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United States Department of the Interior

U.S. GEOLOGICAL SURVEY

Box 25046 M.S. 407

Denver Federal Center

Denver, Colorado 80225

NATIONAL WATER QUALITY LABORATORY TECHNICAL MEMORANDUM 1996.02

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To: Assistant Chief Hydrologist for Technical Support
Regional Hydrologists
Chief, Office of Water Quality
Assistant Chief, Office of Water Quality
Acting Chief, NAWQA
Area Hydrologists
District Chiefs
Regional Water-Quality Specialists
Assistant Regional Hydrologists for NAWQA
District Water-Quality Specialists
Chiefs, NAWQA Study-Units
Administrative Officer, NWQL
Chief, Ocala Project Office
Chief, Yucca Mountain Project Office
QA Manager, Yucca Mountain Project
Chief, Branch of Technical Development & Quality Systems
Employees, National Water Quality Laboratory

From: Pete Rogerson, Chief
National Water Quality Laboratory
Branch of Analytical Services

Subject: Lower Your Costs--Choose the right volatiles schedule.

Author: Brooke F. Connor, Supervisory Chemist, Volatiles Unit,
Organics program (303)467-8170, (BFCONNOR)

Revision: None

SCOPE

Volatiles Schedule 2090 is a schedule that was developed for the determination of 60 known volatile compounds and includes a search for any additional unknown compounds (also referred to as "nontargets" or "tentatively identified compounds"). Volatiles Schedule 2091 is an identical schedule, except that it does NOT include the search for unknown compounds. Presently, Districts

involved in field quality control (QC) for Schedules 2090 or 2091 send in an environmental sample, a spiked duplicate environmental sample, and a spiked triplicate environmental sample, spiked with the 60 known volatile compounds. Reports are sent from the NWQL detailing percent recovery of these spiked compounds. When Schedule 2090 is requested on each of these sample types, a report detailing any additional nontarget compounds found is sent for each of the samples (the sample, the spiked duplicate, and the spiked triplicate).

Spiked samples submitted for Schedule 2090 incur the additional expense per spiked sample because of the additional analysis of unknown compounds. The Volatiles Unit does not believe it is always worthwhile to analyze for unknowns in a sample which has been spiked with known compounds.

Requesting Schedule 2091 on field spikes instead of Schedule 2090 eliminates the search for unknowns. All other data and compounds reported are identical between Schedule 2090 and 2091. It still is advisable to analyze any field or tripblanks with Schedule 2090 to compare unknowns in these blanks to unknowns in the environmental samples.

The original intent of requesting Schedule 2090 for field spikes, field spike replicates, and the unspiked sample was to analyze all QC samples using the same method as that with which the samples are analyzed. Schedules 2090 and 2091 are the same method except for the additional computer search and analyst time in interpretation of unknowns. It is usually cost effective to analyze only blanks and unspiked sample for unknowns and to assess only the percent recovery of spiked compounds in the spikes.

If your data quality objectives require the analysis of unknowns in the spiked sample and spike replicate, then you may still do so. Those who request Schedule 2090 will continue to receive reports for unknowns regardless of sample type. However, if you do not necessarily need a search for unknowns for your field spikes, you may save money by requesting Schedule 2091.

Impact on Database: None

Supersedes: None

Key Words: VOA, volatiles, nontargets, unknowns

Distribution: See above plus the continua USGS.labnews &.waterquality; WRD Secretaries; Field and Project Offices: <http://www.nwql.cr.usgs.gov/>