

Highlights

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- Regulatory Update
- MWRA Update



ITLA

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Message from the President

By Chris Wakefield

For environmental laboratories, today's environmental market is a challenge. The challenge is on many fronts. This market has encouraged us to review and change if necessary every aspect of our business practices to eliminate any excess. This includes all aspects of the laboratory from instrument efficiencies, laboratory procedures, reporting of data, and client services.

Now, the down side is weathering the current market, yet there is also an up side. The up side is with all the efficiency steps taken throughout the laboratory, what will emerge is a stronger more productive laboratory with the ability to be more efficient and process more sample when the market turns. Essentially, positioning yourself for an upturn of the future industry.

Do I really believe what I just wrote in the above paragraphs? I

certainly do. I realize it is a harsh reality in this economy that chances to have laboratory closures and acquisitions have increased.

Unfortunate, but true. I also believe the key to survival of this market is effective management of resources and retaining clients. It is my hope that all will continue and will survive this market. I also suspect what I have stated above is not a surprise to anyone reading this.

Well, those are my observation, no answers. I only recommend working hard, being skilled at your analysis and perform accurate analysis for your clients to ensure repeat business. Remember, we are all in the same situation.

Hope to see you all on the 17th.

Next Meeting

June 17, 2009

Taunton, MA

Quarterly Meeting

Wednesday, June 17, 2009, Holiday Inn in Taunton, MA

Feature Presentation: "Capillary Flow Technology" Terry Wilkes, Quantum Analytics

MWRA Items

By Mike Delaney, mdelaney@mwra.state.ma.us

MWRA Obtains New DEP Lab Certifications

The MWRA Central Laboratory recently became certified by MassDEP for three tests. We are the first lab to be certified by MassDEP for Mercury by method 245.7 using cold-vapor atomic fluorescence (CVAF) & for semivolatile organics by GC/MS by method 625, both in non-potable water. We have been performing the semivolatile GC/MS method for a long time but this certification recently became available from MassDEP. We also obtained certification to test potable water for PCBs by method 505. This method is being used to test samples associated with several MWRA remediation projects.

Update on MWRA TRAC.IS and LIMS

MWRA's new Pretreatment Information Management System (PIMS), formerly known as TRAC.IS, went live last August. This commercial, off-the-shelf system was configured to address MWRA's unique needs for enhanced data management capabilities in the MWRA's Toxic Reduction and Control section. Labs are required to use the eSMART system to electronically report industrial self-monitoring discharge data. For additional information, please contact Alice Chang, Data Management Supervisor, (617) 305-5621, or alice.chang@mwra.state.ma.us. MWRA's new LIMS from LabWare (www.labware.com) went live on 2/1/09 (Super Bowl Sunday!) for drinking water microbiology data, including eDEP uploads. The Go Live for everything else should occur later this year.

Disinfection By-Products Not A Concern In MWRA Drinking Water

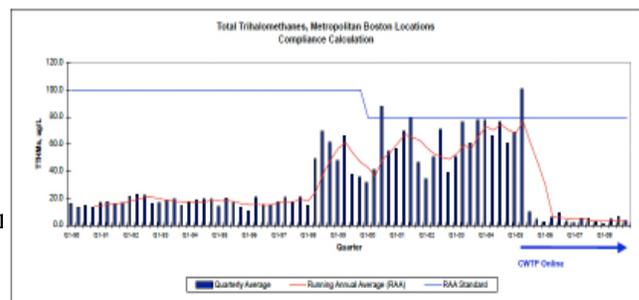
The level of disinfection by-products in MWRA water is at an all-time low. With the start-up of the Carroll Water Treatment Plant in 2005 and the use of ozone instead of chlorine for primary disinfection, the level of disinfection by-products in water supplied by MWRA has dropped dramatically. MWRA has always met the standards for disinfection by-products, but with ozonation, the new levels of disinfection by-products are even further below

current and future standards.

Disinfection By-Products (DBPs) are formed when disinfectants such as chlorine — effectively used to control disease-causing pathogens — mix with naturally occurring organic substances in the source water. There are several types of products formed, with trihalomethanes (THMs) and haloacetic acids (HAAs) of most concern.

MWRA follows the levels of DBPs in the water closely. Based on sampling at compliance sites, disinfection by-product levels have dropped by over 80%, with THM and HAA levels now averaging less than 10 ug/L. The present Massachusetts Department of Environmental Protection and Environmental Protection Agency standards require that the running annual average (average of past four quarters) not be over 80 ug/L for THMs and not be over 60 ug/L for HAAs. MWRA has always met this standard. With the startup of the CWTP in July 2005, MWRA water now meets the newly issued EPA standards (December 2005), 6 to 8 years ahead of when they will become effective.

Below is a graph of THM levels over the last 18 years. These levels were relatively low prior to 1997-1998, and rose when improved disinfection practices to inactivate certain pathogens (germs) of concern were implemented. DBP levels rose until ozone treatment was ready to come on-line. Over this period inactivation of *Giardia* was improved significantly, and inactivation of *Cryptosporidium* was met once ozone was used as the primary disinfectant. With ozone, DBP levels are even lower than before disinfection



01 2000 Quarterly THMs elevated above the future 60 ug/L standard, but below the current standard of 100 ug/L. Actual compliance is based on an annual running average (not quarterly averages) and we meet the compliance requirement.

MWRA drinking water comes from the Quabbin and Wachusett Reservoirs in Central Massachusetts.

MWRA routinely tests for 122 contaminants. Overall testing results for 2008 will be published in MWRA's Annual Water Quality Report distributed this June to every household in MWRA's water service area. Copies of prior annual reports are available online at www.mwra.com or by calling 617-242-5323.

Arsenic Not a Concern in MWRA Drinking Water

A recent article in the Boston Globe discusses arsenic in drinking water, and how it is often detected in the New England area. MWRA test for arsenic at four locations along the MWRA system and has not detected arsenic in the water supply since 2001. Furthermore, all results from 2001 or earlier are far below EPA's new stricter standards.

Under the federal Safe Drinking Water Act, the EPA has lowered the arsenic standard from 50 parts per billion to 10 parts per billion. The rule took effect in 2006.

In over 150 samples since November 2001, MWRA laboratories found no detectable quantities of arsenic in any of the samples. The last detected quantity of arsenic was 1.2 ppb in October 2001, well below the new stricter EPA standards.

Arsenic is a naturally occurring mineral that comes from erosion of rocks and soil. In the U.S., highest arsenic levels are found in the Southwest and parts of the Midwest, West, and New England. Communities served by ground water supplies, rather than reservoirs and streams, are more likely to find higher arsenic levels.

MWRA drinking water comes from the Quabbin and Wachusett Reservoirs in Central Massachusetts, very large reservoirs with high water quality that do not have high levels of arsenic.

MWRA routinely tests for 122 contaminants. Overall testing results for 2008 will be published in MWRA's Annual Water Quality Report distributed this June to every household in MWRA's water service area.

Uranium Not a Concern in MWRA Drinking Water

A recent article in the Boston Globe discusses the potential of finding uranium in drinking water, and

how it is often detected in well water in the New England area.

The water supplied by MWRA is surface water, and therefore is not likely to contain many of the potential radioactive contaminants sometimes found in ground (or well) water.

To ensure that any potential radioactive contaminants are not found in the MWRA water supplies, the water is tested for these contaminants including gross alpha activity, which is one way to screen for the presence of uranium. Based on test results for gross alpha activity, uranium is not a concern in the water supplied by MWRA.

MWRA will continue to monitor for both regulated and other potential harmful contaminants in the water supply, even those that are not likely to be found in surface water supplies.

Uranium is a naturally occurring mineral that comes from erosion of rocks and soil, in particular granite. Since there are many granite deposits in the New England area, uranium is a potential concern for ground water.

MWRA drinking water comes from the Quabbin and Wachusett Reservoirs in Central Massachusetts, very large surface water reservoirs with high water quality that do not have concerns for uranium, or other radioactive materials.

MWRA routinely tests for 122 contaminants. Overall testing results for 2008 will be published in MWRA's Annual Water Quality Report distributed this June to every household in MWRA's water service area. Copies of prior annual reports are available online or by calling 617-242-5323.

Visit Our Web Page for More Information

Check us out at www.mwra.com. We have a wealth of information for both the public and for experts on our water and wastewater activities. This includes monthly updates on drinking water quality testing, information on lead, our most recent Consumer Confidence Report, and many technical reports associated with the Deer Island Treatment Plant and our extensive Harbor and Outfall Monitoring program.

Regulatory Update

By Bob Bentley, bob@h2otest.net

The postponed Lab Advisory Committee meeting from early March was held in late April. Following are some highlights.

Rapid Confirmation of *E. coli* in Drinking Water

We have been told that Mass. DEP has drafted the new policy requiring the change from EC-MUG to NA-MUG. This is a regulation change and will be out for public comment. To our knowledge, it is not out as of this writing. DEP only informally responded to the ITLA's comments, unfortunately.

The use of EC-MUG is also being disallowed in a soon to be released regulatory change from DEP's Drinking Water Division. The LCO staff told us that the change from EC-MUG to NA-MUG will require only one (1) performance evaluation sample as long as you hold certification for EC-MUG. We continue to await the announcement to the rest of the Laboratory community as the ITLA member labs are the only ones "in the loop" at this juncture.

As we stated previously, if implemented, this will have a major impact on your laboratory operations if you are confirming the presence of *E. coli* through the use of EC-MUG.

eDEP

The DEP folks have developed "printable forms" to replace the 39 column spreadsheets. These forms do **not** mimic the present State forms. They provide the user a form that looks like a standard piece of paper, but in most cases there are still multiple pages per report. DEP is "trying" to come up with a better form. We have been assured that they have not been hit by the budget axe, but feel that the jury is still out. The ease of "sharing" issue remains "in the pipeline."

Subcontract Data Reporting

Answers to ITLA's questions regarding subcontract data reporting are as follows:

- Is an ink signature or an electronic signature appropriate? **Yes, both are.**

- Is it a requirement that subcontracted reports must be on DEP forms? **No. Any form which ties the reader to a specific drinking water sample is acceptable. Of course, primary labs must report on State Forms.**
- Must subcontracted reports list PWS IDs as well as sample locations? **No. As long as the DEP can track the subcontracted sample to the primary lab sample.**

Possible Rhode Island Regulation Changes

An update from the last newsletter for labs who do work in Rhode Island: The Rhode Island Department of Health promulgated a new set of regulations that takes away the ability of private and public laboratories to do a large array of analytical work. All work would have to go to the RIDOH Laboratory. The good news is that RIDOH backed down on this provision and eliminated the requirement to send analytical work to their lab. We have been told by those in the Lab community in RI that are in the know that this needs to be watched very carefully. It is their opinion that this could come back at a time when least expected. Thanks need to go to Laurel Stoddard and her sub-committee for taking a stance for the ITLA to the RIDOH. While we cannot claim all of the credit, we were amongst the first to beat the drum and LOUDLY!!

On all of these, stay tuned!!! We will be able to update you at our upcoming meeting with news from the March Lab Advisory Committee. If you know of other regulatory issues or have any other items we should be watching, please contact me or any member of the Executive Committee.

Regulatory From Page 5

parameters such as Oil and Grease.

- Clarifications, modifications, or options applicable to existing CWA methods, such as: adding metals to the scope of Methods 200.7 & 200.8, explicitly allowing use of collision cell technology with 200.8, provide more instructions on how to obtain a waiver of the distillation requirement for ammonia and fluoride.

ITLA Quarterly Meeting

Wednesday, June 17, 2009
Holiday Inn
700 Myles Standish Inn
Taunton, Mass 02780
(508) 823-0430

8:30 a.m. Coffee

9:00 a.m. Committee Reports

Secretary	Technical
Newsletter	Lab Advisory
Election	Membership
Ethics	Treasurer
Regulatory	By-laws

9:30 am **Capillary Flow Technology:
Recent Improvements in Gas
Phase Techniques**

Terry Wilks, Quantum Analytics

10:15 am Break

10:30 am **New Generation of GC/MS:
Featuring Scan/SIM Technology**

Terry Wilks, Quantum Analytics

11:15 am **Ethics**

Michael Delaney, MWRA

12:00 pm Meeting Adjourns

Regulatory News

Provided by Catalyst Information Resources

EPA Publishes Memo Mandating Quality Control for all Wastewater Testing Methods

EPA has published a memo that clearly indicates the following twelve quality control checks are to be considered essential and must be incorporated into the laboratory's documented quality system unless a written rationale is provided that indicates why these controls are inappropriate for a specific method.

These essential QC checks are:

- Demonstration of Capability (DOC),
- Method Detection Limit (MOL),
- Reagent blank (also referred to as method blank),
- Laboratory fortified blank (LFB, or laboratory control sample (LCS)),
- Matrix spike (MS), matrix spike duplicate (MSD), or laboratory fortified blank duplicate (LFBD),
- Internal standard/s, surrogate standard/s (for organic analysis) or tracer (for radiochemistry),
- Calibration (initial and continuing),
- Control charts (or other trend analyses of quality control results),
- Corrective action (root cause analyses),
- Specific frequency of QC checks,
- QC acceptance criteria, and
- Definitions of a batch (preparation and analytical).

www.epa.gov/waterscience/methods/qaqc.html

Advance Notice of New EPA Water Regulation Affecting Laboratories

EPA has published a list of items it is considering for a new propose rule affectin g wastewater analyses. The list includes:

- Approval of only the most recent edition of Standard Methods.
- Specify Essential Quality Control.
- Propose methods that have passed the Alternative Test Procedures (ATP) process. Candidates include a Hach LDO method, a Systea Easy (1-Reagent) Nitrate Method; Leck Mitchel and Orion laser and LED methods for turbidity.
- Clarify respective roles of headquarters on national ATP reviews followed by rulemaking for approval at Part 136 versus regional limited-use approvals without rulemaking.
- Add updated or new methods published by voluntary consensus standards bodies, such as ASTM methods D7065-06 (nonylphenol), D888-05 (luminescent dissolved oxygen), D 7284-08 & D 7511-09 (cyanide), & Standard Method 3114C (selenium).
- Revise Method 1664 and add Methods 1614 (flame retardants). 1668 (PCBs as Congeners), and 200.5 (metals).
- Explain why the sample collection, shipment and storage requirements requirements in Part 136 supersede any conflicting instructions in the corresponding analytical method.
- Modifications may be made to method defined