OWQ WaQI Note

October 26, 2004

Office of Water Quality Water-Quality Information Note 2005.02

Subject: Field Methods—Hach® cartridge correction factor

The purpose of this Note is to announce that, until further notice, the correction factor for the Hach sulfuric acid cartridges (all normalities) used for alkalinity determinations is 1.01. This factor is to be applied to the determined alkalinity concentration.

The Quality Assurance Section at the NWQL, with assistance from Michael Lewis in the Colorado District, recently tested new lots of the Hach® 1.6N (Lot No. A4216) and 0.16N (Lot No. A4189) sulfuric acid cartridges and approved them for sale through One-Stop Shopping. In addition to the usual tests against alkalinity standards, volumetric tests to determine delivery rates were run on empty cartridges from both lots. These tests showed the same bias of about 1 percent low that past lots have shown, such that there is a positive bias in the delivery rate resulting in a negative bias in the calculated alkalinity. This is due to the configuration of the cartridge. The Ocala Water Quality and Research Lab (OWQRL) had determined that all Hach® cartridge lots since May 1997 required a correction factor of 1.013 to be applied to the determined alkalinity concentration. Since there is no documentation on how this figure was determined, the Office of Water Quality, based on the information from the NWQL, is setting the correction factor at 1.01. The NWQL will continue to do volumetric tests on all new lots of the cartridges. No additional notices will be provided unless it is determined that the correction factor has changed.

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