

The Pipeline

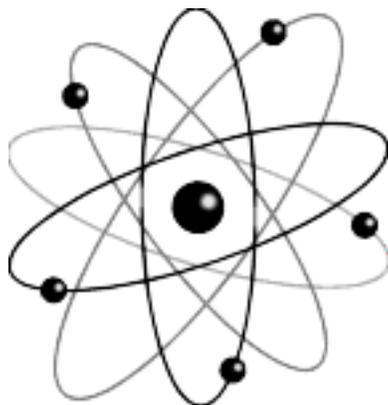
Drinking Water Laboratory
Policy & Procedures Update

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Arsenic MCL, Method, and Reporting Limit Changes

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On January 22, 2001, the USEPA officially chose 0.01 mg/L as the new arsenic MCL which will become effective on January 23, 2006. Beginning January 23, 2006, any arsenic result of 10.5 ug/L or greater should be reported to Ohio EPA as an arsenic level above the MCL.

The USEPA also decided to withdraw two Inductively Coupled Plasma Atomic Emission Spectroscopy methods, EPA Method 200.7 and SM 3120B for arsenic analyses in drinking water because their detection limits are too high for the new standard. Any samples analyzed by these methods after rule revisions are effective, which is anticipated to be mid-2003, will **not** be valid for compliance determination by Ohio EPA.

Ohio EPA has officially proposed to lower the required reporting limit for arsenic to 3 ug/L. A notice of the proposed rule changes for reporting limits was mailed to all laboratories which conduct inorganic or DBP testing. The draft revisions can be viewed on Ohio EPA's web site at <http://www.epa.state.oh.us/ddagw/oac.html>. Comments on the draft rules were due to Ohio EPA by July 19, 2002.

MCL Notification Reminder

Please remember that all chemical MCL exceedances must be reported to Ohio EPA by no later than the end of the next business day after the result is obtained, as specified in Ohio Administrative Code (OAC) 3745-89-08. If your laboratory

does not use DrinkWare, then you must fax the results to the Division of Drinking and Ground Waters, Central Office (614) 644-2909), using the Ohio EPA MCL fax notification form. Positive bacteria results, as well as all repeat bacteria samples, must also be submitted by no later than the end of the next business day after obtaining results to the appropriate district office. If you subcontract, your laboratory must ensure that the subcontracted laboratory will forward the analytical information back quickly enough for your laboratory to meet this reporting deadline. Failure to meet these reporting requirements is a violation of the OAC and may effect the validity of your certification. Both the MCL fax notification form and list of MCLs are located on Ohio EPA's web site at <http://www.epa.state.oh.us/ddagw/pubs.html#factsht>. If you have any questions regarding this information, please contact Todd Kelleher at (614) 644-2752.

QA Plans

This is just a reminder that all organic and trace metal testing labs must submit a revised QA plan each time an application is submitted for renewal of certification. It is NOT necessary for each survey. For example if analysts are being added, it is not required.; however, it **is** required if new tests are being added.



It is required if your certificates are due to expire and you will need a survey.

Please consult the laboratory certification manual for information concerning the required elements of a QA plan. Please mail all QA plans to:

James Evans
Ohio EPA/DES
Laboratory Certification Section
1571 Perry Street
Columbus, OH 43201

Mr. Evans can be reached by phone at (614) 644-4222 if there are any questions.

Calibrating ATC Probes

The lab staff at the Delaware City Water Plant laboratory were having some problems getting their pH slope to fall within range. They traced the problem down to a bad ATC probe. They ordered a new one, but were not sure how to calibrate it. During a recent survey, the survey officer checked the calibration. This was done by taking a large quantity of tap water (500-1000 mL) at about 25 degrees Celsius, inserting a mercury or equivalent thermometer in it and comparing it to the temperature on the pH meter. A NIST calibrated thermometer works best, but is not required. In Delaware's case, their NIST thermometer read 25.5 degrees; the pH meter read 35.4 degrees. This was a huge difference. Their pH meter allows calibration of the temperature. It was then adjusted to the correct temperature, then the

slope was checked. The slope and 4.0 buffer were right in range this time. The manufacturer recommends daily checks with a thermometer, but this is overkill. A regular check might be in order considering the impact it had on results. Certainly attempt a calibration of the ATC probe when using a new ATC probe and when slopes are out of range. It is not certain and probably doubtful that older meters have the capability of allowing for ATC calibration but, if your meter allows this, it should be checked and adjusted if necessary. Our thanks to the excellent crew at the Delaware Water Plant for discovering this and passing the information along!

A Short History of Lab Certification

Drinking water laboratory certification in Ohio was started in the 1930s or 1940s by the Ohio Department of Health (ODH). It was combined with dairy laboratory



certification. The program initially only included microbiology tests. Tests were performed by multiple tube technique. It took until the early 1970s before tests improved - that's when the membrane filter test was adopted. Around that time the Ohio EPA was formed. It was the EPA's duty to administer the laboratory certification program, but since all the expertise was located within the Health Department, the EPA decided to contract with ODH to run the day-to-day operation of the program. This arrangement continued until about 1997 when the entire program was transferred to the Ohio EPA. At that point, all ODH laboratory certification personnel become Ohio EPA employees.

The first chemistry laboratory certification program was started in the early 1970s as well. In was in 1975 that Ohio produced its first laboratory certification manual. Shortly thereafter standardized QC forms were required. Later chemistry laboratory certification manuals were also produced. Ohio is still probably the only State that produces these manuals.

Charles Thayer was one of the first survey officers. Not too much is known about him. He was followed by Charles Croft, who became the lab director at ODH. Dr. Croft is alive and well living in Worthington, Ohio. Next was Elizabeth Collett. She hired the next survey officer, Lois Thompson. Lois eventually headed up the "Milk and Water" section and hired Ken Applegate. Ken quit, went back to school and was rehired with a Ph.D. at the Ohio EPA, where he worked on the administrative end of the program. Lois then hired Bob Lewis, who moved on to the Department of Mental Health. He is now retired. Also hired was Barbara (Huntley) Dorian. A couple of years later Barb took a job heading the micro lab at the Columbus Water Quality Lab. She is now retired. Don LaSota was also hired soon after. Don eventually made it to his current position, the supervisor of the laboratory certification section. He'll be retiring in September 2002. Lois also hired Eric Lynn, who stayed a few years before moving to San Diego. Judy (Budd) Hild was the next survey officer hired. She moved on to clinical laboratory management. Todd Bidlack, the current micro survey officer, was hired next. About 12 years ago the dairy laboratory certification duties were transferred to the Ohio Department of Agriculture. Ken and Lois eventually married and then retired in the early 1990s. They are both well, living on a farm in southern Wyandot county.



The first chemistry laboratory survey officer was Ken Humphrey. He managed the program for a few years and was succeeded by Lundy Adelsberger and Larry Schmeltzer. Lundy moved on to the Ohio EPA and Larry went to medical school. Jim Dolfi, who still is with laboratory certification, was next. He was followed by Jim Evans, who stayed on as a survey officer for a couple of years, but eventually took a job working with Ken Applegate at the Ohio EPA. Jim returned "home" a few years ago when he was transferred back to the laboratory certification section. After Jim Evans, Steve Rosenthal was briefly a survey officer. Hired to replace him was Clyde Cain, who eventually retired. Frederick Jones replaced Clyde. Frederick left for a better paying job within the air pollution program at the EPA. He was replaced by the current chemistry laboratory survey officer, Charles Vasulka.

On the administrative side, the secretarial staff started in the early 1970s with Lucille Perry, she was followed by Janis Snowball who is still working at the ODH labs. In those days the micro and chemistry programs were separate - the chemistry secretarial staff started with American Hopkins. American was followed by Lorraine Howell. Lorraine was present when the Quality Assurance and Compliance Section was formed in ODH, combining the chemistry and micro programs. She was followed by the current staff member, Jacqueline Williams. That's a short history of the lab cert program!

Chlorine Dioxide and Chlorite Reporting

The Stage 1 Disinfectants and Disinfection Byproduct rule (D/DBPR) has limited the approved methods for chlorite and chlorine dioxide analysis. The Ohio EPA's Laboratory Certification Office will no longer certify personnel or laboratories to perform SM 4500 ClO₂-C or SM 4500 ClO₂-D for the reporting of chlorite. We will also stop certifying personnel or laboratories for SM 4500 ClO₂-C for the reporting of chlorine dioxide.



This change will not affect the status of current certification. Laboratories will remain certified to perform these tests until their current certification expires or until January 1, 2004. However, samples collected from public water systems using surface water and serving greater than or equal to 10,000 persons must be analyzed by the methods approved in the Stage 1 D/DBPR. This rule has been effective for these systems since January 1, 2002.

The acceptability of data is determined by the Division of Drinking and Ground Water's Chemical Monitoring and Compliance Group. It is the responsibility of the reporting entity to report data analyzed by an acceptable method for which they are certified.

New Water Course to be Offered

OTCO will offer a new water treatment course next winter. The 36-hour "Basic Chemistry and Hydraulics Concepts" short course will begin in January. The course will contain basic chemistry for water treatment processes, lime-soda softening, ion exchange, iron and manganese removal, corrosion control, pH adjustment and water hydraulics. "Basic Chemistry and Hydraulics Concepts" will be for the operator who needs a stronger background in the subjects mentioned.



Watch for OTCO's 2002-2003 training bulletin, to be mailed late this summer, for details.



Bob Taft, Governor of Ohio
Christopher Jones, Director of Ohio
EPA



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