



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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To: All Laboratories Participating in the Laboratory Certification and Registration Program

Subject: Acceptable Weight Determinations for Total Suspended Solids Testing

Periodically, the Laboratory Certification Program reviews analytical practices for consistency in interpretation. To continue ensuring this consistency, we find it necessary to clarify what constitutes acceptable weight determinations for Total Suspended Solids. The following options are applicable to both the determination of weight of filters *before* and *after* the filtration of samples.

Laboratories have two options for determining weights:

Option 1: Follow the directions specified in approved procedures, which require drying samples to constant weight or to an established tolerance. For example, *Standard Methods 2540D* sections 3 a and c. state: "...Dry for at least 1 hour at 103 to 105° C in an oven, cool in a dessicator to balance temperature, and weigh. Repeat the cycle of drying, cooling, dessicating and weighing until a constant weight is obtained or until the weight change is less than 4% of the previous weight or 0.5 mg, whichever is less."

If your laboratory chooses this option, each and every sample must be submitted to at **least** two drying cycles. This requires you to record a minimum of two weights for each and every filter and sample.

Option 2: Dry all filters and samples overnight at 103-105° C, cool in a dessicator, and weigh. For this test, we are defining "overnight" as any period of time exceeding eight (8) hours.

We believe that drying samples overnight will achieve constant weight for most samples; however, for verification at least once per quarter repeat the drying, cooling, dessicating, and weighing cycle of a representative sample.

Laboratories are asked to implement this change to their standard operating procedures as soon as practicable, but no later than September 1, 2001. If you are unsure that your laboratory's procedure for determining final weight for total suspended solids meets this interpretation, contact your auditor.

Sincerely,

/s/, May 8, 2001

David Webb, Chief
Environmental Science Services Section
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