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# THE CHIEF

NEWSLETTER

CHIEF!

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— THE CLEARINGHOUSE FOR INVENTORIES AND EMISSION FACTORS —

EMISSION INVENTORY BRANCH  
TECHNICAL SUPPORT DIVISION (MD 14)  
OFFICE OF AIR QUALITY PLANNING AND STANDARDS  
U. S. ENVIRONMENTAL PROTECTION AGENCY, RESEARCH TRIANGLE PARK, NC 27711

VOL. III, No. 4

WHITMEL M. JOYNER, EDITOR

JULY 1992

## AIR CHIEF CD-ROM, VERSION 2.0 BETA, IS NOW AVAILABLE

The Emission Inventory Branch (EIB) has released the second version of its latest air emissions tool, the *Air CHIEF* CD-ROM (Compact Disc-Read Only Memory). *Air CHIEF* compiles numerous documents and other emission estimation products into a single compact disc. These products include the entire stationary source volume of AP-42; the *Locating And Estimating...* series of toxic emission reports; and the two data bases, *XATEF* and *SPECIATE*, which address emissions from toxic air pollutants. The *Air CHIEF* CD

allows for easy search and retrieval of emission estimation data, by pollutant or source description. *Air CHIEF* is updated annually. The disc and its user's manual are distributed free of charge to government agencies and nonprofit organizations and are available to others from the Government Printing Office (GPO) at a price of \$15.00. Users will need an IBM® compatible personal computer and a CD-ROM player. A brochure is available describing *Air CHIEF*, its equipment requirements and technical data, and GPO ordering information.

For more information about *Air CHIEF*, or to get the CD brochure, contact the *Info CHIEF* service phone line, (919) 541-5285, or write *Info CHIEF*, US EPA (MD 14), Research Triangle Park, North Carolina 27711.

An ordering form for the *Air CHIEF* compact disc from the Government Printing Office can be found on p. 7 below. The form may be copied, if you wish to keep your Newsletter intact. For further information, call the *Info CHIEF*, (919) 541-5285. ☚

## KUDOS! – FOR TIMELY EMISSION INVENTORY SUBMISSIONS –

EIB takes this opportunity to applaud and to congratulate the following States and Localities for meeting the May 1 deadline for submitting a Draft 1990 Base Year Emission Inventory:

Kentucky  
Alabama  
Massachusetts  
Albuquerque, NM

Oregon  
Washoe Co., NV  
(for CO)  
Washington

Here at EIB and in the Regional Offices, we sincerely appreciate your efforts, and we're glad to give you recognition for your work. Our "κudos" goes out to you, and we are looking forward to working with you on your **FINAL** entries! These timely responses from you have strongly emphasized the concept that 1992 is **THE YEAR OF THE EMISSION INVENTORY**.

More draft inventories are arriving as this is written, and we hope to have over half of the total in hand by the time you read this. ☚

*This newsletter is printed on recycled paper.*

## NEW MOBILE SOURCE INFORMATION —

Two new products are available to help in the estimation of emissions from motor vehicles, both on- and off-highway. EPA's Office Of Mobile Sources (OMS) has completed its latest revision of *Procedures For Emission Inventory Preparation, Volume IV: Mobile Sources*, EPA-450/4-81-026d Revised. This is the third and latest version of this volume, first published in 1981 and reworked in 1989, and of course, it supersedes both

earlier ones. It contains an overview of the mobile source category, identifying specific methods which can be used to identify sources, estimate their emissions, and establish and maintain a useful, current vehicle emission inventory. When mentioning this guidance, remember to specify the 1992 version. Paper copies of this document can be gotten from the *Info CHIEF*, (919)541-5285,

and from the *CHIEF* bulletin board here.

Also, The beta version of the emission factor model, *MOBILE5*, will presently be available soon for distribution. As soon as this pc program is ready, probably some time in August, it will be put on our BB.

For further information on either of these items, contact Natalie Dobie at OMS, phone (313) 741-7812.

## UPDATE FROM THE CHIEF BB —

Bulletin Board activity continues to grow, and we now have over 675 registered *CHIEF* users. Since the last Newsletter, there have been several improvements installed on the BB. We are still opening more access lines for you to reach the BB, and some of the questions that have arisen during registration about the necessary configuration of your systems have been eliminated. In addition to the list of current Alerts, there is now a list of old Alerts for those who want to make sure they're up to date. Current Alerts will stay on the list for at least a month before they become "old" and are moved off the current list.

The new draft updates of AP-42

sections are coming in continuously, and they are being put on the bulletin board as they arrive. We encourage you to review these drafts, and we hope you'll give us any comments you have on them. You can do this easily through the E-mail capability on the BB. Remember that the drafts are subject to change before their publication in an AP-42 Supplement. The Surface Impoundment Modeling System (SIMS) is still the most popular data base downloaded from *The CHIEF BB*. New programs and information on the BB include WATER 7, CHEMDAT 7, and several memos from EIB's Inventory Guidance And Evaluation Section regarding the

Direct Assistance Program, which is discussed on p. 4 below. These memos have helpful material on assessing such sources as wineries, bakeries, landfills and municipal waste combustors. Also, the long awaited *TANKS* pc program for estimating VOC storage emissions, will be available on *The CHIEF BB* about August 1.

Let us hear from you – help us make the bulletin board as useful as we can with your comments and suggestions. Write, phone or E-mail to Michael Hamlin, bulletin board System Operator, here at the Newsletter. ✉

## EIBERS TEACH FOUR EMISSION ESTIMATION COURSES AT THE AWMA MEETING & THE COMING SPECIALTY CONFERENCE

Jim Southerland and Anne Pope were involved in teaching four popular courses at the 1992 annual Air & Waste Management Association gathering in Kansas City, and they will repeat this important work at the Emission Inventory Issues And Progress specialty conference this October in Durham, NC (See "Upcoming Meetings", p. 7). These classes are clear opportunities to learn about EIB's tools for estimating air emissions of criteria and toxic pollutants, and people are taking advantage of them in considerable numbers. In Kansas City, some actually rearranged their plans to stay beyond the scheduled hours. These are the courses:

AIR 150 - Overview Of EPA (And Related) Air Emissions Data Reporting (Jim Southerland and Anne Pope) - This course defined the various air emission reporting needs and requirements for EPA. It provided information on how different reporting requirements are related, and it included general assistance on locating tools for estimation.

AIR 152 - Demonstration And Hands-on Experience With EPA's Emission Estimation Tools (Anne Pope and Jim Southerland) - This course covered the use of EIB's pc data base management systems (*XATEF* and *SPECIATE*), the *Air CHIEF* CD-ROM, and *The CHIEF* Bulletin Board System. Attendees were provided with these tools and shown how to use them, and this proved to be a very popular event.

AIR 154 - Estimating Evaporative Emissions From Storage Tanks (Bill Moody/MRI, Robin Barker/MRI, and Anne Pope) - This course examined the various types of storage tanks used for organic liquids and the variables that affect their air emissions. The newly revised AP-42 equations for estimating emissions from storage tanks were presented. *TANKS*, EIB's

new pc program that computerizes the new AP-42 equations, was demonstrated and provided to the attendees. (Look for this program on *The CHIEF* bulletin board around the first of August.)

AIR 156 - Estimating Fugitive Particulates From Various Sources (John Kinsey/MRI and Jim Southerland) - This course gave guidance on PM-10 emission estimation procedures and inventory techniques for open fugitive dust sources. It presented basic terminology, data requirements, calculation procedures and decision criteria, with detailed examples of emission inventory applications. ↵

## INTEGRATING EMISSIONS DATA REPORTING —

Before 1985, estimated emissions data were gathered primarily for the annual National Emissions Data System (NEDS) reporting, under the *Code Of Federal Regulations*, or for occasional nonattainment area State Implementation Plan (SIP) development. Since that time, emissions reporting requirements have markedly increased for many pollutants and sources, particularly industrial sources. This significant expansion has resulted from the *Superfund Amendments And Reauthorization Act* (SARA) Title III release reporting requirements, which particularly involve toxic air pollutants; and from requirements of the Clean Air Act. As a result of the Clean Air Act Amendments of 1990 (CAAA), EPA has been busy implementing the requirements in the Act's eleven Titles.

Each Title establishes one or more emissions reporting requirements, such as emissions statements, operating permits, emission compliance reporting, acid precipitation, and expanded SIPs. Then, each reporting requirement must be implemented by sources and State control agencies, and must be tracked by EPA.

The expansion of the number and types of emissions data reporting has prompted the Emission Inventory Branch to begin long-term discussions among the various federal emissions programs, in hopes of coordinating efforts toward streamlining data collection for individual plants, State and Local agency experts, and EPA Headquarters and Regional staff. As a first step in this process, EIB is identifying sources' emission reporting requirements to EPA and other federal

agencies. Several issues have already been identified that must be resolved, involving reporting frequency, synchronized timing of submissions, incompatible data element requirements, inconsistent data element definitions, and inconsistent size cutoffs.

The ultimate goal of this effort is to integrate, to the extent possible, the different emissions reporting requirements. Doing this should help ease the reporting burden on emission sources and on State/local air pollution control agencies. EIB will also be addressing each of the previously mentioned issues as well as any new problems uncovered in the process of resolving these issues. For more information, contact David Misenheimer at the Newsletter, phone (919) 541-5473. ↵

## UPDATE ON BIOGENIC EMISSIONS —

Supplemental guidance is now available on the *CHIEF* bulletin board which will detail how States should prepare the meteorological files to run the Personal Computer program on the Biogenic Emissions Inventory System (PC-BEIS).

In addition, to make this an easier process for the States, meteorological files for each nonattainment area, ready for use with *PC-BEIS*, will be uploaded to *The CHIEF BB* at the same time as the guidance. States are encouraged to use these meteorological

files to speed up the computation of biogenic emissions.

Any questions on this program should be addressed to Keith Baugues at the Newsletter, phone (919) 541-5366. ↵

# 1992 IS THE YEAR OF THE EMISSION INVENTORY!

- FINAL EMISSION INVENTORIES FOR O<sub>3</sub>/CO NONATTAINMENT AREAS  
ARE DUE TO EPA BY 11/15/92.

DRAFTS ARE DUE NOW!

## DIRECT ASSISTANCE FOR EMISSION INVENTORY PREPARERS —

To provide quick and direct help to those preparing emission inventories, the *CHIEF BB* now is listing questions and answers which have come up through the EIB Direct Assistance Program. Frequently encountered problems in reviewing emission inventories are also listed, with suggestions on how they can be dealt with. An "Alert" will appear on the *CHIEF* screen to direct you to the new information. If you need quick assistance with your inventory work, you can send us your questions under the "Public Messages" part of *The CHIEF BB*. We will have a response

to you within a week of receiving your inquiry.

This program is going full speed ahead, and it has already met with success. The Direct Assistance Team has conducted workshops in Missouri, Pennsylvania, Florida, New Jersey, Texas, Louisiana and Delaware, to give participants a lot of valuable assistance in preparing their inventories. Other States have requested our visits, and we will be going to them as the program progresses. We are using *The CHIEF BB* to get information to you even quicker than through the visits. For

example, the bulletin board now offers technical memoranda discussing emissions from wineries, underground storage tanks, and several other sources. We hope to convince you all that "We're from the Government, and we're here to help you" is true at the Emission Inventory Branch!

For more information about the Direct Assistance Program, or with any questions on the technical memoranda, contact Sharon Bruno here at the Newsletter, phone (919) 541-2825. ✍

## DRAFT GUIDANCE AVAILABLE ON EMISSION STATEMENTS —

A draft of the document, *Guidance On The Implementation Of An Emission Statement Program*, is now available. This document was prepared in response to a provision in the 1990 CAAA requiring that sources in both ozone nonattainment areas and attainment areas of ozone transport must submit a statement listing their

actual VOC and NO<sub>x</sub> emissions. The guidance serves to interpret this provision in the Clean Air Act by addressing 1) which sources are subject to the requirement, 2) what constitutes an emission statement, 3) what should be submitted, and 4) the dates for these submissions.

This document is being placed on the bulletin board, also.

For copies of the draft guidance, call the *Info CHIEF* at (919) 541-5285. For more information about the program, contact Mary Ann Warner-Selph here at the Newsletter, phone (919) 541-1192. ✍

## — — DOWN IN THE EFMS CHIEF'S CORNER — —

Recently, I gave the readers an overview of our plans for a complete update for AP-42, EPA's longest running and all-time best selling document. This effort is well under way, and significant activity has taken place, affecting each AP-42 chapter. Some new sections are being added, some revised, and some for now only superficially modified. In the upcoming *Supplement E*, which will go into printing in October, I had projected a "hope" to update as much as 75% of the book. I've come to realize what a big bite that is — many hundreds of pages — and now the sights are lowered to a more realistic 40 - 50%. It now looks as if the rest of this huge update work will follow in a *Supplement F* about October 1993.

The reasons for the delay are severalfold. We have had a

multiplicity of projects in our office, many of them with timetables and other requirements, many of them mandated under the Clean Air Act Amendments of 1990, and all has strained our resources and capabilities. Also, there have been problems with contract capacity, contractor and contract personnel availability, new data and numerous comments at the advanced stages of the work — a plethora of delays here and there. Not to whine and complain too much, but it's clear that Murphy has been working on our plans.

We have started putting draft AP-42 sections on *The CHIEF BB* for you to see and to comment on, so tap in periodically and look at what's there. Remember — these drafts are subject to change. They are in a special part of the bulletin board, away from the

current sections and any final sections not yet published in a supplement. The first major draft update to go on the BB was the new AP-42 Chapter 12 on petroleum storage tanks.

We think you're going to like the improvements, format changes and significantly enhanced factors. After the big AP-42 update program is finished, maybe our lives can get back to a more organized pace. Meanwhile, please bear with us.

### NEW PEOPLE

EIB has been helped in its recent work by the arrival of four talented people.

**Richard Basom**, following a long career with IBM, has come to us as a computer technician in the Agency's Senior Environmental Employment Program. He has over 23 years experience in the computer industry, significantly involved with system

design and analysis, programming, testing and implementation in a variety of industrial settings. Richard has an undergraduate degree in Business Administration and a Master's in Industrial Relations. In our Branch, he's been quite effective in extracting data from various places for our evaluation. Richard spent 36 years with the National Guard, mostly in data processing. He likes reading, gardening/landscaping, and being a handyman at home. He's active in the IBMer social groups.

**Laurel Schultz**, an Environmental Engineer in the Ozone/CO Branch of our Air Quality Management Division, is working with EIB on a 5-month rotation assignment. She's already involved in producing the next Trends report and in inventory validation efforts, and she will be our contact with one of the Regional Offices on O<sub>3</sub>/CO inventory matters. Laurel's lending us an important hand here.

We have two young energetic college students aboard, thanks to the EPA summer hire program. They are both adept with computers, and we're

glad to have them with us.

**Greg Bryant**, a resident of Raleigh and a 4.0 GPA student at NC State University, is now only one year away from degrees in both electrical engineering and applied mathematics. He likes music, photography, reading and swimming, having spent two years on the NCSU swim team. Greg tells us that, after several years of lifeguarding and coaching swimming in the summers, he's happy with "an air-conditioned job far away from screaming children." He's engaged and hence goes around a bit glassy-eyed sometimes.

**Scott Royston** is a rising senior at what he calls the "prestigious whole grain academic center" of Rice University. After growing up in Rockville, MD, which he calls "the Mecca of toad farming", he's now playing cowboy in Houston while pursuing his degree in Mechanical Engineering. Scott says his head got good and brain-baked painting houses for the previous two summers, the latter of which saw him fall off a roof,

and somehow it makes him happy to be working here with us for awhile.

#### OTHER NEWSLETTERS

EIB is certainly not the only organization with a healthy and informative newsletter. We have seen a very interesting bulletin called *On The Air*, put out by Elizabeth Waddell in EPA's Region 10 office in Seattle. Call her about it at (800) 424-4EPA or (206) 553-8578. There is also a helpful periodical being produced by the Wisconsin agency which deals with emission factors and inventories, and for information on this one, contact Ralph Patterson at the WI DNR Bureau Of Air Management, Box 7921, Madison, WI 53707.

If everyone else putting out newsletters will send us copies, we'll be glad to exchange issues with you and to mention your work here, which will "expose" you to our more than 4300 addressees in the U. S., its territories and 43 other countries. ♪  
— Jim Southerland

## — THE HUMAN FACTORS . . . KEITH BAUGUES —

The Emission Inventory Branch member in the spotlight this issue is our favorite ole Hoosier of French lineage, Keith Baugues. Keith holds down EIB's vanguard position on the topics of emission projections, biogenic emission estimations and the major issues involving the role of photochemical modeling in emission inventory development.

Keith was born and reared in West Terre Haute, Indiana, and has a B. S. degree from Rose Hulman Institute Of Technology in Terre Haute. After graduation, he worked for over 6 years with the Indiana Air Pollution Control Division in Indianapolis, where he became Chief of the Modeling And Data Analysis Section. Then for a time, he was a consultant in the private sector, first with an EPA contractor in Chicago, then with



another in Dallas. In January 1984, Keith joined the EPA at its Regional Office in Dallas, and he came here to the Office Of Air Quality Planning And Standards in December of that same year. Before joining EIB and taking up his present tasks, Keith analyzed ambient NMOC and NO<sub>x</sub>

data, prepared O<sub>3</sub> design values, prepared and provided guidance on how to use photochemical models, and oversaw the development of inventories for use in *ROM*, the Regional Oxidant Model.

Keith and his wife live in Durham with their son. Away from the desk, he enjoys reading (mostly science fiction), listening to music (almost anything but jazz and C&W), and playing basketball and tennis. His concentrated gaze can take the fur right off the ball. Keith can be reached at EIB by mail, by phoning (919) 541-5366, or through *The CHIEF Bulletin Board* E-mail. Remember to pronounce both syllables in his last name, although he'll still talk to you if you don't. ♪

## THE SOUTH COAST AQMD'S RECLAIM PROGRAM —

The South Coast Air Quality Management District is developing a regulatory program called the Regional Clean Air Incentives Market (RECLAIM). RECLAIM will require a 5% annual reduction of mass emissions from all sources of volatile organic compounds, nitrogen oxides and sulfur oxides. These sources can be flexible in determining which of them should be controlled to achieve the requisite 5% per year decrease.

Under this program, most sources which expected to participate will have to install continuous emission monitoring devices. Some of the sources, storage tanks for example, do not lend themselves easily to stack monitoring, and it is proposed that these sources use AP-42 factors.

This program is a positive step which could be quite effective. However, to meet its demands, it may be necessary to develop new techniques

for estimating emissions which require far more resources than traditionally have been devoted to producing factors in AP-42. We plan to follow the RECLAIM program closely and to be actively involved as it progresses and is implemented.

For more information about the RECLAIM program, contact Dennis Beauregard here at the Newsletter, phone (919) 541-5512. ↵

### ⌘ TECH NOTES . . . .

⌘ — **O<sub>3</sub>/CO INVENTORY PREPARATION PLAN (IPP) STATUS** - Final IPPs for 43 States were due to the Regions on October 1, 1991. All 45 plans have been received in both draft and final form, and 38 plans have been approved. EIB will continue to work with the Regions on their strategies for dealing with any problems. For more information, contact Lee Gabele at the Newsletter, phone (919) 541-5292.

⌘ — **SURFACE COAL MINING** - Section 234 of the 1990 CAAA requires that emission factors and models applying to surface coal mining activities be reviewed and revised, to assure that they don't overpredict emissions. EIB, with the Source Receptor Analysis Branch, is planning a multiyear program to meet the CAAA provision, and we will begin source testing this Summer of high priority surface coal mining operations. For more information, contact Dennis Shipman at the Newsletter, phone (919) 541-5477.

⌘ — **CRUSHED STONE PROCESSING** - EIB has begun source testing of tertiary crushers and screens to develop PM-10 factors for AP-42 Section 8.19.2. Two facilities have been tested, and the next test is scheduled for early summer. For more information, contact Dennis Shipman at the Newsletter, phone (919) 541-5477.

⌘ — **REMEMBER THE INFO CHIEF FOCAL POINT** - We have activated a central telephone contact here at the Newsletter to answer general questions and to direct your calls to the technical staff people who can best help you. If you already know whom you want to talk with here, please call her or him. But if your inquiry is general in nature, or if you need further information, first try the *Info CHIEF* at (919) 541-5285.

⌘ — **AUTO-MOTIVATION** - A car produces about 20 pounds of CO<sub>2</sub> with each gallon of gasoline used. A well-tuned car with properly inflated tires can use 20% less gas than a poorly running one with slack tires, for an annual reduction of about 1000 lbs of CO<sub>2</sub>. Also: drive less, pool your cars, take the train.

⌘ — **LIGHT BULBS GOING OFF** - Replacing one ordinary 50 watt incandescent bulb, used about 4 hours a day, with a fluorescent bulb giving the same amount of light (lumens) can save 110 lbs of CO<sub>2</sub> per year.

⌘ — **RECYCLE!** - Turning in 100 aluminum cans saves 34 pounds of CO<sub>2</sub>; 100 average glass bottles recycled save 30 lbs. Recycle 100 lbs of paper and eliminate 20 lbs of CO<sub>2</sub>. ↵

### REGRETS, REGRETS, REGRETS. . . .

To all who called and wrote about getting your own 1992 - *The Year Of The Emissions Inventory* tee shirts, we can only apologize and admit we've gone down for the third time in the Sea Of Red Tape. As some of you already know, questions about use of the Agency seal and about handling the costs and receipts involved proved to be stronger than our desire to call a lot of attention to getting those emission inventories done.

Thanks to everyone who contacted us. It was a good idea. ↵

**UPCOMING MEETINGS AND CONFERENCES**

— National Title III Implementation Workshop, 12-14 August, Durham, NC. Contact Kathy Ward, Alliance Technologies, 100 Europa Drive, Suite 150, Chapel Hill, NC 27514, phone (919) 968-9900.

— Symposium On Greenhouse Gas Emissions And Mitigation Research, EPA/Acurex Environmental, 18-20 August, Washington, DC, phone (919) 544-5690

— 9th World Clean Air Congress & Exhibition, AWMA/Environment Canada, 30 August-4 September, Montreal, Canada Contact Marci Mazzei, AWMA, Box 2861, Pittsburgh, PA 15230, phone (412) 232-3444/FAX (412) 232-3450.

— Emission Inventory Issues And Progress, second annual EPA/AWMA specialty conference, 19-22 October, Durham, NC Contact Larry Jones, Emissions Modeling Branch (MD 62), EPA/AEERL, Research Triangle Park, NC 27711, phone (919) 541-7716; or John O'Connor, Radian Corp, Box 13000, Research Triangle Park, NC 27709, phone (919) 541-9100 ☪

*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 Whitmel M Joyner, Editor, Emission Inventory Branch (MD 14), US EPA, Research Triangle Park, NC 27711, commercial phone (919) 541-5493

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