Maine Department of Environmental Protection

Bureau of Land & Water Quality

O&M Newsletter

May 2008

A monthly newsletter for wastewater discharge licensees, treatment facility operators, and associated persons

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ColiBlue24® Media

As some of you may already know it is almost impossible currently to get your hands on a fresh supply of ColiBlue24® media. While recently trying to place an order for some supplies for our laboratory I ran into a problem with the mColiBlue24® media being on backorder at all of the suppliers with whom I checked.

I turned to the HACH Company customer service line (1-800-227-4224) for the reason why all mColiBlue24® media was on back order. It is not as one might suspect, that the product flew off the shelf and HACH cannot keep up with demand. A HACH Company representative informed me that there were quite a few laboratories experiencing unusual and unexpected results when using the mColiBlue24® media. HACH suspected something might be wrong with the media and since early March has stopped distribution and has made unavailable for distribution all product manufactured in the past year. HACH hopes to have this QA issue resolved within the next three to four weeks and have product available to those who have already ordered their supply of this media by the middle to end of May.

Unfortunately for those who are required by their MEPDES license to start monitoring E. coli on May 15 and were planning on using the mColiBlue24® method, you may not receive your media in time. Fortunately there are alternative approved methods available to those folks, such as method 1603. Method 1603 is a membrane filter technique that employs the use of Modified mTEC agar. To save on expenditures, you could purchase just enough pre-plated modified mTEC agar to get you through until the MColiBlue24® media arrives.

There are also several multiple tube/well methods available. The drawbacks for facilities that switch to multiple tube/well methods are that folks would most likely have to learn a new procedure and/or buy new equipment to perform these alternative analyses.

If you are regulated facility and find yourself in a position of not being prepared to perform MEPDES required E. coli analysis, please contact your DEP wastewater inspector for guidance.

Fred Gallant

Approved Training

May 12, 2009 in Gray, ME – Basic Math for Operators – Sponsored by MRWA – Approved for 4 hours
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May 14, 2009 in Gorham, ME – Advanced Certification Math for Operators – Sponsored by MRWA – Approved for 5 hours
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Note: JETCC stands for Joint Environmental Training Coordinating Committee – PO Box 487 – Scarborough, ME 04070-0487 – Tel (207) 253-8020

MRWA stands for Maine Rural Water Association - 14 Maine Street, Box 36 - Brunswick, ME 04011 – Tel (207) 729-6569

NEIWPCC stands for New England Interstate Water Pollution Control Commission – 116 John St. – Lowell, MA 01852-1124 – Tel (978) 323-7929

eDMR Update

Here's what's going on with eDMR.

Some users are getting the message "Error:null" when they access the system. This is a problem that OIT has been wrestling with for over a year. OIT monitors the eDMR servers and resets then whenever the 'Error:null' message appears. If you or your operators see the 'Error:null' message, wait a few minutes and try again.

The past two months, the eDMR system has been very slow on the 15th of the month. OIT claims that the system was overloaded by income tax filings (Corporate on March 15th and Individual on April 15th). If we see problems on the 15th of May, we will push OIT to increase their server capacity to handle the traffic from our users. They assured us that there would be no problems handling the number of users we anticipated. Perhaps our users could be encouraged to 'file' a day or two early and avoid the slow response problem.

The availability of the daily data entry (49 Form) part of eDMR is close. I anticipate being able to turn the daily part of eDMR on in June.

If you have any other comments or concerns, please let me know. I plan to do this type of update every month to keep everyone on the same page.

Dick Darling

For Practice

1. The purpose of an air-gap device is to:
   a. Put more oxygen in the waste in sewers to avoid odors
   b. Lessen vibration in pipes.
   c. Prevent cross connections between wastewater and potable water.
   d. Ventilate wet wells at pump stations

2. A BOD test was run using three dilutions of the same sample. Which dilution gives the most valid results?

Sample Volume	Initial DO	Final DO	BOD
a. 3 mL	8.0 mg/L	6.7 mg/L	130 mg/L
b. 5 mL	7.9 mg/L	4.0 mg/L	234 mg/L
c. 8 mL		8.1 mg/L	0.9 mg/L

3. If the return sludge rate does not change, the influent flow increases and the influent BOD concentration remains constant, the F/M ratio in the aeration basin will most likely…
   a. Increase
   b. Remain the same
   c. Decrease
   d. Depend on the air temperature

4. If an operator has a stock solution of acid that is 1.0N and he mixes 200 mL of that acid with 800 mL of distilled water, what will the normality of the resulting solution be?
   a. 8.0N
   b. 2.0N
   c. 0.8N
   d. 0.2N

Rulemaking for Nutrient Criteria for Fresh Surface Waters

The DEP is initiating rulemaking for a new rule, *Chapter 583 Nutrient Criteria for Fresh Surface Waters.* This rule is being developed by the DEP in accordance with federal requirements.

The purpose of the rule is to determine if phosphorus or another nutrient has caused or contributed to the impairment of a designated use of fresh surface waters. Nutrient enrichment can cause negative environmental impacts to fresh surface waters, such as algal blooms, low dissolved oxygen concentrations, and excessive growth of filamentous algae or bacteria. The proposed rule is applicable to class AA, A, B, C, and GPA surface waters.

U.S. Environmental Protection Agency had proposed an approach that delineated two regions within Maine and specified numeric ambient criteria for total phosphorus in each region. However, the Department did not agree with this “one size fits all” approach and has opted to propose nutrient criteria for fresh surface waters using a tiered-use approach and response-based attainment decisions.

The proposed rule specifies numeric indicators for ambient total phosphorus that are specific to the classification of the water. The rule also specifies numeric environmental response criteria, such as Secchi disk readings, chlorophyll *a* concentrations, diatom total phosphorus index, percent of substrate covered by algal growth, presence of patches of bacteria and fungi, dissolved oxygen levels, pH, and attainment of

aquatic life standards. The environmental response criteria will be used to determine attainment of designated uses and the total phosphorus levels will be used to determine if nutrients caused impairments.

This draft rule has been under development for some time and has been the subject of numerous presentations at MWWCA, MRWA and JETCC conferences. The DEP held a meeting with representatives of MWWCA, MRWA, and the Maine Pulp and Paper Association on April 22, 2009 to brief them on the details of the draft rule.

The DEP plans to initiate formal rulemaking in accordance with the schedule below (the schedule is subject to change). A copy of the proposed rule and supporting documents will be available shortly on the DEP's web site at: http://www.maine.gov/dep/blwq/rule.htm

Additional information on the rulemaking process can be found at the DEP's web site at: http://www.maine.gov/dep/bep/rulemaking/is_rulemaking.htm

For more information on the proposed rule contact Tom Danielson, Maine DEP at thomas.j.danielson@maine.gov., or 287-7728.

Activity	Date
Board of Environmental Protection Meeting for Posting	05/07/09
Board of Environmental Protection Public Hearing	06/18/09
Public Comment Deadline	07/31/09
Board of Environmental Protection Meeting for Adoption	10/15/09
Expected Final Effective Date	11/09

Certification News

The Spring wastewater operator certification exam was given on May 13, 2009 in the usual locations. Results will be sent to those who took the test as soon as we have them. Applications for the November 18, 2009 exam must be postmarked by September 26, 2009 or hand-delivered to the DEP Augusta office on September 28, 2009

Answers to *For Practice:*

1. c. An air-gap is the only acceptable method to prevent cross-connections between wastewater and potable water.

2. b. In sample A, the depletion of DO in the sample bottle is less than 2.0 mg/L indicating that there was not enough biological activity for a valid test. In sample C, the DO was depleted to less than 1.0 mg/L. There might not have been enough DO available to complete the biological reduction of the organic material in the wastewater.

3. a. The F/M ratio is the ratio of the pounds of food to the pounds of microorganisms. If more flow having the same BOD concentration comes into the plant, the plant will receive more pounds of BOD. If the return sludge rate remains constant, there will be more food for the same amount of sludge. Thus, the F/M ratio increases

4. d. The normality of the final solution is given by (Volume of Acid X Normality of Acid)/Total Volume

   Normality of Solution = (200 mL X 1.0N)/(200mL + 800mL) = 0.2N