



# THE CHIEF NEWSLETTER

— THE CLEARINGHOUSE FOR INVENTORIES AND EMISSION FACTORS —

## DON'T MISS IT!

### The Emission Inventory: Applications And Improvement International Conference And Courses

Raleigh, NC — Conference: November 1-3, 1994 — Courses: October 31, 1994

Sponsored by: Air & Waste Management Association and U. S. Environmental Protection Agency  
General Conference Cochairs: J. David Mobley and Larry G. Jones

The conference will address the development, uses and improvement of emission inventories, and will focus on evolving methods and issues in the inventory development process.

For more information, contact the A&WMA Registrar at (412) 232-3444.

## THE ANNUAL EMISSION TRENDS REPORTS

The third annual emission trends report was released in October 1993. *National Air Pollutant Emission Trends, 1900 - 1992*, EPA-454/R-93-032, tracks the changes in national emissions since passage of the 1990 *Clean Air Act Amendments*. The trends reflected in this edition show the net effect of many factors, including changes in the nation's economy, in industrial activity, technology, consumption of fuels, traffic, and other activities that cause air pollution. These trends also are influenced by changes in emissions resulting from air pollution regulation and mandatory and voluntary emission controls.

This document presents the most recent estimates of national and regional emissions of the criteria air pollutants. The emissions of each pollutant are estimated for many different source categories, which collectively account for all anthropogenic emissions. The report presents the total emissions from all 50 states and from each of EPA's ten regions. Two tables (see page 2) present the summary of the national emission estimates and the percent change in national emission estimates for the years 1900 through 1992.

This Trends report also reflects recent improvements in the way national and regional emissions are calculated. Improvement in estimation methods is ongoing, and it is expected that future reports will reflect this effort. A new methodology was applied this year, including a more accurate method of estimating pre- and post-1985 emissions. Data

bases, methods and models used to develop the estimates were all enhanced. State-derived emission estimates are incorporated, and certain years are used for trends only, while other years qualified as both trend and absolute indicators. Mobile source emissions, previously underestimated, are now reflected more accurately through applying the *Mobile5a* model nationally to estimate emissions from 1940 to the present. In addition, the non-road mobile source estimates in this year's report are based on extensive non-road survey data.

This report also includes coverage of biogenic, global warming gas, toxic, and global emissions. Estimates for the years 1990 through 1992 are preliminary, and final figures (including refinements to data used to estimate emissions) will appear in future reports. The actual format has been changed over the previous edition as well, making the overall report much easier to read.

The contents of the next report in this annual series, *National Air Pollutant Emission Trends, 1900-1993*, EPA-484/R-94-027, are already being assembled for publication. Watch for news of it in the next newsletter. These reports are also available on the CHIEF bulletin board. For a paper copy, please contact the *Info CHIEF* information line at (919) 541-5285. For further information about the report and its contents, contact Sharon Nizich at (919) 541-2825, or call the *Info CHIEF* information line.

## SUMMARY NATIONAL EMISSIONS ESTIMATES

[10<sup>6</sup> tons (10<sup>3</sup> tons for PB)]

Year	VOC	SOx	NOx	CO	PM-10 (Non-Fugitive)	PM-10 (Fugitive Dust)	PB
1900	7.76	9.99	2.61	NA	NA	NA	NA
1905	8.12	13.96	3.31	NA	NA	NA	NA
1910	8.40	17.28	4.10	NA	NA	NA	NA
1915	9.05	20.29	4.67	NA	NA	NA	NA
1920	9.29	21.14	5.16	NA	NA	NA	NA
1925	13.36	23.26	7.30	NA	NA	NA	NA
1930	18.32	21.11	8.02	NA	NA	NA	NA
1935	16.20	16.98	6.64	NA	NA	NA	NA
1940	17.12	19.95	7.57	90.87	15.43	NA	NA
1945	17.48	26.01	9.55	94.83	15.79	NA	NA
1950	20.86	22.38	10.40	98.79	16.16	NA	NA
1955	22.18	20.88	11.56	101.28	15.03	NA	NA
1960	24.32	22.25	14.58	103.78	13.90	NA	NA
1965	27.73	26.75	16.58	111.24	12.99	NA	NA
1970	29.74	31.33	20.86	118.70	12.08	NA	219.47
1975	25.14	28.12	22.30	102.11	7.25	NA	158.54
1980	28.35	26.21	23.66	129.00	7.02	NA	74.96
1982	24.86	23.38	22.67	116.15	5.45	NA	57.67
1983	25.41	22.73	22.01	115.96	6.09	NA	49.23
1984	26.14	23.66	22.63	112.97	6.35	NA	42.22
1985	25.01	23.39	22.42	107.90	6.18	44.68	20.12
1986	25.35	22.48	22.28	104.89	5.81	49.90	7.30
1987	24.72	22.62	22.81	99.30	6.04	42.04	6.84
1988	25.02	23.09	23.63	99.07	6.44	59.84	6.46
1989	23.91	23.20	23.48	93.39	6.21	53.16	6.10
1990	23.67	22.82	23.56	92.38	6.08	44.77	5.63
1991	23.40	22.77	23.41	90.68	5.81	49.54	5.01
1992	22.73	22.73	23.15	87.18	5.93	45.50	5.18

1 ton = 0.9 metric tons.

NA = not available.

## PERCENT CHANGE IN NATIONAL EMISSION ESTIMATES

Pollutant	1900 - 1992	1940 - 1992	1970 - 1992	1982 - 1992	1991 - 1992
VOC	193	33	- 24	- 2	- 3
SOx	128	14	- 27	- 1	- 0
NOx	787	206	11	0	- 1
CO	NA	- 4	- 27	- 29	- 4
PM-10	NA	- 62	- 51	9	- 7
Pb	NA	NA	- 98	- 52	3

NA = not available.

1992 estimates are preliminary. Negative % change indicates a decrease.

PM-10 comparisons pre-1991 are for non-fugitive dust emissions only.

## —{ BULLETIN BOARD NOTES }—

**Have you tried Fax CHIEF?** - If you want a paper copy of part or parts of AP-42, pick up the phone handset on your fax machine and place your order! **Fax CHIEF**, EIB's time-saving information tool, contains some of our most often requested material. Users may select from all of AP-42 Vol. I, Stationary Sources, or the highway portions of Vol. II, Mobile Sources, as well as memos, guidance, and other technical material related to air pollutant emissions. More documents will be added in the future. With **Fax CHIEF**, you can be sure of getting the latest version of the documents you need. In its first year, **Fax CHIEF** has been averaging over 350 caller requests per month. Just call either of the **Fax CHIEF** lines, (919) 541-5626 or -0548, then follow the voice instructions on making selections, and immediately get the needed material transmitted back to your facsimile machine. It operates 24 hours a day, 7 days a week, except during repair time.

All that's required is a fax machine with an attached telephone handset. Call using the handset attached to your fax machine. As directed, use the telephone keypad to enter your document request, and **Fax CHIEF** does the rest.

At the end of your call, the system will prompt you to listen for the "tone", press the "send" key, then hang up. Listen for your machine's indication of a successful connection/transmission before hanging up the phone. You may select up to two documents per phone call. Your only costs are for fax paper and your telephone charges.

**Call Krystal** - "Krystal Ball", has been added to the **CHIEF** BB, but will only survive with users' input. It will introduce topics pertinent to emission inventories and factors and will invite public comment and discussion via "Public Messages". Select <A> from the Main menu for more information. This pilot effort is being tried as a result of our asking focus groups about EPA/state/local communication issues. If our users will submit issues and questions to the "Krystal Ball", and communication thereby improves, it should provide some relief from day-to-day stresses, and we will continue the service. For assistance, or to talk with "Krystal", contact Steve Bromberg at (919) 541-1000. Regular private and public e-mail on **CHIEF** also continue.

The **OAQPS Technology Transfer Network** (TTN):  
Your gateway to U. S. EPA air quality information,  
with eighteen different bulletin boards!

Dial in via modem at (919) 541-5742 or

TELNET via Internet at [ttnbbs.rtpnc.epa.gov](mailto:ttnbbs.rtpnc.epa.gov)

**Mobile Data Converter** - Version 3 of the **On-road Mobile Data Converter** is available on the BB (as is the previous version). The new converter is designed to upload only seasonal or daily VMT. States are encouraged to use the new converter when changing their entire on-road inventories, but they should continue to use the original converter when making modifications.

**TANKS Version 2.0** - Troubleshooting documentation on this new version of **TANKS** has been added to the **CHIEF** BB under the "Emission Estimation Software" section. Some errors in the previous version have been corrected in Version 2.0 and some frequently asked questions, with answers and suggestions for using the **TANKS** program, are also presented.

**Bakeries** - U. S. EPA recommendations for estimating VOC emissions from bread bakeries have been added to the BB under "EF Guidance/Q&A - Policies - Recommendations". The file BAKERIES.TXT may be viewed on the screen. This material will appear in the upcoming fifth edition AP-42, and it is now considered to be in effect.

**AP-42 Proposed Fifth Edition** - This section has been added as a new entry on the BB. The files can be found on the Main Menu under the section "AP-42/EF Guidance". AP-42 drafts on Synthetic Fibers, Portland Cement, Talc Processing and Clay Processing have been added to the BB, under the AP-42 menu in "Draft Sections Under Review". Other draft sections are being added frequently. Please comment on this new material, either by BB E-mail or by phone.

**New L & Es** - The following new **Locating And Estimating** documents have been added to the BB: Chlorobenzenes, Methyl Chloroform, Methyl Ethyl Ketone, Toluene and Xylene.

**Two Updates** - **Water7** has been updated so please be aware of these changes. **XATEF2** is now a **FIRE** module containing unrated toxics factors.

**Downloading From The BB** - The BB has been improved with a newer version of the archiving/dearchiving software, PKZIP/PKUNZIP. In the future, compressed files added to the **CHIEF** BB will use this new software. Instructions and a downloadable copy of the software are both available on the BB. Bulletin Board activity continues to be brisk, now with over 1400 registered **CHIEF** users logging in about 5000 times per month. Always remember, after checking current "Alerts", to review the old ones to make sure you're up to date. Alerts stay current for at least a month and then are moved to the "old" list.

We like hearing from you. E-mail any ideas and suggestions you have for the bulletin board to Michael Hamlin, **CHIEF** BB Operator. If you prefer, write or phone us with your comments. To register for the BB, contact Michael at (919) 541-5232.

# AP-42 CHANGES THROUGH THE YEARS

Throughout the history of AP-42, the document has continued to grow. The evidence we and our users are faced with is the sheer number of pages we have to lift whenever we use it. When the Fourth Edition was published in 1985, there were only 888 pages covering 123 source categories. Now with six supplements, AP-42 is at almost 2,000 pages, covering 158 source categories. As anyone who has recently ordered the basic document and all of the supplements can tell you, there are very few pages that have not been replaced at least once in the improvement process, and many have been replaced two or more times.

Since a picture is worth a thousand words, a graphic illustration of the results of our efforts to improve AP-42 may be of interest.

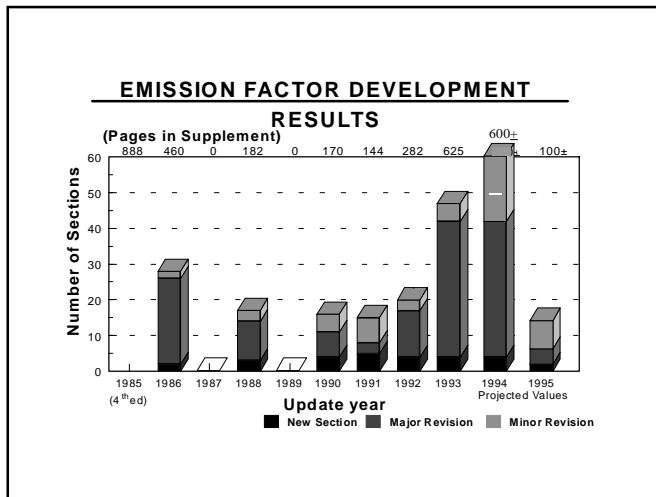


Figure 1. AP-42 Periodic Updates.

Figure 1 shows the number of sections that have received major or minor revisions or are new sections. The number of pages in a supplement are indicated at the top of the figure box. As can be seen, the last few years mark times of major change to this document.

Just the page and source category totals do not do justice to the amount of work that has occurred on AP-42 over the last several years. From the standpoint of the people that have to support this document and of those that use it, the number of emission factors in the document is of more importance. About 1985, AP-42 contained about 2,100 emission factors for five criteria pollutants. Now, AP-42 has over 7,200 emission factors for seven criteria pollutants and over 100 noncriteria pollutants.

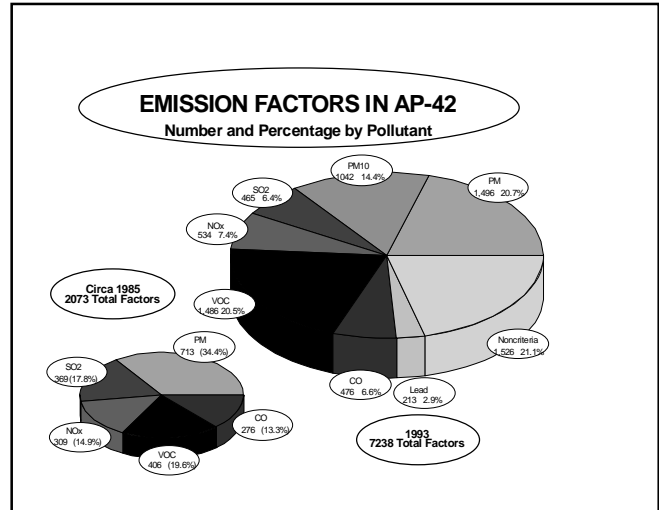


Figure 2. Pollutant Emission Factors.

The changes that have occurred in the number of emission factors, by pollutant, are illustrated in Figure 2. As can be seen in the figure, there is a dramatic increase in the total number of emission factors. There are over 3.5 times as many emission factors in the current version of AP-42 than there were in 1985. Of the original group of pollutants, the biggest increase in factors was in VOCs, followed closely by Particulate. Big increases in the number of factors have been caused by adding PM-10 and Noncriteria pollutants.

For three years now, we have been undertaking a cover to cover revision of AP-42. The objectives of this extensive work have been to add new factors and to revise and make the factor quality ratings more consistent. We had expected that many "A" and "B" emission factor ratings would slip, because of the more stringent criteria that are currently being used, but this has not happened.

(Cont. on p. 5)

**Correction:** p. 8 of Fall issue -

In the illustration of "Criteria Pollutant Trends - 1983, 1992", stated units should have been 10<sup>3</sup> tons, not 10<sup>6</sup>.

## FAX CHIEF IS BACK!

Fax CHIEF has been broken but is now back in operation. If you haven't used *Fax CHIEF* yet, see page 3 for more information. Thanks for your patience while *Fax CHIEF* was in the shop!

(Cont. from p. 4)

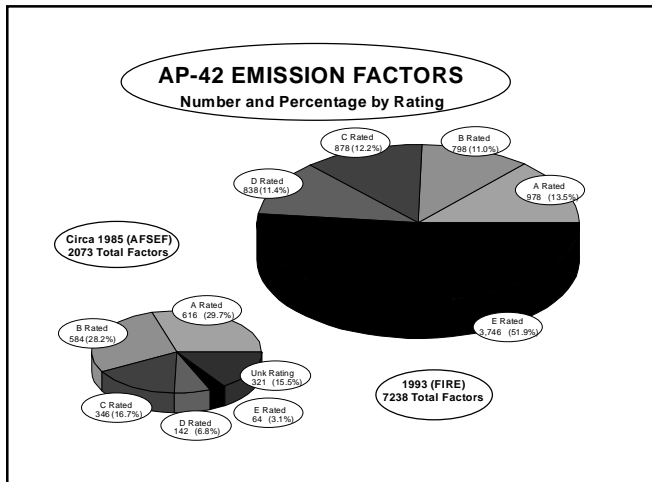


Figure 3. Emission Factor Ratings.

Figure 3 depicts changes that have occurred in the number of emission factors by the factor ratings. As can be seen in the figure the number of "A" and "B" rated emission factors has increased since 1985 (although the proportion of "A" or "B" factors is only about 25 percent in 1993).

Although there have been many new emission factors added to AP-42, we know there are many instances where no emission factors are available. Also, the number of emission factors that should be improved is daunting. Over half of the emission factors in AP-42 are rated "E".

Although much improvement to AP-42 has occurred over the last several years, much more is still needed. Our goal is to provide a document that meets the needs of its users. This goal will be difficult to achieve in the immediate future, but we're trying.

## INFO CHIEF'S MOST FREQUENTLY ASKED QUESTIONS

Here are a few of our most frequently mentioned topics and some information on each.

The *Info CHIEF* help desk number is (919) 541-5285.

### AP-42

A perpetual discussion at the help desk is on the availability of AP-42. Many of you are aware that the Fifth edition is in progress and should be available from GPO late this year. Meanwhile, the following options apply.

1. Some supplements are still available from the Government Printing Office (GPO) by calling (202) 783-3238 or fax (202) 512-2250. Prices range from \$8.00 to \$42.00. Call *Info CHIEF* for details and options.
2. All parts of AP-42 are available on the *CHIEF* BB. There is even a new section called "Proposed Fifth Edition". Downloads of draft, final, and published sections, as well as entire supplements are available.
3. *Fax CHIEF* allows the caller to fax up to two sections of AP-42 directly to his or her fax machine. Call (from a fax machine with a handset) (919) 541-5626 or 0548 for instructions. Note: The *Fax CHIEF* service had been temporarily out of order, but is now operating again.
4. AP-42 is available on Compact Disc (CD); see below.

### Air CHIEF CD-ROM

"Where can I get AP-42 on CD?" At this time, all available copies of *Air CHIEF* 3.0 have been exhausted. Version 4.0 should be available in the fall. This will be a major upgrade containing a new search engine *FOLIO*<sup>®</sup>, usable from the *WINDOWS*<sup>®</sup> environment.

### Source Classification Codes (SCC)

Lately, the number one question is, "How do I obtain a copy of the SCC list?" Many callers are familiar with the 1990 program called *AFSEF (AIRS Facility Subsystem Source Classification Codes And Emission Factor Listing For Criteria Air Pollutants)* previously available in electronic and paper forms. Since this is **NO LONGER PUBLISHED**, the following alternatives are available.

1. The *CHIEF* Bulletin Board (BB), located on our network of bulletin boards (919-541-5742), has a new menu item, "Q", which contains the SCCs. It is searchable on line and available for download in ASCII and dbf formats.
2. Also on the *CHIEF* BB under the menu item "F", "AP-42/ EF Guidance" is the *FIRE* program. *FIRE* must be downloaded and installed on a hard disk (15 MB required). It allows the user to query the data base by using filters such as SCC, CAS, SIC, etc. *FIRE* comes with modules for criteria and rated toxic pollutants. Only 43 toxics are currently rated. Other toxic factors may be found in the *XATEF2* module, also on the *CHIEF* BB.
3. Processes that do not have SCCs but which are still subject to scrutiny may be discussed with Ron Ryan at (919) 541-4330.



Call *Info CHIEF*  
at  
(919) 541-5285!

## *FROM THE EFMS CHIEF'S CORNER—*

Two roads diverged in a yellow wood,  
And sorry I could not travel both  
And be one traveler, long I stood  
And looked down one as far as I could  
To where it bent in the undergrowth;  
Then took the other, as just as fair ....  
Robert Frost

It is not common to travel on a career path twice in a career but that is the experience I have enjoyed over the last five months, albeit from the perspective of manager rather than staffer. While Jim Southerland was enjoying a “sabbatical” detail to the North Carolina air pollution control agency, I travelled the emission factor “highway” as Acting Chief of the Emission Factor And Methodologies Section here at EIB.

Some of you may recall that I started my career at EPA in the early 1980s working on emission factors and inventories under Jim. Back then, the road seemed a little less traveled with lots of potholes and unimproved sections. My latest assignment working on emission factors has shown me that, with the passage of the 1990 *Clean Air Act Amendments* and the creation of the Emission Inventory Branch led by David Mobley, the emission factor road has been widened and paved. The road is a little better traveled now, too, with more staff and resources than were available in the early 1980s. David, Jim, the Emissions Inventory Branch staff, and entire emission factor and inventory community should be proud of the progress made in the last five years. The Fifth Edition of AP-42 will be out this year completing most of the remaining “miles” of an extensive effort to upgrade our factor data bases. When I first worked on factors and inventories, the EPA staff would have been ecstatic to have tools such as *FIRE*, *TANKS*, and the *Air CHIEF* CD. Emission factors and inventories have attained a new level of credibility and support that all involved should be proud of.

However, our trip down the emission factor and inventory road has not been without some “detours”. Budgets have been reduced and are forcing us to rethink how we collect and disseminate emission factor and inventory information. Although improved, the quality and sophistication of inventories continue to lag behind those for monitoring data and modeling methods. More and better emission factors are needed, for many source categories and hundreds of pollutants. There are more miles to go, but clearly we have made progress. Consider this view from someone who had the good fortune to ride a new, yet familiar, highway for a few months.

Thanks for the opportunity, and as I squeeze back onto the crowded “freeway” of permitting again, with its “bumper-to-bumper” issues, I will remember those of you who made my trip interesting and perhaps a little more challenging. I will also remember how important emission factors and inventories are when I weigh into discussions of issues such as what is an available emissions offset. I enjoyed the trip! Maybe I’ll get the chance to ride the emission estimating “road” again before the end of my career “journey”. Until then, happy trails.

—Bill Lamason

## **RUSSIAN AIR MANAGEMENT PROGRAM (RAMP)**

EPA has been funded by the U. S. Agency For International Development to work jointly with them to conduct a multi-year effort known as the Russian Air Management Program (RAMP). The purpose of RAMP is to demonstrate the principles of air quality management to Russia's Ministry Of Environmental Protection, to identify possible improvements to their current system, and to assist them in implementing the changes throughout Russia. The Emission Inventory Branch's role in RAMP is to support activities concerning preparation of emission inventories in Russia.

In May 1993, David Misenheimer of EIB traveled to Moscow and St.Petersburg (the former Leningrad) to provide information on current U. S. emission factor and estimation methodologies and to study Russia's emission inventory practices. The Russian term for emission inventory is “kadastr”.

Russia's current emission inventory program focuses primarily on industrial sources. Point source emission estimates generally are prepared by the sources (“enterprises”) themselves, often with assistance from a “project institute” (that has attributes of a trade association), a contractor, and a research institute.

(Cont. on p. 7)

(Cont. from p. 6)

The inventory for each enterprise is submitted to a local Committee For Nature Protection, sort of an environmental council for the city or region ("oblast"). The information is then passed to the federal level. In October of 1993, EIB's support contractor for the project, Radian Corporation, sent people to Volgograd (the former Stalingrad) to further demonstrate EPA's data bases and tools, and to begin efforts for using EPA's emission factors to estimate emissions for certain enterprises.

The next steps in the program were to pilot the use of EPA methodologies and factors for sources in Volgograd; to prepare guidance and training for estimating emissions in Russia, incorporating applicable EPA methods; and to help the Russians evaluate whether to revise their inventory procedures for the entire Russian Federation. In May of 1994, James Southerland of EIB went to Volgograd to participate

in this phase of the effort. Staff from both Science Applications International Corporation and Radian Corporation provided support for developing the point and area source inventories, and for related tasks for stack testing and source improvement strategy development. These efforts are being approached in a comparison manner, where results of the Russian methods are being compared with the results from U. S. methods, with analysis then being conducted to determine the best, or combination of best, methods to use in the future.

The end product of the immediate efforts in Volgograd will be a modeler's data set that will interface with the next phase of the project, technology exchange sessions in Russia and in the United States, and with efforts to improve the emission estimation tools used in both countries. This effort is expected to spread over the next two years or longer.

## AIR AND ENERGY ENGINEERING RESEARCH LABORATORY (AEERL)

### Emissions And Modeling Branch Research Update

Development Of An Improved Model For Estimating Emissions Of Volatile Organic Compounds From Forests In The Eastern United States

Christopher D. Geron

Regional estimates of biogenic volatile organic compound (BVOC) emissions are important inputs for air quality models such as the *Urban Airshed Model And Regional Oxidant Model*. Since forests are the primary emitters of BVOCs, it is important to develop reliable estimates of their areal coverage and BVOC emission rate. A new system has been developed to estimate these emissions for specific tree genera at hourly- and county-level resolution. The U. S. Department Of Agriculture, Forest Service Forest Inventory And Analysis Eastwide Database is used to describe both areal extent and species composition of U. S. forests. Growing season peak foliar masses are derived from the empirical literature for canopies of deciduous and coniferous genera. A simple canopy model is used to adjust photosynthetically active solar radiation at five vertical levels in the canopy. Leaf temperature and photosynthetically active radiation (PAR) derived from ambient conditions above the forest canopy are then used to drive empirical equations to estimate BVOC emission rates at discrete levels of forest canopies. These estimates are then aggregated to regional levels for input into air quality models. The new model yields county-specific isoprene emission rates that are up to 10 times higher (and therefore total BVOC emission rates that are up to five times higher) than EPA's BVOC emission rate model currently used. Emission estimates of isoprene and monoterpenes from the new model compare favorably with rates measured at various forested sites in the U. S. Comparisons between the current Biogenics Emissions Inventory System and the new model are discussed in more detail in the article, "An Improved Model For Estimating Emissions of Volatile Organic Compounds From Forests In The Eastern United States", in the *Journal Of Geophysical Research*, 99(D6):12,773-12,791.

Estimated hourly emission rates ( $\text{mg-Carbon m}^{-2} \text{h}^{-1}$ ) of isoprene (Isop), sum of monoterpenes and other volatile Organic Compounds (M and O), and total BVOC are presented for each model for forests in four selected areas. PAR units are  $\mu\text{mol m}^{-2} \text{sec}^{-1}$ .

# RECENT EMISSIONS AND MODELING BRANCH (EMB) PUBLICATIONS

(For more information, contact the person named after each)

## Reports —

*State Acid Rain Research And Screening System (STARRSS): Version 1.0 User's Manual*, EPA-600/R-94-017, January 1994. Chris Geron. (919) 541-4639.

*RFP Tracking System: User's Manual*, EPA-600/R-93-173, September 1993. Sue Kimbrough. (919) 541-2612.

*Comparison Of The 1985 NAPAP Emissions Inventory With The 1985 EPA TRENDS Estimate For Industrial SO<sub>2</sub> Sources*, EPA-600/R-94-012, January 1994. Charles Masser. (919) 541-7586.

*Evaluation And Reporting Of County Gasoline Use Methodologies*, EPA-600/R-94-003, January 1994. Charles Masser. (919) 541-7586.

*Conceptual Designs For A New Highway Vehicle Emissions Estimation Methodology*, EPA-600/R-93-214, November 1993. Ted Ripberger. (919) 541-2924.

## EMB Papers presented at the EPA/A&WMA International Specialty Conference, The Emission Inventory, Perception And Reality, October 18 - 20, 1993, Pasadena, CA —

“Methods For Improving Emission Estimates”. Jeff Chappell. (919) 541-3738.

“Preliminary Analysis Of HAP Emission Inventories From Three Major Urban Areas”. Julian Jones. (919) 541-2489.

“Development And Improvement Of Temporal Allocation Factor Files”. Chuck Mann. (919) 541-4593.

“A Comparison Of Current Industrial SO<sub>2</sub> Emission Inventories”. Chuck Masser. (919) 541-7586.

## EMB papers presented at other conferences —

“The EPA Research Program For Reducing CO<sub>2</sub> Emissions Through Efficient Energy Technologies”, Tokyo, November 1993. Jeff Chappell. (919) 541-3738.

“Fuzzy Logic Motor Control For Pollution Prevention And Improved Energy Efficiency”, CONEC-93, Chattanooga, TN, October 1993. Jeff Chappell. (919) 541-3738.

“EPA's Information Management System For Tracking Reasonable Further Progress”, A&WMA, Denver, CO, June 1993. Sue Kimbrough. (919) 541-2612.

**Note:** An updated list of Emission Inventory Branch publications is planned for the next issue of the *CHIEF Newsletter*.



The CHIEF Newsletter is produced quarterly by the Emission Inventory Branch, Technical Support Division, of EPA's Office Of Air Quality Planning And Standards. Its purpose is to enhance communication within the emission factor and inventory community by providing new and useful information and by allowing for the exchange of information between and among its readers. Comments on the Newsletter and articles for inclusion in it are welcome and should be directed to Emission Inventory Branch (MD 14), US EPA, Research Triangle Park, NC 27711; telephone (919) 541-5493.

The contents of The CHIEF Newsletter do not necessarily reflect the views and policies of the Agency, neither does the mention of trade names or commercial products constitute endorsement or recommendation for use.



## EMISSION INVENTORY WORKSHOP SERIES

The Air And Waste Management Association (A&WMA), in cooperation with EIB, is sponsoring an ongoing series of workshops for preparing emission estimates for facilities or other affected operations. The program will be of particular value to industry members of A&WMA who need to know the basic requirements for emission inventories from both the regulatory and technical point of view. The types of sources that will be addressed will center on emitting facilities, but will also include point, area, and mobile sources. A&WMA faculty will present information on (1) reporting emission estimates to meet regulatory requirements, (2) uses of the data for permitting strategies, and (3) compliance and business planning. The program will also be of value to EPA and the other control agency personnel responsible for reviewing facility inventories.

The workshops will focus on:

- Strategic overview of the driving forces behind emission inventory development.
- Practical advice on carrying out an emission inventory.
- Case study information illustrating successful programs.

The workshops will assist affected operations:

- To meet regulatory requirements on contents and timeliness.
- To achieve better quality emission inventories.
- To increase consistency in emission inventories.

The next workshops will be conducted in Atlanta, Denver, Dallas, and Chicago on the following dates:

- Atlanta – December 5-6, 1994
- Dallas – February 13-14, 1995
- Denver – January 9-10, 1995
- Chicago – March 6-7, 1995

Subsequent workshops in this series will be announced in the calendar portion of future CHIEF newsletters. For more information, call the A&WMA meeting registrar at (412) 232-3444 ext. 3142.



## INVENTORIES GALORE IN '94!

### OTHER UPCOMING MEETINGS AND CONFERENCES

— A&WMA Conference on Regional Haze in the West: New Directions, September 28-30, Snowbird, UT. Call (412) 232-3444 for information.

— 1994 Florida Environmental EXPO, October 11-13, Clearwater, FL. For additional information, call Judy Foster or Daniel Moon, (813) 725-8202.

—The Emission Inventory: Applications And Improvement, A&WMA Specialty Conference, November 1-3, Raleigh, NC. Continuing Education Courses, October 31. Call (412) 232-3444 for information.

— A&WMA Conference on Computing in Environmental Management December 1-2, Raleigh, NC. Call (412) 232-3444 for information.

— Toxics Release Inventory Data Use Conference, December 5-8, Boston, MA. Call (617) 628-9297 for information.

### WHAT'S A CHIEF?

CHIEF is the acronym for ClearingHouse For Inventories And Emission Factors. Some of you use "CHIEF" to refer to this **CHIEF Newsletter**; others think of the **CHIEF** Bulletin Board (BB). **Info CHIEF** is our help desk and the **Fax CHIEF** can send you copies of your favorite sections of AP-42. Our "CHIEF's Corner" is edited by the Chief of the Emission Factor And Methodologies Section. **Air CHIEF** is our CD-ROM. Okay, so we stretched it a bit to get to **FIRE (CHIEF)**. That one stands for the Factor Information Retrieval System.

# HEADQUARTERS INVENTORY CONTACTS

Summer 1994

## EMISSION FACTORS

	<b>AP-42 Chapter</b>	<b>Contact</b>	<b>Telephone</b>
1.	External Combustion	Michael Hamlin	(919) 541-5232
2.	Solid Waste Disposal	Ron Myers	(919) 541-5407
3.	Internal Combustion	Michael Hamlin	(919) 541-5232
4.	Evaporation Loss Sources	Ron Ryan	(919) 541-4330
5.	Chemical Process Industry		
	Organics	Dennis Beauregard	(919) 541-5512
	Inorganics	Ron Myers	(919) 541-5407
6.	Food And Agricultural Industry	Dallas Safriet	(919) 541-5371
7.	Metallurgical Industry	Ron Myers	(919) 541-5407
8.	Mineral Products Industry	Ron Myers	(919) 541-5407
9.	Petroleum Industry	Ron Ryan	(919) 541-4330
10.	Wood Products Industry	Dallas Safriet	(919) 541-5371
11.	Miscellaneous Sources	Ron Myers	(919) 541-5407
12.	Storage Of Organic Liquids	Dennis Beauregard	(919) 541-5512
	Toxics	Anne Pope	(919) 541-5373
	Lead	Ron Myers	(919) 541-5407
	General information, Newsletter, Bulletin Board, <i>FIRE</i> , <i>SPECIATE</i> , <i>Air CHIEF</i> CD, Publications, <i>Fax CHIEF</i>	<i>Info CHIEF</i>	(919) 541-5285

## EMISSION INVENTORIES

1990 O <sub>3</sub> /CO SIP Inventory Status	Sharon Nizich	(919) 541-2825
O <sub>3</sub> /CO Periodic Inventories	Bill Kuykendal	(919) 541-5372
Biogenic Inventories	Steve Bromberg	(919) 541-1000
Emission Statements	Mary Ann Warner	(919) 541-1192
PM-10/Lead Inventories	Bill Kuykendal	(919) 541-5372
Toxics Inventories	Anne Pope	(919) 541-5373
Emission Trends	Sharon Nizich	(919) 541-2825
Emission Projections	Mary Ann Warner	(919) 541-1192
Quality Assurance	Bill Kuykendal	(919) 541-5372
AIRS Area And Mobile Subsystem (AMS)	Lee Tooly	(919) 541-5292
AIRS Facility Subsystem (AFS)	Steve Bromberg	(919) 541-1000
AIRS/AFS Emission Data Quarterly Report	Lee Tooly	(919) 541-5292
PM-10 SIPS		
OAQPS/AQMD	Larry Wallace	(919) 541-0906
O <sub>3</sub> /CO SIPS		
OAQPS/AQMD	Laurel Schultz (O <sub>3</sub> )/Carla Oldham (CO)	(919) 541-5511/3347
Office Of Mobile Sources	Mark Wolcott	(313) 668-4219
Lead SIPS		
OAQPS/AQMD	Laura McKelvey	(919) 541-5497

# REGIONAL OFFICE INVENTORY CONTACTS

August 1994

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	Contact	Telephone
<b>— PM-10 —</b>		
Region		
I	Matt Cairns	(617) 565-4982
II	Rick Ruvo/Kirk Wieber	(212) 264-4926/5996
III	Tom Casey	(215) 597-2746
IV	Joey LeVasseur	(404) 347-3555 ext.4215
V	John Summerhays	(312) 886-6067
VI	Mark Sather	(214) 665-7258
VII	Lisa Haugen	(913) 551-7877
VIII	Tim Russ	(303) 294-1814
IX	Morris Goldberg	(415) 744-1296
X	George Lauderdale	(206) 553-6511
<b>— O<sub>3</sub>/CO —</b>		
I	Bob McConnell	(617) 565-3250
II	Demian Ellis	(212) 264-9357
III	Raymond Forde	(215) 597-8239
IV	Joey LeVasseur/Doug Deakin	(404) 347-2864
V	Ed Doty/Bill Jones/ Charles Halten	(312)886-6057/6058 (312) 886-6031
VI	Herb Sherrow	(214) 665-7237
VII	Royan Teter	(913) 551-7609
VIII	Tim Russ	(303) 293-1814
IX	Morris Goldberg	(415) 744-1296
X	Christi Lee/Stephanie Cooper/ Montel Livingston	(206) 553-1814/6917 (206)553-0180
<b>— Air Toxics —</b>		
I	Janet Beloin	(617) 565-2734
II	Carol Bellizzi/Ken Eng	(212) 264-2517/9627
III	Iz Milner/Therese Dougherty	(215) 597-9090/1325
IV	Becky Allenbach	(404) 347-3555 ext.4223
V	Bruce Varner	(312) 886-6793
VI	Tom Driscoll	(214) 665-7549
VII	Wayne Kaiser	(913) 551-7603
VIII	Cory Potash	(303) 294-1886
IX	Cecelia Bloomfield/Regina Spindler	(415) 744-1249/1251
X	Chris Hall	(206) 553-1949
<b>— Lead —</b>		
I	Bob Judge	(617) 565-3233
II	Kirk Wieber	(212) 597-4556
III	David Arnold	(215) 597-4556
IV	Joey LeVasseur	(404) 347-2864
V	Roseanne Lindsey (IL, IN)	(312) 353-1151
V	Christos Panos (MI, WI)	(312) 353-8328
V	John Summerhays (OH, MN)	(312) 886-6067
VI	Guy Donaldson	(214) 665-7242
VII	Stan Walker	(913) 551-7494
VIII	Laurie Ostrand	(303) 294-1757
IX	Ed Snyder	(415) 744-1154
X	George Lauderdale	(206) 553-6511

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### ✿ Personnel Notes . . . .

✿ Marty Martinez, formerly the Chief of the Emission Inventory Guidance and Evaluation Section, has retired. See the next issue of the **CHIEF Newsletter** for an article on his career.

✿ Robert Jemison has completed an effective term as a co-op student with EIB. He has been performing a detailed comparison of the emission factors in the AP-42 series with information in the **AIRS** data base, with considerable success. Having Robert with us was both pleasant and productive. Robert has two BS degrees from NC State University, Mechanical Engineering And Environmental Engineering. In addition to his studies and his efforts for EPA, he works on weekends as a security guard. With the spare time left to him, Robert enjoys hiking, reading and spending time on the Internet. His hometown is King, NC, a small town near Winston-Salem.

✿ Christy Isaacs has been working as a co-op with EIB since June 1. She has recently been working on utility matching between AIRS and NADB. Additionally, she is designing the cover for the new Trends Report coming in the fall. Christy is currently working on her BS degree in Biological And Agricultural Engineering from NC State University. In her spare time, she enjoys camping, hiking, and reading. She was born in Charlotte, NC but has lived in Cary, NC for 15 years.

✿ Kelly Hairston has completed a successful summer working with EIB. She has been working with all the emission inventory tools and has also been working on a project to identify emission factor gaps in AP-42. She is working on her BS in Electrical Engineering at North Carolina A&T University in Greensboro. Kelly enjoys cooking and admiring the latest fashions in clothing. Her hometown is Stoneville, NC, a small town near Greensboro.

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