



“Lighting the way  
through the ICR.”

### **ICR Update**

Jim Walasek, Editor  
Technical Support Center  
June 1997

# **ICR Update '97**

**ICR Update Issue Number 3** - This information sheet, the **ICR Update**, is the third one to be issued by the Technical Support Center (TSC) of the Office of Ground Water and Drinking Water (OGWDW). Future issues will be distributed as needed to maintain information flow related to the ICR.

**Chem Lab Approval Nearing Completion** - TSC is continuing to process applications and as of May 27, 1997, 332 labs had been approved for chemical parameters other than TOC. The list contains 56 commercial, 15 state, 256 utility, and five labs classified as “other.” Recall that there are 20 different parameters for which approval is granted with a total of 52 different method/analyte combinations (labs may not necessarily receive approval for all parameters at the same time). Therefore, current approvals represent 3247 method/analyte group approval decisions. Remember, the list of approved labs is available from the Safe Drinking Water Hotline (800-426-4791) or browse the OGWDW Home Page on the Internet at <http://www.epa.gov/OGWDW/regs.html> (look for the Information Collection Rule hypertext).

Finally, if you are a **water utility** and you have **not yet** applied for approval for the **water quality parameters**, please contact the ICR Laboratory Coordinator at TSC **immediately** (this is important)! The only alternative is to contract with an ICR approved commercial lab to perform these analyses **on-site**.

**More Virus Laboratories Approved**- The final list of virus laboratories is not expected until mid-June when the last data are due from the **second round** of performance evaluation (PE) samples. However, some laboratories got their data in early and have already been approved. Currently, 21 analysts from eleven labs (3 commercial, 3 utility, 2 state/city, and 3 university labs) are approved. Approval is granted based on the completion of an application, an on-site evaluation and successful analysis of PE samples. As always, the list of laboratories will be available through the Safe Drinking Water Hotline and also appears on the OGWDW Home Page.

**Protozoa Laboratory Approval** - TSC has completed a second round of PE samples for protozoan laboratory approval. At this time fifty-one analysts from thirty laboratories have been approved to perform protozoan analyses for the ICR. The list includes nine commercial, sixteen utility, two state, and three city laboratories.

The approval process included submission of an application, an on-site lab evaluation, and analysis of eight performance evaluation (PE) samples. The revised list of laboratories was forwarded to the Safe Drinking Water Hotline (800-426-4791) on May 27th.

## **Deadline for Coliform Lab Approval Imminent -**

Applications for Coliform laboratory approval will **not** be accepted after June 15th. And **no** coliform laboratories will be approved **after** the start of monitoring. Therefore, utilities which do not have an approved laboratory in-house will be required to send their samples to an ICR approved laboratory for analysis.

Approval letters were sent out on May 7th to twelve additional laboratories that have been approved to perform **coliform analyses** for the ICR. This brings the total number of approved labs to 298. The list of approved labs is available through the Safe Drinking Water **Hotline** and is also accessible on the OGWDW Home Page.

**Antibody Kits** - Enslys Environmental Products, Inc., maker of the Hydrofluor-Combo kit for detecting *Giardia* cysts and *Cryptosporidium* oocysts in water samples, has changed owners and is now **Strategic Diagnostics**. They will continue to manufacture the antibody kits. Strategic Diagnostics' toll-free phone number for ordering or technical information is **800-544-8881**.

**Ongoing Lab Approval Status** - Since it is possible that a lab could lose its approval status sometime during the 18-month sampling period, it is important that you check with your labs prior to each monthly sampling period to be sure that they are still approved. We are hopeful that the labs will take the initiative and notify their clients if approval is "lost," but better to be safe than sorry. The lab approval list on the Internet may also be used, but there is no guarantee that it will always be "up to the minute" accurate.

If it does become necessary to use another lab, enter that lab name and lab ID into the utility software (Laboratory Identification List window). It is then a simple matter to reassign the analyte groups to the new lab in the monthly sampling plan. Remember, EPA does not learn which lab a utility has used until they submit a monthly data diskette approximately 4 months after sampling.

**Ongoing PE Studies** - Ongoing performance evaluation studies for protozoa and virus laboratories consist of **two PE samples per month** per principal analyst (and per analyst for virus labs) for the duration of ICR monitoring. Ongoing PE sample shipments for protozoa labs began in May '97; ongoing PE sample shipments for virus will begin in July '97.

Ongoing PE studies for the disinfection byproducts (DBPs) and surrogate parameters consist of **6 quarterly sets** of samples. The **first of the six** required studies (ICR Chemistry PE Study 4) was sent to the laboratories in April and the results were due back to EPA in May. The study samples were mailed only to laboratories that had submitted a completed application by the February 14, 1997 deadline, because EPA is not reviewing late applications for the DBP and surrogate parameters. Results of the study will be mailed to the labs early in June along with "make-up" samples for any parameters that were failed by the lab.

**Calibration Mixes on Their Way** - The calibration mixes to be used in the upcoming ICR monitoring for the chemistry analytes are now being shipped to approved ICR chemistry labs. You will soon be receiving the ampules for the analytes for which you are approved as well as detailed instructions for their use. Note that solutions are only being provided for the **DBPs and surrogates**, not water quality parameters. Questions regarding the calibration mixes should be directed to Ed Glick at 513-569-7939 or faxed to 513-569-7191. E-mail questions to Ed at [glick.ed@epamail.epa.gov](mailto:glick.ed@epamail.epa.gov).

**Protozoan Analysis Reagent Still Available** - We have received several inquiries regarding the availability of one of the reagents for the ICR protozoan method. Which one you ask? Dibasic sodium phosphate with 12 waters of hydration (disodium hydrogen phosphate, dodecahydrate) is available from J. T. Baker, Inc., Catalog No.3822-01 for a 500 gram bottle. The CAS number is 10039-32-4.

**Four Digit ICR Numbers?** - Yes, some utilities do have **four digit** ICR Plant ID numbers assigned to their plants. These are ground water systems that serve a combined population of between 50,000 and 99,999 people (with 50,000 or more served by ground water). These plants do not have to conduct the 18 months of monitoring, rather they only have to conduct 12 months of TOC monitoring to determine if it is necessary to conduct a treatment study. This decision to use four digit numbers for these **Category G** systems was made so that they would not inadvertently use the ICR Utility software to enter their TOC data. Some labs using the ICR Lab QC database software have also tried to enter Category G plant TOC data and have discovered that the software won't accept the 4 digit plant ID number.

**More Dry Runs** - Since the last **ICR Update** I have received comments from several utilities saying that they have already conducted dry runs and that they were extremely helpful. Many plan to conduct another dry run (or two) before the start of the "real" sampling in July.

One ICR contact, Mike Furrey at NJDWSC, has been running "Pre-ICR test runs" for nearly 2 years. He is using his LIMS to simplify data entry into the ICR database. If you would like details, give him a call at 201-616-2903.

Another utility contact, who would like to remain nameless, suggests that it would be an "unfair expectation of operators to enter the G, T10 or T50 values" on the **C.2** forms. For this type of information and detention times, "it's better to have them (operators) just enter flow, and have the data entry person use a chart that gives these values based on design and unit processes in service."

One large system, with multiple filtration plants, has been doing "practice runs" every month since January 1997. Their first attempt was a "fiasco," but now the procedures are almost routine. Looking back, they don't think that they started the practice runs a bit "too soon." Oh, one other thing, their practice runs are not "dry runs." They actually do the analyses!

**Initial Sampling Plans Approved** - Approval of Initial Sampling Plans (ISP) is just about complete. You may have already received a "pre-approval" letter from EPA, stating that your ISP was received and reviewed and was found to be acceptable. (As of the end of May, 268 pre-approval letters had been sent.) The "formal" approval letters will be sent out this month (June) and according to the rule [§141.141(f)(2-4)] your system must begin monitoring the following month, which would be **July 1997**.

As a **reminder**, the Initial Sampling Plan did not require a valid ICR Lab ID number to be entered into the software because a finalized list of approved labs was not yet available. If you were among the "many" that did not enter a valid ICR Lab ID into the ISP then please do so **before** generating your **first** monthly sampling plan. Neither the "revised" ISP nor the monthly sampling plan should be submitted to EPA.

**Monthly Sampling Plans** - With the start of sampling just a month away, now would be a good time to review the monthly sampling procedures in the **ICR Water Utility Database System Users' Guide**. Chapter 6 of the Users' Guide covers monthly sampling. The first step in monthly sampling is to develop a Monthly Sampling Plan to provide your field operators with a list of the treatment information they will need to gather and the samples they will collect that month. A summary of the procedure for conducting monthly sampling is on page 92 of the Users' Guide.

**Reader Tip** - One of our readers, who has been working with the ICR utility software since last fall, provides some advice on the use of the **D.1 Report** (Monthly Sample Allocation to Laboratories) to help your laboratories get familiar with their QC software and data entry. The way I understand it, the lab needs the D.1 report because it contains the **Sample ID Check Digit** that is required to proceed with data entry. Therefore, to generate a D.1 report with check digits before the start of sampling, first define a new sampling period with sampling dates, and then copy data from the ISP/Design Period (or a previous sampling period) to the new sampling period. Finally, generate the D.1 report which will contain the Sample ID Numbers and the Sample ID Check Digits for the new sampling period. Send this report to your lab so that they have a valid check digit to enter into the "Add Utility Sample" window in the Lab QC software (See pages 29 - 31 of the **ICR Laboratory QC Database System Users' Guide**).

**Filter Clogged, Bunky?** - In the event of a clogged filter when collecting a virus or protozoa sample, you should enter "**Clogged Filter**" into the comment field for the sample collection data and set the QC flag to "A" for acceptable.

**Treatment Study Approval** - Twelve "grandfathered" treatment study (TS) applications were received before the February 14, 1997 deadline. Three were disapproved, and nine (4 - GAC, 5 - membrane) were **approved** pending receipt of the study results by the

November 14, 1997 deadline. In addition, 7 individual TS applications and 2 applications to "avoid" the TS requirement have been approved. Finally, two "single-study for multiple plants operated by a single PWS" (sounds like an Oscar nomination, doesn't it?) applications have been received and will be reviewed upon submission of common source information.

**Beat the Last Minute Rush** - April 14, 1998 is the deadline for plants required to conduct treatment studies to begin their study. However, it is perfectly acceptable to begin a treatment study prior to then, even if the applicability monitoring is **not** complete. For example, if it is discovered that a treatment study will be required based on the first several months of TOC results, the PWS may decide to **begin the study early**. But before beginning a treatment study, the PWS must **submit a study plan** to the ICR Treatment Studies Coordinator. Once the study plan is **approved**, the PWS may begin the study at any time prior to the deadline, and can cease the TS applicability monitoring (unless the plant needs to demonstrate that it shares a common water source with another plant for some of the other options). Seven utilities have already begun their treatment studies! **Friendly reminder:** the deadline to apply for treatment study options is **November 14, 1997!**

**SDS Tests for TS** - During the ICR Treatment Studies (TS), the formation of THM4, HAA6, and TOX must be evaluated under **Simulated Distribution System (SDS)** conditions using free chlorine. Some questions have been received lately regarding chlorination procedures for the SDS test procedure. The following summary outlines the selection of the four parameters which establish SDS conditions:

**Incubation Time** - representative of the **average residence time** in the distribution system (DS) associated with the plant.

**Free Chlorine Residual at the end of incubation** - equivalent to the free chlorine residual in the DS at a point representative of the average residence time. (Should be between 0.5 and 1.0 mg/L if chloramines are normally used in the DS.)

**pH at the time of chlorination** - equivalent to the pH in the DS at a point representative of the average residence time.

**Temperature during incubation**- equivalent to the temperature in the DS at a point representative of the average residence time.

For more info see Sect. 4.6, Part 1 of the ICR Treatment Studies Manual (EPA 814-B-96-003).

**Clarification on Booster Chlorination Stations** - In the ICR, the term "Booster Chlorination Station," refers to those chlorination facilities that are part of the **distribution system**, while chlorination facilities located at individual wells are considered to be associated with the "treatment plant" process train. See the **Design Distribution System** window in the **Initial Sampling Plan** section of the ICR Water Utility Database, and page 68 of the Users' Guide.

**ICR Requirement Waived?** - Don't get too excited, the only requirement that has been waived is the one to analyze for **bromide** in the presence of chlorine. This only applies to bromide analysis of chlorinated washwater return (and additional water sources added to the process train after the TP influent). Since there is no dechlorination agent added to the bromide sample, residual chlorine will continue to react with bromide during the holding period,

making the bromide result meaningless. A *Federal Register* notice is planned as well as a change to the **ICR Sampling Manual**.

### **“FREE” ICR Products** - The *ICR Treatment Study Data Collection*

*Spreadsheets* and accompanying *User's Guide* have been completed and are being mailed to affected water systems and ICR approved DBP laboratories. A limited number of copies of the spreadsheets and user's guide will also be available through the Safe Drinking Water Hotline (800-426-4791) at no charge. These additional copies are intended for **consultants** involved in conducting treatment studies and **other laboratories** that are providing analytical support for the studies.

**ICR on the Internet** - There have been some recent changes to the OGWDW Home Page on the Internet (<http://www.epa.gov/OGWDW>) that permit easier access to ICR information. Click on the **Regulations and Guidance** button and you will find the Information Collection Rule followed by an outline listing most recent updates of everything we have posted. Set a **bookmark** for <http://www.epa.gov/OGWDW/regs.html> for **direct access** to the Regulations and Guidance page.

**Sampling Begins Next Month** - Yes, Virginia, ICR sampling will really start in July! Hopefully, if you have taken the time to conduct some “Pre-ICR” test runs, there shouldn't be too many surprises. See the item above on Monthly Sampling Plans.

**Good Luck** - Remember to use the Safe Drinking Water Hotline (800-426-4791) for your ICR questions. The **Hotline** will forward your question(s) to the appropriate contact in TSC for a prompt answer to your question. Most of all, good luck and keep up the good work!

United States  
Environmental Protection Agency  
Office of Ground Water and Drinking Water  
Cincinnati, OH 45268

Official Business  
Penalty for Private Use  
\$300

EPA 815-N-97-003

BULK RATE  
POSTAGE & FEES PAID  
EPA  
PERMIT No G-35