

Accurate News

"Accurate News" is a publication of Accurate Labs & Training Center
Stillwater, OK 74074

Accurate



Labs & Training Center

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July-September 2000

More Good Stuff from QA/QC

In a series of past articles I have related some of the ongoing efforts we are making to improve our Quality Assurance system. This system has one goal; to produce accurate and defensible data. We realize that most of the things we do in our QA program are transparent to you and that is as it should be when our system is working well. However, there are times that changes are more obvious, such as on a report, and these you may be interested in knowing more about.

When you look at the QC section of our report for metals you will see two features have changed. There are now categories for Matrix Spike (MS)/Matrix Spike Duplicate (MSD) and Lab Fortified Blank (LFB). The MS/MSD is reported in Relative Percent Difference (RPD), a measure of agreement between two values. The lower the RPD, the better the agreement. Ideally, for metals, we are looking for an RPD of 20% or less. This means the batch QC passes. Occasionally, the RPD may exceed 20%. If so, we look to the LFB value. This is the result of a sample of lab water spiked with the metal of interest and run through the same sample prep and analytical procedure as the "real" sample. If the LFB value is within acceptable limits then we assume the RPD failure was due to matrix interference, which cannot be avoided. Thus, the batch QC still passes.

In the future you can expect to see other changes similar to this. We are not trying to confuse you, though it is always confusing to have to deal with so

many technical terms. We are making these changes to try to bring our QA program to a higher level, and one that agrees with established guidelines from organizations such as EPA, A2LA, NELAC, etc. Please feel free to call if anything on our report does not make sense or meet your expectation.

Ken Crawford
QA/QC Manager

Haloacetic Acids of Interest to Water Plants

Treatment plants that produce our drinking water not only have to make water that is clean and free of bacteria, they must try to reduce the disinfection byproducts that form when they use chlorine as a disinfectant. One of these DBPs is called Haloacetic Acids, or HAAs. Another is Total Trihalomethanes, or THMs. We have been testing for THMs for many years now because THMs are suspected of having toxicity. Recently, studies have shown that HAAs are also suspected toxins.

Accurate has been performing the test for HAAs for several years now. It is a gas chromatographic method, which makes it too expensive and difficult for most plants to do as an in-house test. It also is a very difficult method to perform correctly, and in fact it took us several years to really perfect the method. We now feel like it is "old hat" to run HAAs, however, as we have run many hundreds of samples during the past year alone.

If your water treatment facility is in need of THMs and HAAs, please call us. We can provide containers with proper preservatives and advice on sampling strategies.



New Instruments Benefit Customers

Accurate Labs has recently acquired several new instruments with the purpose of improving service to our customers. Several will allow us to do a new test, or do an old test with better technical results. Others will enable us to achieve better throughput and shorter turn around time. We hope that all will benefit our customers through improved service, quality, and turn times.

The first new instrument, placed in operation in April, is a Thermo Jarrell Ash ICP. It is a near twin of the IRIS model we have had for several years. Having this instrument gives us not only greater throughput but allows us to have backup in case one ICP should be down for an extended period. It will also allow us to produce rush results without having to interfere with the normal flow of samples. Look for more details about this ICP in future issues.

The second new instrument, which should be in place by the time you read this, is a flow injection analysis system from ALPKEM. This will be used for the new Available Cyanide Method, OIA-1677. To our knowledge, we are the first commercial environmental laboratory in the United States to purchase this instrument. We hope to be able to offer this new cyanide test by mid summer of 2000. We will provide more details about this instrument in the next issue as well.

The third acquisition is actually a group of autosamplers for sampling manholes and outfalls. There are to be four of these units, made by Sigma, and they are expected to be in service soon. The addition of these new devices will give Accurate a total of eight autosamplers, enabling us to handle even the largest sampling jobs.

The fourth and fifth are a new solid phase extraction manifold and a new metals digestion heating device. The manifold will allow us to speed the extraction of samples during the test for Oil & Grease by method 1664. The digestion unit, called a Hot Block, provides for more sample prep capacity for our metals section. It is a 54-place version of the 36-place unit we have now. Like the ICP above, having this second unit gives us both throughput and backup, ensuring a consistently quick turnaround time.

ATC Offers Course in Management Skills

As a part of a comprehensive program to serve our clients, Accurate Training Center is offering a one-day "Aspects of Management" class on management skills. The class is designed as a one-day crash course for those who have been thrust into management, but may never had any formal training as managers. It will also be a good review for those who have been managers for awhile, but have become stagnant and want some new ideas to aid in their continued development.

This course covers subjects such as communication, motivation, delegation, and organizational politics, as well as understanding behavior and personality types. It is designed to be fun and participatory as well as educational and stimulating.

The "Aspects of Management" class is scheduled for 9:00 to 5:00, Friday, September 8th, 2000, in our Stillwater Training Center. We will take the participants out to lunch.

With space being limited, we anticipate this class to fill up quickly. So, please call in your reservation soon.

Please contact me at 1 - 800 - 516 - 5227 if you need more information about this or any other course we offer.

Clarke Hodson
Training Administrator

New Rules & Regulations Are Coming Out

The new ODEQ Rules & Regulations concerning Waterworks and Wastewater Works Operator Certification are going into affect on July 1, 2000. Are you prepared?

Here are some "Million Dollar Questions" concerning the new R & R.

1. How soon do you need your Exam Application in prior the examination date?
2. How many days does an operator have to take an exam before he forfeits his exam fee?
3. How much are Certification Renewal Fees?
4. How old does an operator have to be to obtain a temporary certification?



5. At what level or levels can an operator obtain a temporary certification?
6. Is a temporary certification good for one year from date of employment or one year after being issued?
7. To become an Approved Instructor for a standard course for certification, a person must make at least ____% on the exam for the course taught or a higher exam than the course being taught.
8. Who is responsible for keeping each operator's records of training and experience?
9. How soon must an owner of a waterworks or wastewater works notify the ODEQ when an operator begins or terminates employment?

Answers:

- 1.) 3-Weeks, 2.) 120 Days, 3.) \$30, 4.) 18 years,
- 5.) "D" Only, 6.) One-year of Employment, 7.) 80%
- 8.) Each Operator, 9.) Within 10 Days.

Timing is Everything

Accurate's route pickup service has proven so popular with our customers that many of the routes are reaching maximum capacity. Several of our routes now have 12 to 15 stops per day. For this reason, our route drivers are instructed to limit their time on site to no more than 15 minutes. If a customer does not have their samples ready when our driver arrives, it is likely the driver will not have enough time to wait while the samples are prepared.

Also, the routes are filling up earlier all the time. It is getting more difficult to schedule a "last minute" stop. If you want to be included on the schedule it is best to call at least a day or two in advance. Please realize too, that with so many scheduled stops it is almost impossible for the driver to be at any particular stop at a precise time. As the day goes on the driver is likely to be behind schedule. In fact, the drivers arrive back at the laboratory as late as 6:30 to 7:00pm many nights.

We encourage our customers to make use of this pickup service. However, it is, for the most part, a free service. We just ask that those wishing to take advantage of this benefit work with us to make it smooth for all concerned.

John Russell
Field Services Manager

ATC Adds Class "A" Water Laboratory & Class "A" Wastewater Laboratory Classes

Accurate Training Center recently added the Class "A" Water Laboratory and Class "A" Wastewater Laboratory Classes to their Operator and Laboratory Training Schedule. Both of these classes are five-day classes held in the Stillwater classroom at 505 South Lowry. The Class "A" Water Laboratory Class is August 28 to September 1 and the Class "A" Wastewater Laboratory Class is September 25 - 29.

These classes will prepare the operator to take the Oklahoma Department of Environmental Quality (ODEQ) Certification Examinations. The cost for each class is \$495 per operator per class. This price includes 40 hours of classroom and hands-on training, notebook, handouts, and lunch and refreshments for all five days.

For further information, please contact Clarke Hodson, Training Administrator, or Sean Swafford, Instructor / Chemist, at 1 - 800 - 516 - 5227.

Clarke Hodson
Training Administrator

Did You Know?

Did you know that ATC is here to provide help even after you attend class? Often, when you attend class at other institutions or at a class held at a temporary site, there is a dilemma about who to call if you have questions when you get home. When you attend classes at ATC, you can call for help if there is something you still don't understand or if you are having difficulty applying a theory in the real world.

If you have questions about future classes you can call me. If I'm not available Sean Swafford can also help you. Sean can also answer questions about lab procedures. Of course, Dr. Fazel is available to help you and our laboratory manager, George Drye, will also be glad to assist you.

Clarke Hodson
Training Administrator

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TOC Back in Style

It's funny how some lab tests come and go in popularity just like fashions. One test, which faded but never died, is Total Organic Carbon (TOC). It has been used as a way to screen for organic compounds in water for years. It can be used as a quick test for estimating what the COD and BOD of wastewater will be and also of detecting the leakage of organic compounds from a landfill into the groundwater.

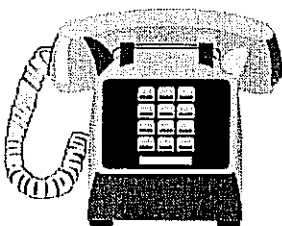
The new use of the TOC test, which has revived interest in it, is for screening raw water for the organic matter that can act as a precursor for disinfection byproducts. In plain English, if there is TOC in the water, chlorination is more likely to cause things like THMs and HAAs to form. It is easier to control the TOC than

to try to control formation of these compounds. Thus, monitoring TOC becomes important for the treatment plant operator who is trying to keep THMs and HAAs under control.

With the advent of some of the new rules and regulations about disinfection byproducts, it has become very important for operators to have knowledge of the TOC content of their raw water. We have seen a slow but steady increase in the number of customers requesting a test for TOC, as well as for THMs and HAAs. Of course, the best approach is to test for all of these at once during a treatment study, and we are glad to provide the special containers required when our customers wish to do so.

George Drye
Laboratory Manager

Accurate Labs will pick up your samples along seven statewide routes. Please call.



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