

bromate concentration is  $<0.0025$  mg/L as a running annual average. If this change is implemented, there will no longer be a need for bromide compliance monitoring methods. EPA is proposing additional bromide methods today in order to provide flexibility to the laboratories and water systems in the interim period before the Stage 2 DBPR compliance monitoring requirements becomes effective.

In order to qualify for reduced bromate monitoring, EPA is proposing that the samples must be analyzed for bromate using either EPA Method 317.0 Revision 2.0 (UV/Vis detector), EPA Method 326.0 (UV/Vis detector), or EPA Method 321.8. These three methods can provide quantitative data for bromate concentrations as low as  $0.001$  mg/L, thus ensuring that a bromate running annual average of  $<0.0025$  mg/L can be reliably demonstrated. Laboratories that analyze samples by these three methods must report quantitative data for bromate concentrations as low as  $0.001$  mg/L.

Since EPA Methods 317.0 Revision 2.0, 326.0, and 321.8 offer significantly greater sensitivity for bromate analyses, EPA considered whether these should be the only methods approved for bromate compliance monitoring. However, the new methods using postcolumn reactions with UV/Vis detection (EPA Methods 317.0 Revision 2.0 and 326.0) or IC/ICP-MS (EPA Method 321.8) require greater analyst skill than is necessary for the standard ion chromatographic (IC) methodology (EPA Method 300.1 and ASTM Method D 6581-00). They also require instrumentation that may not be currently owned by many laboratories that perform bromate analyses. As a result of these factors and because the standard IC methods are adequate for determining compliance with the bromate MCL that was promulgated as part of the Stage 1 DBPR, EPA decided not to propose withdrawal of the currently approved method (EPA Method 300.1). In addition, EPA decided to propose ASTM Method D 6581-00, because it is equivalent to EPA Method 300.1. EPA strongly encourages laboratories to expand their services by adding the capability to perform analyses using one of the more sensitive methods for bromate. EPA believes that there will be a shift to the more sensitive methods as water systems realize that the analytical capabilities are available for a slightly increased analytical cost. (The ability to determine bromate concentrations as low as  $1$   $\mu$ g/L will provide water systems more information concerning the

optimization of ozone application to control for bromate formation.)

#### 10. Request for Comments

EPA requests comments on whether the methods proposed today should be approved for compliance monitoring.

EPA solicits comments as to whether standardizing the sample holding times for the HAA5 methods is appropriate. Specifically, should the sample holding time for Standard Method 6251 B be extended from 9 days to 14 days and should the sample holding time for EPA Method 552.1 be shortened from 28 days to 14 days?

EPA requests comments as to whether laboratories should be required to switch to one of the more sensitive bromate methods for compliance monitoring sample analyses. Should EPA Method 300.1 be withdrawn as a compliance monitoring method for bromate and be replaced by EPA Methods 317.0 Revision 2.0, 326.0, and 321.8 which provide reliable data for bromate concentrations as low as  $1$   $\mu$ g/L?

#### *P. Laboratory Certification and Approval*

##### 1. What Is EPA Proposing Today?

EPA recognizes that the effectiveness of today's proposed regulation depends on the ability of laboratories to reliably analyze the regulated disinfection byproducts at the proposed MCLs. EPA has established a drinking water laboratory certification program that States must adopt as part of primacy. Laboratories must be certified in order to analyze samples for compliance with the MCLs. EPA has also specified laboratory requirements for analyses, such as alkalinity, bromide, disinfectant residuals, magnesium, TOC, and SUVA, that must be conducted by parties approved by EPA or the State. EPA's "Manual for the Certification of Laboratories Analyzing Drinking Water" (USEPA 1997b) specifies the criteria that EPA uses to implement the drinking water laboratory certification program. Today's proposed rule maintains the requirements of laboratory certification for laboratories performing analyses to demonstrate compliance with MCLs and all other analyses to be conducted by approved parties. It revises the acceptance criteria for performance evaluation (PE) studies and proposes reporting limits for the DBPs as part of the certification program. Today's rule also proposes that TTHM and HAA5 analyses that are performed for the IDSE or system-specific study be conducted by laboratories certified for those analyses.

##### 2. What Changes Are Proposed for the PE Acceptance Criteria?

The Stage 1 DBPR specified that in order to be certified the laboratory must pass an annual performance evaluation (PE) sample approved by EPA or the State using each method for which the laboratory wishes to maintain certification. The acceptance criteria for the DBP PE samples were set as statistical limits based on the performance of the laboratories in each study. This was done because EPA did not have enough data to specify fixed acceptance limits.

Subsequent to the 1998 promulgation, EPA evaluated the results for the EPA Water Supply (WS) PE studies and the Information Collection Rule PE studies to determine if fixed acceptance limits could now be applied. (Fixed limits were used during the Information Collection Rule).

Four different fixed limits ( $\pm 20\%$ ,  $\pm 30\%$ ,  $\pm 40\%$ , and  $\pm 50\%$  of the true value) were applied to each analyte in the WS PE study TTHM, HAA5, bromate, and chlorite samples. Successful analysis of the sample was defined as passing all four THMs individually in the TTHM PE sample; passing four of the five HAAs in the HAA5 PE sample; and passing bromate and chlorite individually. The number and percentage of laboratories that successfully passed each study sample were determined for the four fixed limits. These results were then evaluated to determine how narrow the criteria could be set in order to achieve accurate data and also provide enough certified laboratories to meet the capacity needs. Only the last six WS PE Studies administered by EPA (WS36-WS41 conducted between 1996-1998) were used in the final recommendation, because they provided a better estimate of current laboratory capabilities. Table V-19 summarizes the results of this WS PE Study evaluation.

The number of laboratories that analyzed WS TTHM PE samples was significantly larger than for the other DBPs, because a laboratory certification program for TTHM has been in effect since the promulgation of the THM rule in 1979 (USEPA 1979). Most of the analytical methods for TTHM have been in use for many years, and the laboratories are experienced in their use. The Stage 1 DBPR established the first requirements to monitor for the other DBPs and certification was not required until December 2001. Therefore, the WS PE results for HAA5, chlorite, and bromate were from laboratories that were not part of a certification process and the laboratories