United States Department of the Interior

U.S. GEOLOGICAL SURVEY
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IN REPLY REFER TO:

NATIONAL WATER QUALITY LABORATORY TECHNICAL MEMORANDUM 1998.04

December 9, 1997

Subject: Changes in Minimum Reporting Levels for Solids Analyses at the NWQL (Lab Codes 159, 165, 27, 229, and 85) and Request for Information on the Need to Develop Lower Level Methods

Effective date of changes: December 22, 1997

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Revision: None

Supplemental: None

SCOPE

This technical memorandum announces changes, effective December 22, 1997, in minimum reporting levels for the solids methods at the NWQL. The new reporting levels have been set at approximately 2 times the Method Detection Limit determined using the U.S. Environmental Protection Agency (1997a) procedure documented in the Code of Federal Regulations. The determination was based on an assessment of analytical data for low-concentration samples. Additionally, the variability of blank sample data for these methods was considered when setting the new reporting levels. Reporting level changes are listed in Table 1.

TABLE 1. Reporting level changes for solids methods at the NWQL

Constituent	Parameter (WATSTORE) code *	NWQL lab code	Minimum reporting level (milligrams/liter) Current	Minimum reporting level (milligrams/liter) Effective Dec. 22, 1997
Solids, Residue on Evaporation (ROE), 105 deg C, filtered	00515 B	159	1	10
Solids, Residue on Evaporation (ROE), 105 deg C, Total	00500 A	165	1	10
Solids, Residue on Evaporation (ROE), 180 deg C, filtered	70300 A	27	1	10
Solids, Volatile on Ignition (VOI), filtered	00520 A	229	1	10
Solids, Volatile on Ignition, (VOI), whole-water recoverable	00505 A	85	1	10

* Letter following 5 digits represents method code.

EFFECT ON DATA BASE

Minimum reporting level changes for the solids analyses listed in Table 1 will cause a shift in nondetection (less than) concentrations in the data base. Minimum reporting levels for historical data will not be changed in the data base. During FY1998, the Office of Water Quality, along with other Water Resources Division representatives, will be developing guidance on interpreting analytical results, both new and historical, for the effected determinations. Data users should be cautious when interpreting historical data for these methods in light of new higher reporting levels. Recent U.S. Environmental Protection Agency (1997b) guidelines on good laboratory practices recommend periodic assessment of method detection and reporting levels. The NWQL is developing plans to assess this information annually.

ASSESSMENT OF NEED FOR NEW SOLIDS METHODS

The NWQL is soliciting information to assess the need to develop a lower level solids method to satisfy requirements for WRD hydrologic assessments. If you have a need for dissolved solids

methods that have minimum reporting levels less than 10 mg/L, please identify the required data reporting level and associated data quality objective information in a request to Gerald Hoffman (geomail: ghoffman) of the Methods Research and Development Program at the NWQL.

References:

U.S. Environmental Protection Agency, 1997a,Guidelines establishing test procedures for the analysis of pollutants (App.B to Part 136) Definition and procedure for the determination of the method detection limit): U.S. Code of Federal Regulations, Title 40, revised as of July 1, 1997, p. 265-267.

U.S. Environmental Protection Agency, 1997b, National Environmental Laboratory Accreditation Conference Chapter 5, Quality Systems Standards.

/signed/
Robert S. Williams, Jr., Chief
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Key words: Reporting levels; solids; residue on evaporation; volatile on ignition; lab codes 159, 165, 27, 229, and 85.

Supersedes: None

Distribution: E(all WRD employees), and http://wwwnwql.cr.usgs.gov/