

# CLEAN AIR TECHNOLOGY CENTER



## CATC Information Bulletin Summer 1999

A lot has happened since our last (Fall 1998) Information Bulletin. Since we tend to be optimistic, it is not as much as we hoped to accomplish, but we are making substantial progress. Our overall level of activity (your access to CATC services) is running a little ahead of last year. CATC Web related services by far dominate the way you access the CATC and we are working hard to keep our Web sites current and relevant.

We do tend to use a lot of **ACRONYMS**, so we've included a section called **Short-Talk** at the end of this bulletin. Just refer to this section if you need help with an acronym.

Please share this Information Bulletin with others who may have a need to access CATC services. You can reach the CATC on the Web at <http://www.epa.gov/ttn/catc/>, by E-Mail at [catcmail@epa.gov](mailto:catcmail@epa.gov), by **phone** at **(919) 541-0800**, or by **FAX** at **(919) 541-0242**. The CATC includes the RBLC and CICA, and works with SBAP. All of these programs are accessible from the CATC Web.

## NEW PRODUCTS AVAILABLE ON THE CATC WEB

(NOTE: \* Indicates item is also available under  
CICA Products - English  
\*\* Indicates item is also available under CICA  
Products - English & Spanish)



### Air Pollution Technology Fact Sheets & Technical Bulletins: (See HIGHLIGHTS)

- Fabric Filter - Mechanical Shaker-Cleaned Type\*\*
- Fabric Filter - Pulse-Jet Cleaned Type\*\*
- Fabric Filter - Reverse-Air Cleaned Type\*\*
- Dry Electrostatic Precipitator (ESP) - Wire-Pipe Type\*\*
- Dry Electrostatic Precipitator (ESP) - Wire-Plate Type\*\*
- Wet Electrostatic Precipitator (ESP) - Wire-Pipe Type\*\*
- Wet Electrostatic Precipitator (ESP) - Wire-Plate Type\*\*
- Catalytic Incinerator\*
- Recuperative Incinerator\*
- Regenerative Incinerator\*
- Thermal Incinerator\*
- Flare\*
- Spray Chambers\*
- Packed-Bed Scrubbers\*
- Impingement Plate Scrubbers\*
- Mechanically-Aided Scrubbers\*
- Venturi Scrubbers\*
- Orifice Scrubbers\*
- Condensation Scrubbers\*
- Fiber-Bed Scrubbers\*
- Choosing an Adsorption System for VOC: Carbon, Zeolite, or  
Polymers (EPA-456/F-99-004)\*



## **NEW PRODUCTS AVAILABLE ON THE CATC WEB** (Continued)

(NOTE: \* Indicates item is also available under CICA Products - English

\*\* Indicates item is also available under CICA Products - English & Spanish)

### **Air Pollution Technical Reports:**

Emission Estimation Techniques for Unique Source Categories in Mexicali, Mexico (English: EPA-456/R-99-002; Spanish: EPA-456/R-99-003)\*\*

Emissions from Street Vendor Cooking Devices (Charcoal Grilling) (EPA-600/R-99-048)\* (See HIGHLIGHTS)

### **Control Cost Chapters & Information:**

Revised Chapter 5, Fabric Filters, OAQPS Control Cost Manual - Fifth Edition (EPA 453/B-96-001) (See HIGHLIGHTS)

Revised CO\$T-AIR Spreadsheets - Second Edition (Corrections, updates and enhancements to popular air pollution control cost calculation tool. (See HIGHLIGHTS)

Vatavuk Air Pollution Control Cost Indexes (VAPCCI); Update #12 to "Escalation Indexes for Pollution Control Costs" (EPA 452/R-95-006).

### **RBLC Software:**

RBLC Desktop Data Base Updates - Current DB

RBLC Desktop Data Base Updates - Transient DB

### **RBLC Documents:**

RBLC 1999 Annual Supplement (Electronic version only)

## **COMING ATTRACTIONS**

### **Air Pollution Technology Fact Sheets & Technical Bulletins:**

Nitrogen Oxides (NOx): How and Why They Are Controlled (Fall 1999)

### **CICA Products:**

Emissions Prevention/Control Techniques for Automobile Body Shops in Ciudad Juarez, Mexico (August 1999)

### **Air Pollution Technical Reports:**

Radiation-Cured Coatings and Inks (Spring 2000)

### **RBLC Documents:**

RACT/BACT/LAER Clearinghouse Annual Report for 1999 - Paper copy (August 1999)

## **HIGHLIGHTS**

### **REVISED FABRIC FILTERS CHAPTER FOR OAQPS CONTROL COST MANUAL**

Chapter 5 ("Fabric Filters") of the OAQPS Control Cost Manual (Fifth Edition, 1996) has been revised and posted on the CATC Web, in Acrobat (PDF) format. This revision replaces the chapter now in the Manual, which was originally finalized in late 1986. Like the old chapter, this revision contains descriptions, sizing and cost-estimating procedures, and capital and annual costs for the three major fabric filter ("baghouse") designs: shaker, reverse-air, and pulse-jet. In addition, the revised chapter addresses technologies not previously covered, such as sonic cleaning and cartridge filters. Material on the latter is quite detailed, yet user-friendly.

The revised chapter also includes application and price information for three new bag materials: Nextel®, P84®, and Ryton®. Prices for bags, bag cages, baghouse compartments, baghouse add-ons (e.g., insulation), and all other components are in second quarter 1998 dollars. Updated prices for labor, electricity, and other annual cost components are also included. The comprehensive example problem has been revised to incorporate the new sizing and cost-estimating procedures and data. For answers to technical



## **HIGHLIGHTS** (Continued)

questions about the revised chapter, please contact: William M. Vatavuk, ISEG/AQSSD/OAQPS, at (919)-541-5309 (e-mail:vatavuk.bill@epa.gov) or Daniel Mussatti, ISEG/AQSSD/OAQP, at (919)-541-0032 (e-mail:mussatti.dan@epa.gov).

### **CO\$T-AIR Control Cost Spreadsheets (Second Edition)**

The first edition of *CO\$T-AIR* was released in early 1996. Since then, over 2,500 copies of this package of spreadsheets have been distributed via the OAQPS TTN. Like the original, this second edition consists of an introductory WordPerfect file and 20 Lotus™ spreadsheets that make the calculation of capital and annual costs for air pollution control devices and auxiliary equipment easy, flexible, and accurate. The spreadsheets cover 12 control devices (five particulate matter, seven gaseous) and one auxiliary (ductwork). However, these revised spreadsheets improve upon the originals, sometimes dramatically. Errors have been corrected, ambiguities removed, and enhancements made. (For example, the *Carbon Adsorbers* spreadsheet now contains isotherm data for over 30 compounds, compared to 11 in the first edition spreadsheet.) Primarily based on design and cost procedures and data in the *OAQPS Control Cost Manual* (Fifth Edition, 1996), the *CO\$T-AIR* spreadsheets form a link between the *Manual* and the VAPCCI (Vatavuk Air Pollution Control Cost Indexes), in that they allow for instantaneous escalation of equipment costs.

### **1999 Small Business Ombudsman (SBO)/Small Business Assistance Program (SBAP) National Conference**

The 1999 SBO/SBAP National Conference was held on April 18 through April 21, 1999, in Tampa, Florida. Conference presentation materials that were submitted by conference speakers are available electronically, rather than in hard copy, at <[www.epa.gov/ttn/sbap/conf99a.html](http://www.epa.gov/ttn/sbap/conf99a.html)>.

## **RBLC Developments:**

Although the RBLC is fully accessible via the WWW, all maintenance and updates are performed on the old TTN BBS data base and then copied to the Web. Work to move these remaining functions to the Web has progressed slowly. However, we still hope to have the data base fully transferred to the Web environment in January 2000. The RBLC BBS would then be closed. We would also have to suspend (at least temporarily) use of the RBLC Desktop and Standalone Editor software programs because they will no longer be consistent with the Web data base format and structure. All data entry, NSR early notification, and system updates and maintenance will be performed via the RBLC Web. Once the new Web version is up and running, we will assess the need for new RBLC Desktop and Standalone Editor software. If you have an opinion about the need for the RBLC Desktop and/or Standalone Editor software, please let us know.

## **Fact Sheets & Technical Bulletins**

The CICA program has produced 20 Fact Sheets on various air pollution control technologies and more are in the works. The Fact Sheets are actually 4-8 pages of succinct, substantive information that you may find helpful when evaluating air pollution control options. They also are an excellent source of information if you are not familiar with a technology and need a quick summary. The Fact Sheets include the following topics: Name of Technology; Type of Technology; Applicable Pollutants; Achievable Emission Limits/Reductions; Applicable Source Type; Emission Stream Characteristics; Emission Stream Pretreatment Requirements; Cost Information; Theory of Operation; Advantages/Pros; Disadvantages/Cons; Other Considerations; and References. They are available at both the CATC and CICA Web pages in PDF and WordPerfect formats. They are also available in Spanish. (Continued)



## HIGHLIGHTS (Continued)

Technical Bulletins are a little more comprehensive than Fact Sheets and are about 10-20 pages long. Topics address the following questions: What is the technology? Why is it important? How does it work? What levels of emission control/prevention are achievable? What type of sources could use this technology? How much does it cost? What new developments are anticipated? Lots of references are provided too. We believe you will find CATC Technical Bulletins very useful and informative. They are available at both the CATC and CICA Web pages in PDF and WordPerfect formats. They are also available in Spanish.

### Short-Talk:

- AQSSD - Air Quality Strategies and Standards Division
- BACT - Best Available Control Technology
- BBS - Electronic Bulletin Board System
- CATC - Clean Air Technology Center (formerly the CTC)
- CICA - U.S.-Mexico Border Information Center on Air Pollution (Acronym is from the Spanish title *“Centro de Información sobre Contaminación de Aire para la Frontera entre EE.UU. y México”*)
- EPA - Environmental Protection Agency
- ESP - Electrostatic Precipitator
- ISEG - Innovative Strategies and Economics Group
- LAER - Lowest Achievable Emission Rate
- NOx - Oxides of Nitrogen
- NSR - New Source Review
- OAQPS - Office of Air Quality Planning and Standards
- PDF - Portable Document Format
- RACT - Reasonably Available Control Technology
- RBLC - RACT/BACT/LAER Clearinghouse
- SBAP - Small Business Assistance Program
- SBO - Small Business Ombudsman
- TTN - Technology Transfer Network
- VAPCCI - Vatavuk Air Pollution Control Cost Indexes
- VOC - Volatile Organic Compounds
- WWW - World Wide Web

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