories for which emissions of a toxic substance have been identified. These volumes include general descriptions of the emitting processes, identifying potential release points and emission factors. L&E documents are available from the *CHIEF* website and NTIS (see adjacent table).

# E TOOLS

The **CHIEF List Server** allows you to receive announcements relevant to the functions of EFIG and EIIP via e-mail. In addition, you will receive an electronic text version of EFIG's quarterly publication, the **CHIEF Newsletter**. To subscribe, send E-mail to: [listserv@unixmail.rtpnc.epa.gov](mailto:listserv@unixmail.rtpnc.epa.gov). In your message type: **subscribe CHIEF Firstname Lastname** (your first and last name).

**Fax CHIEF** is a device that can transmit caller-selected parts of the AP-42 Volume I and Volume II, the **CHIEF Newsletter** and other technical documents to a requester's fax machine. Users can call and enter their requests by using the hand-set and dial pad on most fax machines, and then **Fax CHIEF** will transmit the desired sections within minutes. Two dedicated telephone lines provide access to this service: (919) 541-0548 and (919) 541-5626. Contact **Info CHIEF** for a brochure or help in using **Fax CHIEF**.



# PY TOOLS

## Locating & Estimating Document Series

Substance or Source Category	EPA Publication #	Substance or Source Category	EPA Publication #
1,3-Butadiene	EPA-454/R-96-008 PB97-189880	Manganese	EPA-450/4-84-007h PB86-117587
Acrylonitrile	EPA-450/4-84-007a PB84-200609	Mercury & Mercury Compounds	EPA-454/R-97-012 PB88-117054
Benzene	EPA-450/4-84-007q PB88-196175/A10	Methyl Chloroform	EPA-454/R-93-045 PB94-214137
Cadmium & Cadmium Compounds	EPA-454/R-93-040 PB94-173093	Methyl Ethyl Ketone	EPA-454/R-93-046 PB94-214194
Carbon Tetrachloride	EPA-450/4-84-007b PB84-200625	Methylene Chloride	EPA-454/R-93-006 PB93-207579
Chlorobenzenes	EPA-454/R-93-044 PB95-111340	Nickel	EPA-450/4-84-007f PB84-210988
Chloroform	EPA-450/4-84-007c PB84-200617/A03	Perchloroethylene/Trichloroethylene	EPA-450/2-89-013 PB89-235501/A06
Chromium	EPA-450/4-84-007g PB85-106474/A11	Phosgene	EPA-450/4-84-007i PB86-117595/A04
Chromium (Supplement)	EPA-450/2-89-002 PB90-103243/A04	Polychlorinated Biphenyls (PCB)	EPA-450/4-84-007n PB87-209540/A05
Dioxins & Furans	EPA-454/R-97-003 PB98-116650	Polycyclic Organic Matter (POM)/ Polycyclic Aromatic Hydrocarbons	EPA-450/4-84-007p PB88-149059/A17
Cyanide Compounds	EPA-450/R-93-041 PB94-118379/A07	Styrene	EPA-454/R-93-011 PB93-207520/A08
Epichlorohydrin	EPA-450/4-84-007j PB86-117603/A04	Toluene	EPA-454/R-93-047 PB94-177607
Ethylene Dichloride	EPA-450/4-84-007d PB84-239193/A05	Vinylidene Chloride	EPA-450/4-84-007k PB86-117611/A04
Ethylene Oxide	EPA-450/4-84-007l PB87-113973/A05	Xylene	EPA-454/R-93-048 PB95-123394
Formaldehyde	EPA-450/4-91-012 PB91-181842/A05		