HAP-PRO VERSION 2.0
NOW AVAILABLE!
By Joe Steigerwald
CTC, ITG, OAQPS

Version 2.0 of HAP-PRO is now available from the CTC BBS. The program file and the User's Manual are downloadable items within the Downloading Software and Other Items area of the BBS. The User's Manual is on the BBS in an ASCII text format, WordPerfect 5.x format, WordPerfect 6.0 format, and as an Envoy file. All are in self-extracting format so just download them, put them in a new directory, go into that directory, and type their file name from the prompt. The executable file is large, 1.7MB, so use the highest speed modem you can.

AIR WAVES
By Bob Blaszczak
CTC Co-Chair, OAQPS

I'm sure glad I didn't make that "get out the CTC NEWS on time" new years resolution again. I'm not sure when you'll be seeing this, but I know it's not January. (I sure hope it's no later than February!) We're still getting use to our new organization and trying to figure how to do more with less. Getting the CTC NEWS out during this turmoil has been a real chore. It seems like I'm being devoured by my workload instead of empowered to get it done. Oh well, I'll grow from the experience.

For the fifth time in the seven years I've been with the Office of Air Quality Planning and Standards (OAQPS), I (and the CTC) have moved. We're still in the same building, just a different floor with a different view. Although moving is getting to be the routine thing to do every year or so, it's still drudgery and very time consuming. The only good thing about it is that it forces an old pack rat like me to cleanup. The move did cause some disruption of CTC HOTLINE service and we sincerely hope this did not cause you any pain. Otherwise, as far as you're concerned, nothing has changed except our regular mail drop (now MD-12). So, make a note of it and be sure to use it when writing the CTC. We have also added a second FAX line (919/541-0361) to improve access to the Air and Energy Engineering Laboratory (AEERL) part of the CTC. The old FAX number (919/541-0242) still works and connects you with the OAQPS side of the CTC. Feel free to use either number. We'll make sure that it gets to the right person.

"Centro de Control Tecnologico: Podriamos ayudarle?" That's the greeting our Spanish speaking friends will hear when calling the CTC HOTLINE in the near future. (That translates to "Control Technology Center: can I help you?") The CTC is becoming an active player in the Mexican Border Initiative, a program to clean up pollution along the Mexican border. A Spanish speaking CTC HOTLINE and bulletin board are under development. We hope to have them up and running by late spring. Although targeted to promote environmental improvements along the Mexican border, the new (continued page 2)...
HAP-PRO VERSION 2.0
NOW AVAILABLE!
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inorganic vapors and particulates).

HAP-PRO also includes an expert review system for the design of thermal incinerators, catalytic incinerators, and carbon adsorber systems. The program reviews the design results generated, makes recommendations for changes, and allows easy evaluation of design sensitivities.

Even though the version number made a large jump (from 1.2 to 2.0) the changes in the model were mostly internal. The following changes were made from version 1.2 to version 2.0:

- The system was redesigned for improved accuracy of calculations and better performance.
- The data entry screens were modified to be consistent for all data groups.
- The system was modified to allow multiple control devices to be associated with a stream. This allows users to run calculations on different control devices for the same stream and HAPs and compare the results.

HAP-PRO version 2.0 is available through the CTC BBS to anyone who wants to download it. However, the CTC will make the model available on 2 high density 3.5 inch diskettes to individuals in State or local air pollution control agencies if they are unable to download the files from the CTC BBS. The model will also be available from the National Technical Information Service (NTIS) for a fee in the near future. Both the BBS version and the diskette version examine your harddrive upon installation to see if you have an older version of HAP-PRO on your system. If it finds HAP-PRO version 1.2, you will be asked if you need to save any data file you may have already created. If it finds an older version, you will be prompted to either call the CTC for the appropriate files to upgrade it to version 1.2 or to allow the installation program to overwrite these older files. Remember, if you updated to version 2.0 from a version prior to version 1.2, some existing data files may be lost or corrupted. Either way, it would be prudent to make a backup copy of any important HAP-PRO data files you have before you install version 2.0 over any older version except 1.2.

After the installation is complete, enter HAP-PRO at the DOS prompt to execute version 2.0. The hardware requirements for using the HAP-PRO model are not very stringent. They are: an IBM PC/XT/AT or compatible; 512K minimum free RAM; hard disk with a minimum of 4.2 megabytes of free storage space for installation; monochrome or CGA/EGA/VGA color monitor; and MS-DOS version 3.1 or greater.

AIRWAVES
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Hotline will accept calls from all Spanish speaking people. We’re also in the process of identifying key documents that need to be translated into Spanish and technical assistance/guidance project needs. Stay tuned for additional developments.

The Federal Regulation Data Base has proven to be a very popular addition to the RACT/BACT/LAER Clearinghouse (RBLC) bulletin board. It provides quick access to summary information on Federal emission standards (NSPS, NESHAP, and MACT) in a format similar to that used for the source specific (traditional) RBLC data bases. We will be adding a browse function in the near future to simplify viewing the regulations. We are also inviting State and local agencies to input their significant regulations. If you have any suggestions for additional improvements, please let us know.

As is the tradition, this January edition of the CTC NEWS includes a CTC product ordering form. Our resources are limited. So, please order only what you need. Be sure to include your return address and phone number when placing your order. Also, note that the Document requests should be sent to mail drop 91 (MD-91) instead of our usual drop. This will help us expedite filling your order.

Enjoy the NEWS. See you in the Spring.

DANIEL RETIRES

The Control Technology Center (CTC) recently lost the services of a valued staff member. Bobby Daniel, whom many of you would recognize by his sultry southern drawl, retired on January 3, 1995, from the EPA. He has been with the EPA in the Air and Energy Engineering Research Laboratory for 25 years, including the last 4 years as a member of the CTC staff.

His experience, patience, and wisdom have greatly contributed to the success and growth of the CTC. Bobby accepted each call as a new challenge and endeavored always to give the caller complete and accurate service. He said, many times, that he enjoyed providing this service to government and private industry agencies.

Although Bobby brought to the CTC expertise in many areas of pollution control technology and research, his target areas have been asphalt emissions and advanced volatile organic compound (VOC) control technology evaluation. Bobby’s research studies in asphalt emissions have become recognized authoritative documents.

Bobby joins his wife, Martha, in retirement. He enjoys spending time with his son and best friend, Thomas, and his daughter, Deborah. Besides being an avid golfer, he is a dedicated fan of Duke University football and basketball.

Bobby, we wish you good luck, happiness, and a monthly “hole in one” in the coming years!
The RACT/BACT/LAER Clearinghouse (RBLC) has a new data base that may help you respond to these questions more effectively.

In November 1994, the RBLC added a data base that contained summaries of regulations that were enacted at the federal level in response to the Clean Air Act and Amendments. Starting in January 1995, State and local agencies can add summaries of their own rules to the data base, making this information available to all TTN users. You may include all your rules or just those that you feel may be of interest or that you want to share with others. How many and which rules you enter are up to you.

Adding and updating your agency's regulations is easy. To get started all you need is a password to access the data entry module of the regulation data base. This module uses the same menu-driven system that you know from the RBLC's control technology determination data base. It includes context-sensitive on-line help at all menus and prompts to assist you with your input. If you would like to enter

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WILLIAM MAXWELL - CTC EXPERT ON EMISSIONS FROM UTILITIES

By Janet Erwin, Acurex Environmental

CTC callers needing expert advice concerning emissions from utilities are likely to be directed to William Maxwell. His current work as the Project Lead for the Utility Air Toxic Study Report to Congress puts him on top of ongoing research to determine possible health effects resulting from hazardous air pollutant emissions from utilities.

Originally from the Midwest, Bill earned his B.S. in Civil Engineering from Kansas State University in 1969. After serving 2 years in the Army under the ROTC program, he returned to Kansas State to begin working towards his Masters in Sanitary Engineering, which he was awarded in 1973.

Bill's degree prepared him for his work as an environmental engineer at the Midwest Research Institute in Kansas City. There, as an EPA contractor working under the New Source Performance Standards (NSPS) contracts, he performed field testing at various industries, including power plants and pulp mills. These projects were part of EPA's continuing efforts to carry out work under the Clean Air Act.

Bill's work under the NSPS contracts brought him to Durham in 1979, where his continued work as an EPA contractor eventually led to his coming on board with EPA in 1985. He comments on his 9 years with EPA, "It doesn’t seem like it has been that long." He further commented that he enjoys the people he has the opportunity to work with, and that his job provides him, "a chance to attempt to do something good."

Well, he must have been successful in his attempts! In March of 1992, Bill was honored with a Bronze Medal for Commendable Service for his work on the small boiler NSPS team developing standards of performance for small industrial/institutional/commercial boilers. Again in November of the same year, he was recognized with another Bronze Medal. This one commended his work on the source category list project team, on which he contributed to the development of the list of source categories for which Section 112 standards would be required under the Clean Air Act Amendments. Last June, Bill's outstanding efforts were recognized once more. He was awarded a third Bronze Medal for his work on the medical waste incinerator technical program and his contributions to the development of the technical background information necessary to develop standards of performance.

At work, Bill spends time determining whether or not utilities need to clean up their act. In his free time, however, he enjoys tennis, camping, and helping his two boys, both scouts, with their skills and sometimes their homework. Although Bill claims he doesn't have any upcoming travel plans, he enjoys returning to the Midwest to visit his family, or breathing in some coastal air at Topsail or Myrtle Beach.

SMALL BUSINESS UPDATE

Deborah Elmore, Federal SBAP Coordinator, CTC/OAQPS

WE NEED YOUR PROJECT IDEAS NOW!

It's time to start thinking about what types of assistance projects you would like to see from the Federal SBAP in 1995. If you have any ideas for projects, especially those not related to a federal regulatory effort, please let us know as soon as possible. Co-sponsored projects that share responsibility and resources are also quite "popular" in this era of streamlining government (and budgets too)!

If you would like to discuss a possible project, please contact Deborah Elmore at (919) 541-5437.

SBAP FORUM

For each issue of the "CTC NEWS", we would like to invite one or more of our State Small Business Assistance Programs to discuss successful and innovative activities that may be of interest to their colleagues across the country in our "SBAP Forum". If you would like to be one of our guest writers, please contact Deb Elmore at (919) 541-5437.

Mom's Bakery

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Special Hot Cross Buns

Handy Dry Cleaners

Spring Air Conditioner Check Time!

Clyde's Copies

Special - 5 Shirts for One Dollar!
CTC RESOURCES

The CTC provides reports and software resulting from its efforts to government personnel free of charge. (Others may order them from the National Technical Information Service using the “PB” numbers shown here.) Below is a list of CTC resources published in the past two years. The CTC is happy to provide its resources to government personnel. However, because of the large response we anticipate to this list, we ask that you limit your request to the resources for which you have an immediate need and the quantity to one. To order CTC resources, COMPLETE FORM AND MAIL INFORMATION (on reverse side), CUT OUT FORM, FOLD, STAPLE/TAPE CLOSED, APPLY POSTAGE AND MAIL TO THE CTC.

REF NO.  AIR TOXICS
9  ( ) "Handbook: Control Technologies for Hazardous Air Pollutants" (HAP Manual), EPA-625/6-91-014, PB92-141373 (Manual)
53 ( ) "Evaluation of VOC Emissions from Heated Roofing Asphalt," EPA-600/2-91-061, PB92-115286
60 ( ) "Controlling Odorous Emissions from Iron Foundries," EPA-600/R-92-058, PB92-166925
67 ( ) "Air Emissions from the Treatment of Soil Contaminated with Petroleum Fuels" EPA-600/R-92-124, PB92-212476
94 ( ) "Analysis of Atmospheric Deposition Samples from Easton, PA," EPA-600/R-93-057, PB93-181600,
100 ( ) "Air Emissions and Control Technology for Leather Tanning and Finishing Operations," EPA-453/R-93-025, PB94-120219
106 ( ) "Evaluation of Mercury Emission from Fluorescent Lamp Crushing," EPA-453/R-94-018, PB94-176932
114 ( ) "Evaluation of Emissions from Paving Asphalts," EPA-600/R-94-135, PB95-129110
133s ( ) "HAP-PRO Model User's Manual, Ver. 2.0," EPA-450/R-94-002(Software and user manual)

COMBUSTION
58 ( ) "Burning Tires for Fuel and Tire Pyrolysis: Air Implications," EPA-450/3-91-024, PB92-145358
66 ( ) "Characterization of Emissions from the Simulated Open-Burning of Non-Metallic Automobile Shredder Residue," EPA-600/R-93-044, PB93-172914
76 ( ) "Mutagenicity of Emissions from the Simulated Open Burning of Scrap Rubber Tires," EPA-600/R-92-127, PB92-217009
78 ( ) "Evaluation and Costing of NOx Controls for Existing Utility Boilers in the NESCAUM Region," EPA-453/R-92-010, PB93-142016
102 ( ) "Emissions from Burning Cabinet Making Scraps," EPA 600/R-93-21, (PB94-130408
105 ( ) "Characterization of Air Emissions from Simulated Open Combustion of Fiberglass Materials," EPA-600/R-93-239, PB94-136231

GLOBAL GREENHOUSE GASES TECHNOLOGY TRANSFER CENTER
80 ( ) "Development of an Empirical Model of Methane Emissions From Landfills," EPA-600/R-92-037, PB92-152875
83 ( ) "Analysis of Factors Affecting Methane Gas Recovery From Six Landfills," EPA-600/2-91-055, PB92-101351
84 ( ) "List of Papers and Reports for EPA's Research Program on Air Emissions from Landfills and Other Waste Management Processes"
86 ( ) "Landfill Gas Recovery/Utilization - Options and Economics", EPA-600/A-92-170, PB92-217066
88 ( ) "Emissions and Mitigation at Landfills and Other Waste Management Facilities," EPA-600/R-92-116, PB94-132180
121 ( ) "Methane Emissions from Industrial Sources," 1993, EPA-500/A-94-089, PB94174760
122 ( ) "Database of North American Landfill Gas to Energy Products," March 1994, EPA-600/A-94-064, PB94-162773

RACT/BACT/LAER CLEARINGHOUSE
117 ( ) "RACT/BACT/LAER Clearinghouse Flyer

VOC - SOURCE CATEGORIES
68 ( ) "Identification and Characterization of Missing or Unaccounted for Area Source Categories," EPA-600/R-92-006, PB92-139377
70 ( ) "Control of VOC Emissions from Ink and Paint Manufacturing Processes," EPA-450/3-92-013, PB92-190230
77 ( ) "Control of VOC Emissions from Nonferrous Metal Rolling Processes," EPA-453/R-92-001, PB92-227677
85 ( ) "Alternate VOC Control Technique Options for Small Rotogravure and Flexography Facilities" EPA-600/R-92-201, PB93-122307
93 ( ) "Alternative Control Technology Document for Bakery Oven Emissions," EPA-453/R-92-017,PB93-157618
96 ( ) "Automobile Paint Spray Booth Cleaning Emission Reduction Technology Review (in final processing)
101 ( ) "Initial Assessment of Emissions from Heat Setting Carpet Yarn," EPA-600/R-93-161, PB93-229862

MISCELLANEOUS
90 ( ) "OAQPS Cost Control Manual — Supplement 2,"(Gas Absorbers) EPA 450/3-90-006b, PB93-138147
92 ( ) "A Guidebook for Explaining Environmental Regulations to Small Businesses," EPA-453/B-93-023, PB94-120334
112 ( ) "Oil Suppression of Particulate Matter at Grain Elevators," EPA-453/R-94-049
118 ( ) "Evaluation of a Liquid Chemical Scrubber System for Styrene Removal," EPA-600/R-94-211
48 ( ) Complete list of CTC resources

Check here if you would like to be added to the CTC News mailing list. (If your name appears on the attached mailing label, you are already on the mailing list. You may also use this form to notify us of an address change.)

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regulations for your agency, contact the BLIS System Administrator at (919) 541-2736 for a password.

After you have a password, choose <T> from the BLIS BBS to access the regulation data base. Then choose <E> to access the edit module. This module is password-protected, so enter your password at the prompt. The system verifies your password and displays the record selection menu. Select the <A> option to add a new rule to the data base. When you add the regulation, the system assigns it an 8-character rule identifier (much like the BLISID). Use the rule identifier whenever you want to view or update information for one particular regulation with the <E> option. To list all the rules in the data base for your State or local agency, use the <L> option.

The regulation data base is organized so that a rule is associated with the type of facility whose pollutant emissions are governed by the regulation. This facility is referred to as the affected facility. Information at the regulation/affected facility level includes the rule number (as assigned by your agency), rule status, statutory basis for emission limits, proposed and effective dates, references to supporting technical documentation, and explanatory notes. Especially important is a telephone number for a contact at your agency who is knowledgeable about the regulation.

Each affected facility consists of one or more processes that are regulated by the rule. Data at the process level includes process type, SCC code, and additional notes for details about the process itself. Each process, in turn, consists of information on one or more pollutants and the emission limits required by the regulation. Pollutant level information includes details about add-on equipment and/or pollution prevention methods that can satisfy the rule; estimated capital costs and operations and maintenance costs; and cost effectiveness in dollars per ton.

Try to fill in as much information as possible when you are adding a new rule, and be sure to use standard terms and abbreviations. Other users interested in your agency’s rules will be using the query module to access this information. Complete and consistent data help insure that searches with any of the allowable fields produce the desired results. The searchable fields are the same ones used in the determination data base, except for a few fields that do not apply to regulations (e.g., AIRS ID).

The RBLC is enthusiastic about the federal and State regulation data base and hope you will take advantage of this new capability. As States enter their own information on key rules, both federal and State rules will be available—all in a single data base. Call EPA at (919) 541-2736 to get a password from the BLIS System Administrator, and get started adding your agency’s regulations today.
ENVIRONMENTALLY SAFE AEROSPACE EQUIPMENT CLEANING COMPOUND

SYNOPSIS
Numerous manufacturers of cleaning compounds are continuing to qualify to the new Military Specification, MIL-C-87937B Cleaning Compound, Aerospace Equipment. This specification developed by San Antonio Air Logistics Center (SA-ALC), Kelly AFB, Texas, establishes the requirements for biodegradable, water dilutable, environmentally safe cleaning compounds for use on Air Force equipment (aircraft, engines, and aerospace ground equipment). Environmentally safe means no ODC or EPA 17 materials. The cleaners fall into four classes:

- Type I is a terpene-based solvent emulsion, water-dilutable cleaning compound.
- Type II is any water dilutable cleaning compound with no flash point.
- Type III is a gel-type cleaning compound.
- Type IV is a heavy duty, water dilutable cleaning compound with no flash point.

Independent laboratories, manufacturers, and Department of Defense (DOD) agencies conducted extensive laboratory tests, reformulations, and field tests during the writing of this specification. There are currently cleaners qualified as Types I, II, and III. Manufacturers are currently testing material to qualify as Type IV, with qualification expected by the end of 1994. All are biodegradable cleaners that meet materials and performance criteria including:

- Compatibility with polyimide wiring insulation.
- Removing oil, hydraulic fluid, and other soils from surface with no streaking, blistering, or discoloration.
- Containing no known toxic or carcinogenic substances.
- Biodegradability, the EPA biodegradable acceptable rate is 70 percent within 28 days. Type I is 75 percent biodegradable within 28 days, while Types II, III, and IV are 85 percent biodegradable within 28 days.
- Cleaning efficiency (passes a standardization cleaning test developed by SA-ALC and an independent testing lab).

BENEFITS/LIMITATIONS

Mr. Gus Zachariades, chemist for the preparing and qualifying activity, SA-ALC/SFTT, stated, “There are currently several good cleaners qualified to Types I, II and III, which can be found in the Qualified Products List (QPL). Many more compounds are in the process of qualifying to all types.”

MIL-C-87937 cleaning compound benefits include:

- Ability to remove carbon, solidified grease, gelled oil, and other types of soil in any application method such as cold dip tanks, sprayers, foams, hand-wipe, or brushed on application.
- Type I cleaners remaining effective for up to two months in dip tanks by simply skimming off the separated oil and replenishing the lost fluid.
- Reusing diluted cleaner solutions, from Type I cleaners, when recycled through an oil-water separator.
- Requiring rinse water at room temperature rather than heated water.
- Cleaning compound with demonstrated biodegradability.
- Documented materials compatibility.

MIL-C-87937 cleaning compound limitations include:

- The necessity of diluting with water.
- The necessity of rinsing aircraft or parts with cold water to prevent leaving a residue or stain.
- Ferrous alloys that may flash rust may require a protective coating or a rust inhibitor in the rinse water.
- No standard water-dilution ratio. This ratio varies from manufacturer to manufacturer and type of application. Specific applications figures depend on parts cleaned.
- Type I cleaner’s corrosive effects on soft metals (such as indium).
- A potential adverse effect on cleaning properties caused by the quality of local water.
- Costing more than previous non-biodegradable cleaners.

MIL-C-87937 is approved for aerospace ground equipment and certain airframes when approved by the appropriate Single Manager for the equipment involved. John King, Chief of the Materials Engineering Section at SA-ALC, stated “This specification is communication of an effort initiated over six years ago by the Air Force Civil Engineering Support Agency at Tyndall AFB, FL. Under their direction, over 300 parts with cold water to prevent leaving a residue or stain.”

Editors Note: This article was submitted by the U.S. Air Force and reflects their experience and satisfaction with new cleaning agents. EPA encourages the development and use of performance based specifications and more environmentally friendly materials that prevent or minimize pollution. However, use of these materials as part of a program to comply with environmental regulations must be considered on a case by case basis.
various cleaners were tested for performance and MIL-C-87937 is the result. The SA-ALC portion of this initiative was to develop a specification from the best of the best and originally only one type of cleaner was planned. As conditions and requirements changed, four different types have resulted.”

DOCUMENTATION

Technical documentation concerning MIL-C-87937 cleaning compounds is available from Brian Ballew. (See below.)

ENVIRONMENTAL

Lt. Robert Reed, Environmental Engineer, SA-ALC, stated, “MIL-C-87937 is a masterful combination of performance and environmental considerations. It is one of the first documents from the Air Force in which environmental considerations were given equal weight with that of performance.” Many local, State, and base regulations prohibit dumping some cleaners into the waste treatment facilities because although a cleaner may be biodegradable, the soils being removed may not. Check with your base and city environmental management offices prior to releasing new chemicals into your discharge lines.

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