

The Pipeline

Drinking Water Laboratory
Policy & Procedures Update

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2004 Public Water System Monitoring Requirements

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The 2004 chemical monitoring requirements were mailed to all public water systems in early December 2003. Because of additional monitoring requirements, many public water systems received a distribution monitoring schedule along with their entry point monitoring schedule(s). The distribution monitoring schedules list the monitoring requirements for disinfection by-products, asbestos, and lead/copper. In order to properly complete and submit the sample submission report forms to the Division of Drinking and Ground Waters, laboratories should obtain all required information from the public water systems, including the sample monitoring point information included on the monitoring schedules. For the disinfection by-products, the distribution schedules direct the public water systems to the Sample Monitoring Plan Template in order to obtain the correct sample monitoring point codes. The distribution schedules alone will not provide all the information needed to report disinfection by-product results. Monitoring schedules are available on the DDAGW web site at: <http://www.epa.state.oh.us/ddagw/index.htm>.

In the past, public water systems have collected asbestos samples at their entry point. This fall, DDAGW surveyed all community and non-transient non-community systems to determine which would be required to

collect distribution samples because they have asbestos-cement pipes. Over 300 water systems are scheduled to collect a sample for asbestos analysis in 2004 during a specific quarter. This is more than a ten fold increase from the last few years. Currently, only one laboratory is certified by Ohio EPA to analyze drinking water samples for asbestos; Data Chem Laboratories in Cincinnati. Due to limited laboratory capacity and a 48 hour filtering deadline, laboratories subcontracting to Data Chem should coordinate a sampling schedule so that all of their public water system clients can meet their quarterly deadlines.

Public water systems were scheduled for asbestos monitoring according to their PWSID number, and they should include one of their valid STU numbers on their paperwork. The SMP designation for asbestos is DS000. Sampling will be required at these systems every nine years.

Also, all community and nontransient public water systems are required to take one sample for nitrite in 2004. Given the short 48 hour holding time for nitrite samples, some laboratories may need to make changes in their sample handling procedures to meet the increased demand. Please contact Todd Kelleher, Division of Drinking and Ground Waters, at (614)644-2752 if you have any questions regarding this information.



Continuous Turbidimeter Calibration

Requirements for Monitoring Turbidity at Surface Water Treatment Systems

All surface water systems are required to monitor turbidity of the **filtered water** either by a continuous turbidimeter or by grab samples taken at least every four hours. If a continuous turbidimeter is used, turbidity readings must be taken at least every 15 minutes. Previously turbidity readings of the filtered water from continuous turbidimeters were required to be taken every 6 minutes. Systems may continue taking turbidity readings of the filtered water every 6 minutes or may change the frequency to every 15 minutes.

In addition, all surface water systems using either conventional or direct filtration treatment will be required to monitor the turbidity from each **individual filter effluent** every 15 minutes, as part of the Interim Enhanced Surface Water Treatment Rule and the Long Term 1 Enhanced Surface Water Treatment Rule. For surface water systems serving a population of at least 10,000 this requirement became effective on January 1, 2002. For surface water systems serving a combined population of less than 10,000 this requirement will become effective January 1, 2005, however, it is recommended that turbidimeters be installed before the compliance date.

Turbidimeter Calibration Requirements		
	Filtered Water (Combined Filter Effluent)	Individual Filter Effluent
What is the procedure?	<ul style="list-style-type: none"> * Use manufacturer's procedures to calibrate the continuous turbidimeter. * Take a split sample and compare turbidity reading from the continuous turbidimeter with your certified bench top turbidimeter * If the certified bench top turbidimeter reads 0.5 NTU or greater and the continuous turbidimeter reading varies by more than +/- 10 percent, then adjust the continuous turbidimeter to read the same as the certified bench top turbidimeter. * If the certified bench top turbidimeter reading is less than 0.5 NTU, and the continuous turbidimeter reading varies by more than +/- 0.05 NTU then adjust the continuous turbidimeter to read the same as the certified bench top turbidimeter 	<ul style="list-style-type: none"> * Use manufacturer's procedures to calibrate the continuous turbidimeter. * Compare the reading from the continuous turbidimeter to a secondary standard once per month (or calibrate using a primary standard once per month). If the monthly turbidity reading deviates from the secondary standard value more than +/- 10 percent, then clean and calibrate the continuous turbidimeter using a primary standard. * Calibrate the continuous turbidimeter using a primary standard at least once per quarter.
Who must conduct the calibration?	Analyst approved by Ohio EPA to conduct turbidity analysis.	Plant personnel
What records must be kept of the calibrations?	<ul style="list-style-type: none"> * Date of calibration * Name of person conducting calibration * Continuous turbidimeter reading * Certified bench top turbidimeter reading 	<ul style="list-style-type: none"> * Date of calibration * Filter number * Name of person conducting calibration * Any significant observations made * A copy of the manufacturer's calibration procedures
Who will review the information	Division of Environmental Services - Laboratory Certification personnel	Ohio EPA survey officer during sanitary survey
How long must this information be retained?	Ten years	Three years

If you have any questions regarding continuous turbidimeter calibration requirements, please contact the Division of Environment Services, Laboratory Certification Section at (614) 644-4245.

New Part-time Laboratory Evaluation Officer

Nik Dzamov from the Division of Environmental Services, otherwise known as the EPA Laboratory, has joined the laboratory certification section as a part-time Laboratory Evaluation Officer. Nik graduated from the Ohio State University in 1992 with a B.S. in biology. He started as an intern with the EPA in 1990 working with the bioassay section. He has 13 years experience working at the DES Laboratory in both the organics and inorganics sections.

Nik has been training in the laboratory certification section since October 1, 2003 and will be returning to the DES lab in June of 2004. Currently he is traveling with either James Dolfi or Charles Vasulka. Beginning in January of 2004, he will be conducting surveys on his own. Please make him feel welcome.

Nik may be contacted at (614) 644-4255 or e-mailed at Nikola.Dzamov@epa.state.oh.us.

New Chemical Monitoring and Compliance Unit Employee

Ken Baughman has joined the Division of Drinking and Ground Waters. He is responsible for the SOC and VOC programs while Rich Ciotola is now responsible for the DBP program. Questions regarding these programs should be directed to Ken and Rich at (614) 644-2752.

Drying off pH and Fluoride Probes

Care and proper technique must be taken when drying off all probes. A sufficient amount of a rinse solution must be used to thoroughly clean the probe of the solution previously used. After the probe is rinsed the excess rinse solution must be dried off the probe. The drying must be done by blotting the probe with a clean dry piece of lint free cloth or paper towel.

Many analysts have been observed wiping off the probes in order to dry them. The action of wiping down a probe with a dry cloth or paper towels can put a static charge on the probe and result in slowing the probes response time considerably. Erroneous results may also result from this practice.

Calcium Carbonate Saturation

The pH / Alkalinity Stability test as described in the Laboratory Manual for the Chemical Analyses of Public Drinking Water 2000 requires the addition of approximately 0.5 to 2.0 grams of Calcium Carbonate (CaCO_3) to the saturated sample. Many of the laboratories are using scoops that are designed to deliver 0.5 or 1.0 grams of a granular solid. Most of the CaCO_3 used is a relatively fine powder. In recent checks at several laboratories it has been found that the scoops only deliver half as much powder as granular solid. If you are using a scoop to measure the CaCO_3 it is recommended that you periodically weigh the amount of CaCO_3 delivered by the scoop or double the number of scoops you are using in order to deliver the expected quantity of CaCO_3 .



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



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