SCDHEC Office of Environmental Laboratory Certification
Certification Updates – May 2019

Program Manager for the Environmental Laboratory Certification Program

Congratulations to Mr. Bennie Cockerel who has been selected as the Section Manager for the Office of Environmental Laboratory Certification Program within the Bureau of Environmental Health Services. Bennie began his career with DHEC in 1998 in the login section of the SCDHEC Central Laboratory. He has also worked in the Bureau of Land and Waste Management, the microbiology and sample characterization sections of the Central Laboratory, as well as the Savannah River Ecology Laboratory in Aiken, SC. In 2004, Bennie accepted a position in the Office of Environmental Laboratory Certification and he is an EPA certified drinking water Laboratory Certification Officer (LCO) and an FDA certified Laboratory Evaluation Officer (LEO) for shellfish and milk. Bennie is a United States Air Force veteran, and has a B.S. degree from USC-Aiken and a M.S. degree in biology from Appalachian State University.

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SW-846 Update VI, Phase II Implementation

On July 12, 2018, the Environmental Protection Agency (EPA) provided notice of the finalization of ‘‘SW-846 Update VI, Phase II’’ to the Third Edition of the manual, ‘‘Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,’’ EPA publication SW–846. Update VI, Phase II contains analytical methods which may be used in monitoring or complying with the Resource Conservation and Recovery Act (RCRA) hazardous waste regulations.

The South Carolina Certification Program will be implementing these new and revised methods for Solid and Hazardous Waste Certification in early 2020. The new and revised analytical methods can be found at this link. The SW-846 Update VI implementation information can be found at this link.

All Entities Reporting Official Residual Chlorine Results to SCDHEC

The South Carolina Environmental Laboratory Certification Program is reminding all laboratories, facilities, consultants and other groups that report residual chlorine results to SCDHEC for official purposes that the laboratory performing this testing must be certified by this Office per South Carolina Regulation 61-81, section C. Residual chlorine samples must be analyzed within 15 minutes of collection for the results to be valid.

It is not acceptable to collect samples for main line clearances, new lines, distribution samples, etc., for which the residual chlorine analysis is either performed by a non-certified entity or the sample is delivered to a contract laboratory for analysis beyond the 15 minute hold time. Any residual chlorine sample not analyzed by a certified laboratory within 15 minutes of collection will be invalidated. Lack of a valid residual chlorine result will also invalidate any bacteriological result for that same sample.

Commonly Asked Holding Time/Incubation Time Questions

1) What is the holding time for BOD samples?

   BOD samples have a holding time of 48 hours from the time of collection to the sample being placed in the incubator.

2) What is the holding time for ammonia samples?

   Ammonia samples must be preserved or analyzed within 15 minutes from the time of collection. If the samples are preserved with sulfuric acid and cooled to ≤6.0°C, the holding time is extended to 28 days.

3) What is the incubation time for samples using the SIMPLATE (2000) method?

   The incubation time for the SIMPLATE (2000) method is 48 hours.

Initial Demonstration of Capability (IDOC) and Continuing Demonstration of Capability (CDOC) requirements

An initial demonstration of capability (IDOC) must be performed for each method and each analyst. It is a demonstration of the analyst's proficiency with the method. As stated in SM 1020B.1, each analyst must conduct an IDOC at least once before analyzing any sample to demonstrate proficiency in performing the method and obtaining acceptable results for each parameter .

An ongoing or continuing demonstration of capability (CDOC) is used to document an analyst's continued proficiency with a method by meeting the precision and accuracy requirements. (Refer to SM 1020B.3 for guidance)

For both IDOCs and CDOCs, complete documentation of the analyses is required. It is not sufficient to state that an employee "passed". The IDOCs and CDOCs can be documented on a calibration and sample analysis bench sheet or the laboratory may use a form specifically for this. However, all calibrations, QC, results of the samples analyzed, and the true value for those samples must be documented. These documents must be maintained in the employee's training folder.

Proficiency Tests (PTs)

Laboratories are reminded that the PT samples must be treated as actual samples and that the results must be traceable to the analysis and applicable quality control records. Failure to provide this traceability may invalidate proficiency testing sample results.

When completing the PT reporting forms, be sure to include the correct method descriptions. If a PT report is received with an incorrect method reported, the PT will be unacceptable and a new PT sample must be analyzed. To ensure that the laboratory is reporting the correct method, review the laboratory certificate for the correct method. If the laboratory has questions on reporting PT methods, please contact this Office to verify the correct method prior to analysis of the PT sample.

Dissolved Oxygen (DO) Membrane method vs. Luminescence Dissolved Oxygen (LDO) method

Laboratories are reminded that separate certifications are required for the membrane electrode method (DO) and the luminescence or optical DO methods (LDO).

The applicable methods are:

Membrane electrode DO method: SM 4500OG-2011
Luminescence or optical DO methods: ASTM D888-09C and HACH 10360 Rev. 1.2

The laboratory must verify that they are using the correct meter for the type of DO analysis they are certified to perform (or obtaining certification to perform).

Microbiology

The laboratories are reminded that microbiological samples that are analyzed using an enzyme substrate method such as Colilert, Colitag, Colisure, Enterolert, etc., must be shaken at least 25 times before the medium is added to the sample. After the medium is added, the samples must be shaken again vigorously before being placed in the incubator.

For any questions or concerns please email labcerthelp@dhec.sc.gov.