



ICR a Howling Success...

- Wiley Coyote

ICR Update
 Jim Walasek, Editor
 Technical Support Center
 June 1999

Auxiliary 1 Database Close!

ICR Update Issue Number 18 - This information sheet, the **ICR Update**, is the eighteenth 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.

Editor's Note: Six months of ICR **validated data** have been extracted to the Auxiliary 1 (AUX1) Database and are due to be released in June 1999 (we're shooting for June 7). The ICR data will support the development of the Stage 2 Disinfectants/Disinfection By-Products Rule (**D/DBP**) and the Long Term 2 Enhanced Surface Water Treatment Rule (**LT2ESWTR**). (*Whew...that's a mouthful.*) A CD-ROM that will be produced will be used by the Technical Working Group (TWG) and others for data analysis. For more details on the reaching of this important ICR milestone, read the article, **Just the FACA, Ma'am**, in this issue.

If you have received your latest ICR Utility Data Validation Package by now you should have noticed a change in the way it was packaged. Instead of one large package containing several months worth of VA1 and VU reports, the new validation package is now actually **three separate packages** - one for each month. (*Assuming, of course, you submitted your data transfer diskettes for the sampling period before the "drop dead" date.*) Other improvements include a new envelope design with a see-through window for the address, a new computer generated packing list, and VA1 reports for all of the labs that you used (even if there were no QC rejections). Remember, we are still **uploading three months of data at a time** for validation. The current set of reports that you received were for January, February, and March 1998. Once again, you will only have one opportunity to review the three months of data and resubmit diskettes (if needed). The **deadline** for resubmitting diskettes for this review cycle is **July 2, 1999**. The next set of diskettes to be uploaded will be for the April, May, and June 1998 sampling periods. Therefore, it is very important that all utilities send in their diskettes now to continue to **stay ahead** of the upload process. By the way, the validation review packages that the labs receive will also have the **new slimmer look** with separate

envelopes for each month of the quarter (Jan., Feb., and Mar. '98) containing VA1 and VL4 reports plus another envelope containing the VL4 reports for April 1998.

As we near the end of the ICR project, I have noticed that there have been personnel changes, reorganizations, moves, area code changes, and, yes, even deaths that have affected the information we have in the "official" ICR files here in Cincinnati. Therefore, I want to remind the utilities and labs out there to update their ICR contact and address (and phone/fax) information when it changes. We, here at EPA, want to keep our records up to date, so if you have such a change, drop us a note on your **letterhead** and send it to U.S. EPA, Technical Support Center (MS140), 26 W. Martin Luther King Drive, Cincinnati, OH 45268 to the attention of the ICR Utility Coordinator. Besides, who knows, it may speed up the arrival of the next ICR Update. Finally, I want to reiterate that utility validation reports are sent to the name and address listed on the **data transfer diskette**. So, even if you send in your contact person changes, we can't guarantee that the **validation reports** will be sent to the new contact and/or address unless the correct information was on the "last" transfer diskette that was loaded into the system. (*This is not a problem for labs because TSC controls the addresses that are used by ICR-FED.*)

99 $\frac{44}{100}$ % pure, well actually slightly better - As near as we can tell,

of more than 5700 diskettes uploaded to ICR-Fed, fewer than 30 diskettes failed to upload. This works out to be better than the purity of Ivory Snow (made right here in Cincinnati by P & G). Of course, the number of diskettes uploaded is constantly changing, but the percentage of diskettes successfully uploaded is fairly constant. Of the 5700 plus diskettes in ICR-Fed, over 3300 are monthly utility data transfer diskettes, almost 1700 are chemistry laboratory diskettes, 300+ are protozoa diskettes, 121 are virus diskettes, and don't forget the 296 Initial Sampling Plan diskettes. The point of all of this? **We're making progress!**

FURAR- Final Utility Reports Are Ready for sampling periods 03 through 06 (September '97 through December '97) and you should be receiving them any day now. We received quite a few calls after the last set of final utility reports were sent out due to some printing problems. For example, there was an overprint problem on the VU6 report that caused the column headers to overlap by one column while the actual results were in the proper location. By studying the report, it was possible to "figure out" what was happening, but many utilities wanted the report to look right. They contacted the ICR Utility Coordinator who arranged to have new reports printed and sent out to the affected utility. We're hopeful that this particular problem has been corrected and will not happen again. However, if you do spot something on your final reports that may require a new report, please contact the **ICR DMS Hotline** directly at **703-292-6170** to report the problem. Again, we don't anticipate any problems.

Backup Diskettes Still Needed! - A letter was sent (March 19, 1999) to the ICR utilities requesting that they **create a backup diskette(s)** of their ICR Utility Database System and send it to the ICR Data Center. The purpose of the backup is so EPA can capture all the comments in the Analyte comment field. Currently, when utilities enter a QA comment in a

"Comment" field at the **analyte level** without entering a QA comment in the comment field at the **sample level**, the utility system does not have the capability to retrieve the comments at the analyte level. Therefore, it does not appear on your utility data transfer diskette. Well, to date we have only received little more than half of the backup diskettes that we were expecting. Therefore, if you haven't already sent in a backup diskette, please create one and send it in as soon as possible.

Judging by the number of calls I received about the creation of the backup diskette, I guess I wasn't as clear in my explanation (in the letter) as I thought. (Probably shouldn't have stated backup diskette(s) plural.) Most utilities should be able to backup their system on a single diskette. The backup diskette should be created by using the "Back Up Data" function in the System Administration segment of the ICR Water Utility Database System. For those utilities that haven't yet sent in a backup diskette to EPA, try to create the backup **after** making any necessary corrections to the first nine months of data in your system. Therefore, send in the backup diskette(s) at the same time you send in resubmission diskettes (if required) for sampling periods 07, 08, and 09 (January, February, and March 1998). Refer to the letter for details, including special labeling instructions for the disks. (*The current deadline for submitting the resubmission diskettes is July 2, 1999.*)

Some ICR Utility Data Diskettes Missing - As mentioned in the **Editor's Note**, there are a few utilities that have still not submitted all of their data transfer diskettes for the 18 months of ICR sampling. In some cases the diskette may have been sent in, but for one reason or another it is not showing up on the latest utility diskette inventory. TSC staff have been reviewing the diskette inventory information weekly and contacting the utilities to encourage them to send in the missing diskettes or a replacement diskette. If you haven't yet sent in all of the required diskettes, please send them in as soon as possible. Remember, we're now uploading diskettes for sampling periods 10, 11, and 12 as well as resubmission diskettes for sampling periods 07, 08, and 09. We will continue to upload diskettes by ICR quarters, so the next uploads will be for sampling periods 13, 14, and 15, followed by the last quarter of ICR sampling (sampling periods 16, 17, and 18).

Just the FACA, Ma'am - The Stage 2 D/DBP/LT2ESWTR stakeholders chartered under the Federal Advisory Committee Act (FACA) agreed to develop recommendations for Stage 2 Disinfection Byproducts and Long Term 2 Enhanced Surface Water Treatment Rules. Why is this important (important enough for the ICR Update), you ask? Because, the ICR data you collected is **the** data that will be analyzed to support the development of the regulatory options used during the negotiations. Of course, other data will supplement the ICR data, but the ICR data is the **most comprehensive** data set we have. Your efforts in ensuring that these data are of good quality and accurately represent your plants have made this possible. Thanks!

The FACA committee meetings will continue throughout 1999 (and are already scheduled through April 2000). Topics of the meetings include discussion of health risks from DBPs and microbial contaminants, results from ICR data and other data sources, followed by development and negotiation of rule options. A Data Analysis Team **Technical Working Group (TWG)** has been created and has been meeting for over a year and will continue to meet to support the FACA. This TWG is the group responsible for analyzing the ICR data and will present ICR occurrence data to the

FACA during September and October, 1999. ICR data will continue to be analyzed and presented into early 2000 to capture all eighteen validated months of data.

The ICR data will be extracted from ICRFED into a more manageable Microsoft Access database called AUX1. To facilitate data analysis and to focus on individual issues, seven other auxiliary databases are being developed for ease of data management. For example, databases are being developed to deal with CT and disinfectant decay (AUX2), with TOC removal throughout the plant (AUX3) and AUX6 will permit data analysts to follow the fate of the DBPs throughout the distribution system. Only the data necessary to answer the questions that will directly support the regulatory development process will be extracted from ICRFED into AUX1. For example, street addresses and quality control data will not be extracted into AUX1. The quality control data are being analyzed by a separate team to further understand the quality of the ICR data and to support the methods and monitoring aspects of the rule development.

The ICR data will be used throughout the rest of this year to support regulatory impact analysis and to validate the enhanced water treatment plant model (WTP). The WTP model predicts water quality based on influent parameters, treatment plant configuration and operating conditions.

The FACA needs to start reviewing the results of some preliminary ICR data analysis to begin discussions (before all 18 months of ICR data are validated in December of this year). Therefore, the TWG's strategy is to work with batches of validated ICR data beginning with the first six months of ICR data. These data will be used to develop the data analysis tools that will be used during the FACA process in the Fall (of 1999). The TWG plans to use ICR validated data after six, twelve, and eighteen months because of the availability of these data relative to the auxiliary databases, models, data analysis tools, and FACA schedule.

By the time you receive this ICR Update, six months of validated ICR data will be on its way to a CD-ROM that will be used by the TWG and others for data analysis. EPA plans to inform you by letter how you will be able to obtain a copy of the validated data for your use as soon as possible.

Finally, we reached another major milestone for the ICR. Six months of validated data can now be extracted to auxiliary databases for data analysis. Congratulations, you made this feat possible. Keep up the good work in reviewing your data for this important database.

Just in the Nick of Time! - The Treatment Study *Help Packet* for preparation of the *Final Treatment Study Report* was mailed to utilities conducting studies on April 9th. If you would like a copy of the *Help Packet*, but have not received one, visit our web-site at <http://www.epa.gov/OGWDW/icr/helppckt.html>, or call the treatment study coordinator at 513-569-7131.

The *Help Packet* is full of useful information that will facilitate preparation of the final report, including example checklists that will be used by EPA to review the data from your study. You can use these example spreadsheets to conduct a preliminary review of your data before submitting it to EPA. But what do you do if you come across data that are accurately reported but may trigger a flag

during the review? Simple, just document these data anomalies in a memo submitted along with the data. In fact, you can list missing information, data outliers, or any other item that would trigger a flag during review. The reviewers will use this information to identify flags triggered by anomalies that you have already identified, and we won't ask you to verify data that you have already checked. Our goal is to make the review of these final reports as **painless** as possible.

Spiking Program - A preliminary statistical analysis has been completed for the **Giardia/Crypto Lab Spiking Study**. The analysis utilized only spiked sample results, as results from unspiked samples have not yet completed the data validation process. The ICR method appears to have similar performance in different months and in different laboratories. With one minor exception, no significant differences between labs or between months were detected for mean recovery or for recovery's variability. The mean recoveries of *Cryptosporidium* and *Giardia* aren't much greater than expected. **Mean recovery** of the target spiked values, not taking natural background levels into account, was lower for *Cryptosporidium* (about 12%) than for *Giardia* (about 26%) with *Cryptosporidium* showing the greater relative variability. Reported concentrations ranged from zero to 65% of the target value for *Cryptosporidium* and ranged from zero to 83% of the target value for *Giardia*. Recovery's **Coefficient of Variation** was estimated as 76% for *Cryptosporidium* and 65% for *Giardia*. Recovery doesn't appear related to volume analyzed or turbidity, but volume analyzed appeared to decrease with increasing turbidity.

These results will be important in understanding and interpreting the ICR Supplemental Survey's **protozoan data**. To that end, the TWG will be focusing on how to characterize the occurrence of *Cryptosporidium* and *Giardia* in the **nation's drinking water sources**. Those interested in working on this issue or have questions about the lab spiking study statistical analyses should contact Michael Messner at 202-260-8107, or at messner.michael@epa.gov.

ICR Supplemental Surveys - The Large and Medium System

Supplemental Surveys have been underway for the past 3 months. EPA appreciates the support and the perseverance of the 87 utilities that are participating in the surveys. In addition, the Agency is grateful for the utilities' cooperation with the coliform reporting requirements. The preliminary results of the weekly single-blind ongoing precision and recovery (OPR) and the matrix spike sample analyses indicate that **Method 1622** is meeting and exceeding the anticipated performance. Routine recoveries, on average, are greater than 50%, despite spike doses of between 80 and 150 oocysts.

The **Small System Survey** has taken off! The survey began in April 1999. There are 40 utilities that are participating in this 12-month data collection effort.

Method 1623 - No, there is no typographical error . . . **Method 1623** is a protozoan analytical method that will soon be used in the Supplemental Surveys to test for **both** *Cryptosporidium* and *Giardia*. Up until this point, the Supplemental Surveys have included testing for *Cryptosporidium* **only**, using Method 1622. Method 1622 was validated in 1998 for the purpose of exclusively collecting *Cryptosporidium* data because the immunomagnetic separation (IMS) reagents for *Giardia* were not yet available. However, since the combined *Cryptosporidium* and *Giardia* IMS kits are now available and round robin validation has been completed, we anticipate

incorporating Method 1623 into the supplemental surveys in June 1999.

☛ *The final procedure for Method 1622 (EPA-821-R-99-001, Jan 1999) is available.*

☛ *The final procedure for Method 1623 (EPA-821-R-99-006, Apr 1999) is available.*

For electronic versions of the above methods go to <http://www.epa.gov/microbes/>

For further information regarding the supplemental surveys or Method 1623, please contact Crystal Rodgers at 202-260-0676, rodgers.crystal@epamail.epa.gov.

PE Sample Program - In the February **ICR Update** it was announced that EPA would be willing to provide Performance Evaluation (PE) samples for *Giardia* and *Cryptosporidium* to interested laboratories. Ten laboratories applied for the program and samples were sent out in May. A **summary report** is available by faxing your request to **Mary Ann Feige, 513-569-7191**. Seven additional laboratories have since applied for the program and will receive samples in August. In order to receive a copy of the results for an individual laboratory, you must contact that laboratory directly.

A New Perspective... - Congratulations to **Michella Stultz** and **Brian Bohl**, Oak Ridge Institute of Science and Education (ORISE) interns working on projects associated with the ICR at the EPA's Technical Support Center who recently successfully defended their Masters projects through Miami (of Ohio) University's Institute of Environmental Science. Brian, pictured at right, says working on the ICR has given him a whole new perspective on life.



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