

NC Drinking Water Laboratory Certification Update

2005 First Quarter

Happy New Year

The staff of the Drinking Water Certification Office hopes that your new year is starting off well and that everyone is ready for the challenges of 2005.

In case you were worried, your laboratory did *not* miss the October 2004 newsletter, there wasn't one. The end of 2004 was quite busy, but based on positive feedback since the start of these updates, every effort will be made to distribute them on a quarterly basis.

Environmental Sciences Branch

In September 2004 John Neal was appointed the new head of the Environmental Services Branch (ESB) of the North Carolina State Laboratory of Public Health. John has served as Supervisor of the Organic Chemistry section of ESB for over 25 years and acted as Interim during the extended time that the previous branch head was in Iraq. The Certification Office is pleased to have John in this role and looks forward to working with him.

Proficiency Evaluation Studies

Just a reminder that a full proficiency evaluation (PE) study was to be completed in the first calendar quarter of 2005. This study should include all analytes tested by each method for which your laboratory is certified. Each laboratory should refer to their most current status sheet to assure that all the required testing is completed. If your laboratory is certified for Heterotrophic Plate Count by either the Pour Plate method or by IDEXX Simplate, this must be included in the first quarter set.

There have been problems recently with receipt of PE study reports from some of the approved vendors. In discussions with representatives of these companies, it appears they do not mail results to Post Office boxes but require a street address. Please use the following physical location for our office:

State Laboratory of Public Health
Certification Office, Room 311
306 N. Wilmington Street
Raleigh, NC 27601

The Certification Office recognizes that some vendor studies will overlap calendar quarters. It is

acceptable for a laboratory to start a study in March with the data reported to our office during the second quarter of the year.

Following review of each individual PE study a detailed letter is forwarded to your laboratory contact name which outlines (1) what is required in the second quarter as make-up testing for those parameters missed or not reported in the first study; (2) what contaminant/method combinations may have been decertified; and (3) what testing must be completed in the third calendar quarter. Laboratory management is asked to review this information carefully and to call our office if you have questions.

Quantitation of *E. coli* source water samples

In order for WTP laboratories to comply with the upcoming LT2 rule which will require enumeration of *E. coli* values in surface water samples, the Certification Office is developing a one-day workshop on the quantitation methods for use under this rule. The information to be presented is being developed using the *proposed* rule and the LT2 Microbiological Guidance Document. Water treatment plants and laboratories must recognize that changes in the allowable methods that are discussed during these workshops may occur when the final rule is published.

It is anticipated that this will be repeated multiple times throughout the state, possibly at NCWOA Sectional Meetings. Additional announcements will be forwarded from NCWOA and/or the Certification Office.

Reporting

The Certification Office has historically relayed reporting questions to the appropriate rule manager in the Compliance Services Branch of the Public Water Supply section and will continue this practice in the future. However, due to increased problems with certified laboratories meeting reporting deadlines (over 800 late bacteriological reports in October) and the continued use of incorrect formats, the Certification Office will now take a more active role in responding to these problems.

Beginning this year, a penalty program will be enforced based on the type of problem and the impact on the affected water treatment plant(s). More specific details will be forthcoming before actual implementation and you are encouraged to read this information thoroughly and call our office if you have questions or concerns.

In general, laboratories that do not report, **within the required timeframe**, any microbial or chemical contaminant above the Allowable Limit or Action Level as defined on the individual PWS report forms, will immediately be dropped to "Provisional" Status. Contaminants considered acute health hazards must be reported the same day as completed, while others which are detected above the stated level must be reported within 48 hours. A second failure to report in a specific time period within one year will lead to "Decertification" of your laboratory for a 30-day period. Before re-certification is awarded, the protocol to be used to prevent a repeat occurrence must be provided to the Certification Office.

Routine reports which are reported late will also be monitored. If a WTP is issued a monitoring and/or reporting violation due to laboratory error, a warning letter will be issued. Failure to again report this type information within a given time period will result in downgrading of laboratory to "Provisional" status. A third delay, or failure to report as defined in the paragraph above, will result in "Decertification".

Since reporting problems may overlap multiple contaminant groups, any status changes will cover *all* laboratory testing. Reporting concerns are viewed by the Certification Office in most instances as management problems rather than analytical; therefore any downgrading of certification status will be for the entire laboratory, not just for the contaminant(s) or method(s) that caused the downgrade.

Reporting problems will be tracked over a rolling 12-month period. Once a laboratory has been decertified for the required 30-day period, the monitoring cycle will start over.

It is not the intent of the Certification Office or the Public Water Supply Section to penalize laboratories due to factors beyond their control. Adjustments in the above plan will be reviewed on a case-by-case basis. The goal of this plan is to prevent undue penalties on the Water Treatment Plants in our state who must publicize violations to the customers served by their facility.

This document has been prepared solely for use by water plants, health departments and commercial laboratories certified by the North Carolina Drinking Water Laboratory Certification Office, State Laboratory of Public Health, to perform compliance testing on public water supply samples.

Nitrate by Probe

The Certification Office has seen increased interest in analysis of drinking water samples for nitrate using the electrode method. Although on the surface this appears to be a relatively easy procedure, those using it have come to recognize the problems associated with this technique.

Our office has had multiple conversations with EPA concerning this method with varying results. To summarize these findings, it appears that the method as outlined in *Standard Methods for the Examination of Water and Wastewater* must be followed, i.e. a double junction reference electrode should be used in conjunction with a Nitrate electrode as described in *Standard Methods*. Although interferences are rare in drinking water samples, the Interference Suppressor buffer solution described in the *Standard Methods* procedure must also be used. Laboratories that are following the method as written are having success with their daily quality control testing as well as samples completed in PE studies.

Nitrate/Nitrite Analyses

Samples which are tested for nitrate levels using the cadmium-reduction method and that give a result of <1 mg/L do not need to be further tested to determine any nitrite interference. Nitrite testing is only required when the detected level is at least 1 mg/L.

Mooresville Regional Office

For those laboratories who may work with the Mooresville Regional Office, please note the following address change. The phone and fax numbers remain the same.

610 East Center Ave., Suite 301
Mooresville, NC 28115

2005 Course Presentations

Bacteriological Methods for the Examination of Drinking Water:

June 21-24; November 1-4

Process Control Chemistry:

August 1- 5