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Planning and Standards
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EPA Control Technology Center NEWS

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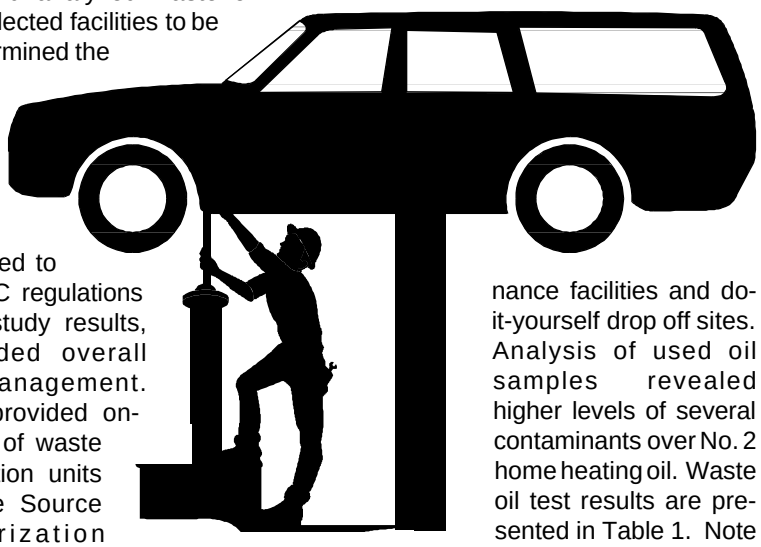
WASTE OIL COMBUSTION

By Bob Blaszczak
CTC/OAQPS

The CTC, in cooperation with the State of Vermont Department of Environmental Conservation (DEC), has completed "Waste Oil Analysis and Waste Oil Furnace Emissions Study," EPA-456/R-95-001. This study characterizes waste oil (i.e., used crankcase oil), the air quality impacts of combusting waste oil in air atomizing space heaters, and the need to adjust Vermont DEC rules governing used oil combustion.

This study resulted from a request made by the Vermont DEC to the CTC to assist in a study of waste oil requested by the Vermont General Assembly. The DEC planned the project, collected and analyzed waste oil samples, selected facilities to be tested, determined the air quality impact of emissions from waste oil combustion, considered the need to change DEC regulations based on study results, and provided overall project management. The CTC provided on-site testing of waste oil combustion units through the Source Characterization Group A in the Emissions, Monitoring and Analysis Division, OAQPS/EPA.



Waste oil samples were collected from 21 gasoline and diesel maintenance facilities and do-it-yourself drop off sites. Analysis of used oil samples revealed higher levels of several contaminants over No. 2 home heating oil. Waste oil test results are presented in Table 1. Note that some of the contaminants found are the result of performance additives in the virgin oil and are not necessarily the result of contamina-

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AIRWAVES

By Chuck Darvin
CTC Co-chair, AEERL

Greetings from the Co-chair! If you are wondering whether the CTC has had a change in management since Bob Blaszczak usually writes this column, be assured, he just had an attack of writer's cramp this quarter.

However, for those of you who are not familiar with its structure, the CTC is divided into two sections, gathering expertise from two Environmental Protection Agency (EPA) sponsor organizations. Bob is the Co-chair from the Office of Air Quality Planning and Standards (OAQPS), responding to your calls regarding regulatory questions and related technology application issues. On the other hand, I Co-chair the CTC on behalf of the Air Pollution Prevention and Control Division (APPCD) of the EPA Office of Research and Development (R&D). The APPCD group, consisting of research engineers and scientists, responds to calls for technical information and R&D assistance.

The research side of the CTC can call on the immediate services of four engineers and scientists to address your technical issues. In addition, we frequently call for technical support from the 75 engineers and scientists of the sponsoring research laboratory to conduct studies in a broad range of technical disciplines, especially issues involving air emissions.

The R&D side of the CTC has, in my opinion, the most exciting assignments of the two groups. Since most of the technical studies result from your requests, they tend to be more practical, with immediate application to your technical problems.

Some examples of successful studies include research in the area of tire burning, and emissions from roofing and road asphalt. At your request, the CTC conducted research into the nature of emissions from tire burning, thereby becoming a widely recognized and used authority on the composition and characteristics of the emissions. The documents from our studies on roofing and road asphalt emissions are regarded as widely recognized and used information on pollutants from these sources.

As a result of your HOTLINE calls, the CTC developed SIMS (Surface Im-

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WASTE OIL COMBUSTION

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tion from use in engines. The majority of samples complied with the constituent and property limits stated in Vermont regulations.

Stack testing was conducted on five atomizing waste oil furnaces currently in service and one No. 2 fuel oil furnace. A sample of the fuel combusted at each site during the emission test was also collected and analyzed. Stack emission test results indicated higher levels of contaminants over that of No. 2 fuel oil. Waste oil combustion emission test results are presented in Table 2. These results were modeled to determine compliance with Vermont's ambient air quality standards for the pollutants listed.

Table 2: Emission Testing Actual Results (mg/min)

Facility	HCl (mg/min)	Particulate (mg/min)	Arsenic (mg/min)[1]	Cadmium (mg/min)[1]	Chromium (mg/min)	Lead (mg/min)
No. 2 oil	22.06	0	<0.1575	<0.2600	0.2076	0.2861
WO/1	556.74	416.5	<0.3577	<0.7070	1.3235	15.4974
WO/2	166.48	333	<0.1808	<0.3163	1.1472	13.1789
WO/3	453.27	499.5	<0.2326	<1.2598	2.1205	25.7692
WO/4	192.01	666	<0.3821	<0.7941	2.3153	27.2374
WO/5	362.73	416.5	<0.1862	<0.6366	1.3211	22.4792
high[2]	556.74	666	<0.3821	<1.2598	2.3153	27.2374
average[2]	346.25	466	<0.2679	<0.7428	1.6455	20.8314
low[2]	166.48	333	<0.1808	<0.2600	1.1472	13.1789

[1]Arsenic and cadmium results are all reported as non detectable. The values presented represent the varying levels of detection for each specific sample collected which is a function of the sample mass.
[2]Values are for waste oil testing results only.

Table 1: Used Oil Samples Average Analytical Results

contaminant	gasoline engine oil	diesel engine oil	virgin engine oil	No. 2 fuel oil	No. 4 fuel oil
arsenic (ppm)[1]	--	--	--	--	--
barium (ppm)	2.73	3.39	<1.00	<1.00	<1.00
beryllium (ppm)	<0.02	<0.02	<0.02	<0.02	<0.02
cadmium (ppm)	<1.51	2.34	<0.25	<0.25	<0.25
chromium (ppm)	3.19	3.91	<2.00	<2.00	<2.00
lead (ppm)	47.23	57	<20.00	<10.00	<10.00
nickel (ppm)	<1.40	1.85	<1.20	<1.20	8.34
zinc (ppm)	1161	1114	1210	5	9.05
ash (% w/w)	0.54	0.46	0.135	0.13	0.55
PCBs (ppm)	<5	<5	<5	<5	<5
total halogens (ppm)	<350	<234	<300	<200	<200
total organic halogens (ppm)	<301	<217	<292	<200	<200
flash point (ºF)	>200	>200	>200	>200	>200
sulfur (% w/w)	0.36	0.25	0.36	0.12	0.19
nitrogen (% w/w)	0.04	0.02	0.02	<0.01	0.03

[1]Arsenic concentrations are not reported due to analytical difficulties with accurately determining arsenic concentrations at the necessary levels. While the laboratory can quantify arsenic concentrations in oil greater than 250 ppb, under the procedures of method 3050 some organic arsenic compounds are lost through volatilization, resulting in poor spike recoveries and the possibility of false negative results. Only one sample had an arsenic concentration >250 ppb and that concentration was reported as >2 ppm.

The fuel analysis and emission testing clearly show that waste oil combustion has higher emissions than No. 2 fuel oil for several contaminates; however, emissions from the waste oil furnaces tested were either in compliance with the Vermont ambient air quality standards or were similar to emissions from No. 2 fuel oil combustion (i.e., at the levels present, pollutants were difficult to detect or quantify).

The report is divided into two parts. The first part is the report prepared by the DEC for the Vermont General Assembly. Part two is the EPA emission testing report for the waste oil furnaces tested. This report is available on the CTC BBS. To order a hard copy, government agencies should call the CTC HOTLINE. Others should call the National Technical Information Service (NTIS) at 800/553-6847.

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MACT, CTG, NSPS, ACT AND TITLE I RULE SCHEDULES**

MACT STANDARD	Proposal	Final
Aerospace (coatings)	* 6/94	6/95
Asbestos MACT/GACT	*1/95***	11/95****
Asbestos Litigation	*1/93	***
Ferroalloys	9/95	11/96
Flexible Polyurethane Foam	2/96	1/97
Marine Vessel (load/unload)	*5/94	6/95
Mineral Wool	2/96	3/97
Off-site Waste & Recovery	*10/94	11/95
Petroleum Refineries	*6/94	6/95
Pharmaceutical Production	3/96	11/97
Polymers & Resins I	6/95	5/96
Polymers & Resins II	*5/94	*3/95
Polymers & Resins III	Schedule under revision	
Polymers & Resins IV	*3/95	3/96
Portland Cement	1/96	1/97
Primary Aluminum Prod.	10/95	11/96
Printing/Publishing	*3/95	3/96
Pulp & Paper (combustion)	*2/95	12/96
Pulp & Paper (non-comb.)	*10/95	3/96
Secondary Aluminum Prod.	11/95	12/97
Secondary Lead Smelters	*5/94	5/95
Shipbuilding (coatings)	*11/94	1/95
Wood Furniture Coating	*11/94	11/95
Wood Treatment	11/95	11/96

CTG ****	Proposal	Final
Aerospace Coatings	*11/94	6/95
Industrial Wastewater	*12/93	on Hold
Shipbuilding (coating)	Schedule Under Review	
Batch Processes	*12/93	on Hold
Offset Lithography	*11/93	on Hold
Plastic Parts Coating	on Hold	on Hold
VOL Storage	*12/93	on Hold
Wood Furniture Coating	*11/94	11/95

ACT	Final
Plywood/Particle Board (PM10)	Schedule Under Dev.

NSPS	Proposal	Final
Degreaser NSPS	*8/94	8/95
Elec. Utility Gen. Rev. (NOx)	*5/94	12/96
Landfill NSPS & 111(d)	*5/91	8/95
Med. Waste Inc. NSPS & 111(d)	*2/95	4/96
NOx NSPS Revision (407(c))	11/95	12/96
Mun. Waste Combustors II & III	*9/94	9/95
SOCMI Sec. Sources NSPS	*8/94	8/95
Starch Mfg. Industry NSPS	*8/94	8/95

Other Rules	Proposal	Final
Arch./Ind. Coatings (§183e)	5/95	5/96
Auto Refinishing (§183e)	Schedule under Dev.	
Consumer Products List (§183e)	*8/94	9/95
Haz. Waste TSDF, Phase II (RCRA)	*7/91	12/95
Haz. Waste TSDF Phase III (RCRA)	Schedule under revision	

NOTE:
* Indicates date completed
@ Indicates on a court ordered deadline
** All schedules are tentative and subject to change without notice. Only those rules with proposal or promulgation dates within one year are included. Completed rules are removed from list after six months.
***Schedule to be determined by litigation/negotiation
****ACT's have been issued for most CTG categories by April 1995

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A I R W A V E S

(continued from page 1)

poundment Modeling System) and HAP-PRO (Hazardous Air Pollutant Program). These software programs are used extensively by industry and government agencies for development of emissions strategies, and evaluation of operating permit applications. Although not developed for the CTC, SAGE (Solvent Alternatives GuidE), is on the CTC bulletin board. Over 3000 copies of these software systems have been distributed through our document distribution program, or downloaded from our bulletin board.

The CTC staff stands ready to assist and support your efforts to reduce air pollution. Whether you have a regulatory or technical question, call us to discuss the issue. Every question is important to us. If there is an answer, we will find it! On behalf of the CTC staff, and the scientists and engineers that provide technical support, I thank you for your confidence in and support of the Control Technology Center.

Oh! In case you don't hear from me over the next few quarters, I'll probably be back in the lab working on a CTC research project.

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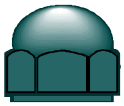
S M A L L B U S I N E S S U P D A T E

YES, THEY'RE HERE!

Two new informational brochures are now available from the Federal SBAP-



"New Regulation Controlling Air Emissions from Solvent Cleaning Machines (Degreasers)" (EPA-453/F-94-083)

"New Regulation Controlling Air Emissions from Chromium Electroplating and Anodizing [redacted]" (EPA-453/F-95-001)

Also available are accompanying detailed guidebooks that discuss ways to comply with these new regulations, and include example reporting and recordkeeping forms-

"Guidance Document for the Halogenated Solvent Cleaner NESHAP" (EPA-453/R-94-081)

"A Guidebook on How to Comply with the Chromium Electroplating and Anodizing National Emission Standards for Hazardous Air Pollutants" (EPA-453/B-95-001)

These materials will be made available to small businesses through the State SBAPs and State Small Business Ombudsman Offices (SBO's). For a list of your State's SBAP/SBO contacts, or additional information on ordering these items, please call the CTC HOTLINE. You can also download these materials from the CAAA BBS; Title III - Policy & Guidance.

OIL SUPPRESSION OF PM AT GRAIN ELEVATORS SBAP PROJECT UPDATE

By Bob Blaszczak, CTC/OAQPS

SBAP sponsored testing of a grain elevator in Greenwood, Nebraska was completed in August 1994; however, the efficiency of oil suppression technology was less than expected. Since oil was applied in the leg of the elevator, this result could have been caused by inadequate mixing of oil and grain. Greater efficiencies are anticipated if oil is sprayed during active grain tumbling. As a result, the National Grain and Feed Association, with the cooperation of EPA's Emissions, Monitoring and Analysis Division, SBAP and CTC, will be conducting additional tests this summer. The new tests should document the effectiveness of oil suppression technology under more optimal conditions.

At the Greenwood site with the oil suppression system operating at the typical 25 psi, the test results indicated about 60% efficiency for both PM10 and total suspended particulate (TSP) when transferring milo, and 69% and 48% efficiency for PM10 and TSP, respectively, when handling corn. With the oil suppression system at 20 psi, efficiency remained about the same when handling corn, but dropped considerably when handling milo.

The SBAP and CTC will keep you advised. Just check the CTC NEWS and CTC or SBAP BBSs for updates on the test results. We hope to have a report based on all valid test results by early fall 1995.

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TECHNOLOGY NOTEBOOK

HAP-PRO 2.0, YOU HAVE TO INPUT VALUES

By Lyndon S. Cox
Senior Environmental Employee

A few weeks ago, I got a call on the HOTLINE from a person who had a software problem. The caller had downloaded HAP-PRO version 2.0 from the CTC Bulletin Board System (BBS), and found that for thermal incineration and catalytic incineration the electrical consumption, and therefore the cost of electricity, was being computed as zero. How could this be?

First, I contacted the Project Officer and outlined the problem that was encountered. I noted that electrical power consumption is calculated in the Control Cost Manual (EPA 450/3-90-006) from which HAP-PRO is derived.

The Project Officer went to the programmer who encoded the computer program for HAP-PRO. The programmer proceeded to look into the program and found that the calculation was indeed present in HAP-PRO. Then the programmer traced the parameters to ensure that they were being entered and computed properly by HAP-PRO. The programmer found that, to compute the electrical power consumption, *the pressure drop has to have a non-zero value.* The pressure drop is found among the parameters of the control device. This value must be entered because there is no explicit default value.

Why is this the case? In the Control Cost Manual, the electrical power consumption is given by the equation:

$$\text{Power}_{fan} = \frac{1.17 \times 10^{-4}\ Q_{total}\ )P}{,}$$

Where: Power_{fan} is in kilowatts.

Q_{total} is the actual flow volume corrected for temperature.

)P is the pressure drop in inches of water, and has no explicit default value in HAP-PRO. Therefore, the computation assumes a default value of zero.

, is the fan and motor efficiency, which has a default value of 60% in HAP-PRO.

The power consumption is multiplied by the hours of operation per year and the cost per kilowatt-hour to give the annual cost of electricity. That means that a non-zero value for pressure drop must be entered to obtain a non-zero value for the electrical consumption and the cost of electricity.

Without actual values, this pressure drop can be estimated. Page 3-55 of the Control Cost Manual gives reasonable values for pressure drop in incinerators and heat exchangers as indicated in the table above.

Equipment Type	Energy Recovery, %	P, inches of water
Thermal Incinerator	0	4
Catalytic Fixed-BEd Incinerators	0	6
Catalytic Fluid-Bed Incinerators	0	6 - 10
Heat Exchanger	35	4
Heat Exchanger	50	8
Heat Exchanger	70	15

These values are additive. That is, a thermal incinerator with a 50% energy recovery by heat exchanger would have a pressure drop of 4 inches of water in the incinerator itself plus a pressure drop of 8 inches of water in the heat exchanger. The overall pressure drop would be 12 inches of water. However, the *total* pressure drop is required, which also includes the pressure drop in the duct work bringing flow to the incinerator and taking flow from the incinerator to the atmosphere. One example problem in the Control Cost Manual uses a total pressure drop of 23 inches of water.

The basis for pressure drop in duct work is discussed in Chapter 10 of the Control Cost Manual, which is the Third Supplement to the Control Cost Manual. This pressure drop consists of losses through straight ducts, fittings, branch devices, venae contractae, and stacks. The pressure drop across duct work for the particular incinerator can vary widely, and must be determined for each installation. Therefore, we can refer you to either Chapter 10 of the Control Cost Manual or a good Mechanical Engineering Handbook to calculate the pressure drop for the duct work in your installation.

Be aware that, when using HAP-PRO, you *must* enter a value for the total pressure drop across the incinerator and its duct work to obtain an accurate power consumption. The cost of electricity, and therefore the annual operating cost, depend on this value. But please remember, the value computed is only as good as the input data.

Fortunately, the calculator is present in HAP-PRO version 2.0 to help you do any necessary calculations.

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Control Technology Center NEWS

The CTC NEWS is a quarterly publication of the U.S.EPA's Control Technology Center (CTC). The CTC is an informal, easy-to-use, no cost, technical assistance service for all State and local (S/l) air pollution control agency and EPA Regional Office staffs. For others, some services may be on a cost reimbursable basis. The CTC offers quick access to EPA experts and expertise via the CTC HOTLINE and the CTC Bulletin Board, and in-depth technical support through source specific Engineering Assistance Projects or more generic Technical Guidance Projects. The CTC is operated by the Air and Energy Engineering Research Laboratory, Office of Research and Development, and the Information and Program Integration Division, Office of Air Quality Planning and Standards in Research Triangle Park, North Carolina.

If you have any air pollution emission or control questions, or would like more information about the CTC and the types of technical assistance available, CALL THE CTC HOTLINE!

(919) 541-0800

Publication of the CTC NEWS does not signify that the contents necessarily reflect the views and policies of the U.S.EPA, nor does the mention of trade names or commercial products constitute endorsement or recommendation for use.

R A C T / B A C T / L A E R C L E A R I N G H O U S E U P D A T E

By Jo Ann Kerrick, ViGYAN

RBLC EMPHASIZES POLLUTION PREVENTION

Recent EPA policy and rules regarding air pollutant emissions have increasingly emphasized "pollution prevention" (P2) as the preferred alternative or, at least, a complement to add-on control equipment. P2 refers to process changes, changes in raw materials or fuels, and other methods designed to prevent or reduce pollution at the source. The RACT/BACT/LAER Clearinghouse (RBLC) has just completed a project to bring it up-to-date with respect to P2 and to enhance the productivity of data base queries related to P2 information.

First, to highlight P2 information within the data base, several data fields at the pollutant level have changed. A logical field was added to indicate what each permit requires for a specified pollutant:

* No P2 or add-on controls
* Add-on control equipment (hardware)
* Pollution prevention methods
* Both add-on controls and P2 methods.

Also, a single, longer character field was added to hold narrative information about required P2 methods and add-on controls. This single data field replaces separate control equipment and process modification data fields. The new field allows room for more detailed descriptions of prevention and control methods and should make the RBLC data base more helpful to users. Both new logical and character fields are searchable. Pollutant data screen and the download reports have been revised to accommodate new data fields.

The second part of our effort was to review all determinations in the current data base, paying particular attention to information about P2. Information in data base fields labeled "Control Equipment" and "Process Modification" was transferred to the new logical and character fields described above. Wherever possible, standardized terms were used to insure that text searches can successfully find all the applicable information. For example, the phrase "FUEL SPEC", for fuel specification, now appears in all determinations which require specific fuels (low sulfur coal or fuel oil, for example). We also evaluated the completeness and technical consistency of information about P2 methods. For those determinations in which existing information was either completely missing or of questionable applicability to the specific process, we contacted the submitting state or local agency to obtain correct and complete information and added it to the data base.

Hopefully these changes will give users easier access to P2 information in the RBLC data base. Submitting agencies should also find that the longer data field makes it easier to describe P2 and control methods required at the facilities they permit.

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EXPANDED HELP FOR RBLC

If you're a long-time user of the RBLC, you may consider yourself an expert who doesn't need any help. However, you might want to look at these recent upgrades to our on-line help. We've added a pick list of SIC codes in both Query and Edit. Also, we've revised the Edit help to indicate which fields are required before a determination can be promoted from the transient data base. We're only trying to help!

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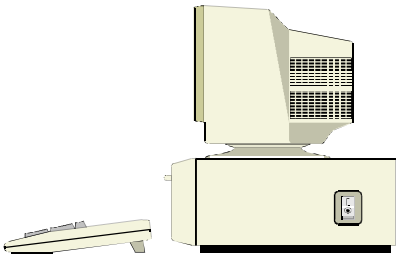

NEW ADDITIONS TO REGULATION DATA BASE

The RBLC regulation data base (REGS) now lets you scan all rules in the data base – **without doing a search**. A new "Browse" option, available from the REGS main menu, lets you view the complete list of regulations. The list is sorted by affected facility name so that you can readily find rules of interest to you. In addition to viewing the rules on-line, you can mark selected rules and download them to your local PC. Choose a regulation from the list, go to the regulation data screen, and mark the rule for downloading. Repeat this process for as many rules as you like, and then choose a download format. Use Browse if you only want to view rules on-line or if you are just interested in a particular affected facility. It's quicker than building a query and searching the data base. When you need to access rules for certain process types or pollutants, Query is still the most efficient way to locate information.

REGS contains summaries of federal regulations enacted in response to the Clean Air Act and Amendments (CAAA). For newer rules, the complete text of the regulation is available on the CAAA BBS. To help you find this information, the regulation data base now includes the names and locations of files on the CAAA BBS. Rules available on the TTN are flagged with a "C" in the affected facility list, and the CAAA BBS file information is available in a pop-up box on the process list screen.

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CTC EXPERT KELLY LEOVIC

By Heather Sigmon,
Acurex Environmental

If you call the CTC HOTLINE with a question about Indoor Air Quality, you may find yourself in a discussion with Kelly Leovic. Pleasant and easy to talk to, Kelly will give you all the information you need and more about her area of expertise at EPA/APPCD's Indoor Air Branch. Her current projects include identifying and characterizing sources of indoor air emissions from office equipment such as copiers and printers, developing pollution prevention techniques and guidelines for formulating less toxic aerosol consumer products, and publishing a biannual newsletter for the Air Pollution Prevention & Control Division entitled "Inside IAQ."

A native of Buffalo, NY, Kelly arrived in Durham in 1980 to attend Duke University without having ever seen Durham or Duke. Fortunately for the EPA and the numerous community affairs Kelly participates in, she fell in love with the Triangle area and has been here since, with the exception of a year spent working in Colorado. After earning a Bachelor of Science in Geology and Math in 1983, Kelly continued on at Duke, earning a Masters of Science in Civil and Environmental Engineering in 1985. Additionally, in 1992, Kelly received an MBA from the Fuqua School of Business at Duke University, a degree which she feels has made her a more well rounded person. Rest assured though, Kelly has no future plans to leave the EPA and climb the corporate ladder!

Kelly began working for APPCD in 1987, doing mainly field work for the Radon Mitigation Branch. Kelly's diligence and hard work earned her a bronze medal for scientific leadership in reducing significantly elevated levels of radon in two schools in Nashville, Tennessee. This and other radon work ultimately led to the publication of "Radon Prevention in the Design and Construction of Schools and Other Large Buildings," a technical guide for architects and engineers, as well as an informational guide for school principals and administrators to learn the importance of radon prevention. In 1992 Kelly moved over to the Indoor Air Branch where she began her work with office equipment and aerosol emissions.

Kelly has participated in several EPA-sponsored educational outreach programs. Through the EPA Scientist Teacher Partnership, Kelly would go to an area elementary school once a month to teach the classes of a teacher she was assigned to. She has also been part of a one-day science fair program for local high school students.

In addition to all her other work for the Indoor Air Branch, Kelly is organizing a symposium on Engineering Solutions to Indoor Air Quality Problems to be held in late July. She was also on the planning committee of the EPA in Research Triangle Park, for the celebration of the 25th Anniversary of Earth Day. One may wonder how, with so much to do, Kelly has time to answer CTC calls, but she is never too busy to help someone needing information. Kelly sees answering CTC calls as a great way of passing on information and another way she can help educate others on issues regarding indoor air.

Kelly, her husband Todd, and new baby Cody love to travel and are hoping to take a trip to the Virgin Islands sometime this summer. It sounds like a great way to relax.

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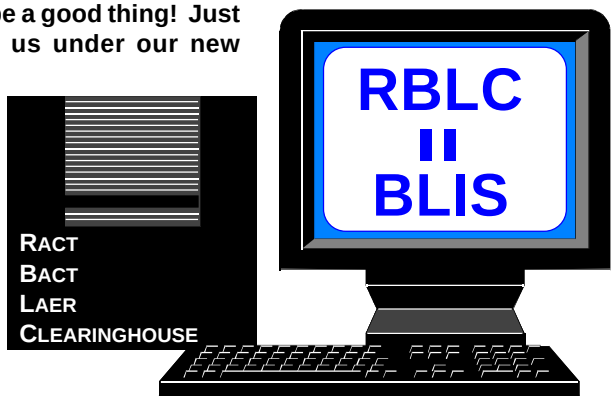
BLIS BBS CHANGES NAME TO RBLC BBS!

No, it's not the new math. The familiar name of the BACT/LAER Information System (BLIS) is changing! We'll now be known as the RACT/BACT/LAER Clearinghouse (RBLC). The name change is long overdue since the Clean Air Act Amendments of 1990 added RACT to our name in November 1990. We had resisted the change fearing that no-one would recognize us. But, they say change is good, so I suppose this could be a good thing! Just be sure to look for us under our new name, the RBLC. (Remember, the TTN technical area list is in alphabetical order, so our name will be further down. Really! It's still us! Check it out and see!)



SAGE UPDATE
SAGE VERSION 2.1 AVAILABLE FROM CTC BULLETIN BOARD

By Charles H. Darvin
CTC Co-Chair, AEERL

The latest version (2.1) of the Solvent Alternatives Guide (SAGE) is available for downloading from the CTC bulletin board. This version reflects a continuous upgrading of the SAGE system. SAGE 2.1 includes an expanded data base and a case study library, and reduces the time needed to generate a full report.

Macintosh users who have been unable to use the system, rejoice! A major new feature of the next update (3.0) will be a MAC version, which can be downloaded from the CTC bulletin board, (919) 541-5742, in late 1995.

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CTC ASSISTANCE

No cost assistance to staff of State and Local agencies and EPA Regional Offices on air pollution control technology issues.

CTC HOTLINE: CALL (919) 541-0800 to access EPA expert staff for consultations, references to pertinent literature, or access to EPA technical data and analyses. No question is too simple! Our Fax numbers are (919) 541-0242 or (919) 541-0361.

ENGINEERING ASSISTANCE PROJECTS: If you need in-depth assistance concerning a specific control technology problem, call the HOTLINE or write the CTC. EPA staff and contractors are available for short-term projects such as review of proposed or existing control technology applications. Projects are subject to CTC Steering Committee approval.

TECHNICAL GUIDANCE PROJECTS: If the CTC receives a number of similar HOTLINE calls or a joint request from a group of agencies, the CTC Steering Committee may undertake broad, long-term projects of national or regional interest. The result may be a control technology document for a particular type of source, microcomputer software, or seminars and workshops.

CTC BBS: Call (919) 541-5742 for up to 14400 baud modem to access the CTC Bulletin Board. Set communications parameters to 8 data bits, N parity, and 1 stop bit, and use a terminal emulation of VT100, VT102, or ANSI. You may leave HOTLINE requests, order documents, suggest projects, and download software. The BBS is part of the OAQPS Technology Transfer Network (TTN).

FEDERAL SMALL BUSINESS ASSISTANCE PROGRAM (FSBAP): Call the CTC HOTLINE to access the FSBAP. The CTC is the focal point for coordination of efforts among the four EPA centers participating in the program. The Federal program is intended to support State Small Business Assistance Programs, as required by the Clean Air Act.

RACT/BACT/LAER CLEARINGHOUSE (RBLC): The RBLC data base (BLIS) is available on the OAQPS TTN BBS. (See the CTC BBS for connection information.) The Clearinghouse provides summary information for control technology determinations made by permitting agencies.

GLOBAL GREENHOUSE GASES TECHNOLOGY TRANSFER CENTER (GGGTTC): Call the CTC HOTLINE to access GGGTTC information on greenhouse gas emissions, prevention, mitigation, and control strategies.

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