

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

JUL 31 1985

OFFICE OF  
WATER

MEMORANDUM

SUBJECT: Clarification of Sampling Procedures for the  
VOA Fraction

FROM: Geoffrey H. Grubbs, Chief  
Technical Support Branch (EN-336)

TO: Regional Water Permits Branch Chiefs

The Permits Division has received several inquiries about sampling procedures when data on volatile organic (VOA) toxic pollutants are required. Specifically, we have been asked: 1) is a composite sample appropriate for VOAs, and 2) what is the procedure for collecting a composite sample for VOAs?

Regarding the first question, we have frequently been told that it is inappropriate to take a composite sample for VOAs. Apparently, people have misinterpreted the term VOA composite sample to mean that the VOA sample is collected by adding aliquots to a large open container. The NPDES regulations require the collection and analysis of samples in accordance with procedures established under 40 CFR Part 136, 304(h) test procedures. Method 624, section 9, specifies that VOA samples must be sealed (without air bubbles) grab samples. This requirement must be followed. Once four sealed grab samples are collected, then they should be composited as described below.

In the instructions to Form 2c, Item V, the general instructions require the collection of 4 separate grab samples for VOAs. These grab samples must be combined in the laboratory immediately before analysis. To composite these 4 grab samples see the instructions in Method 624, section 11.4. Each sample is poured into a syringe. The plunger is added and the volume adjusted to 1 1/4 ml. Each sample (1 1/4 ml) is injected into the GC (total 5 ml). After four injections the sample is purged. Thus, only one analysis, rather than four, would be possible.

Such a procedure is required in order to strike a balance between the need for the most representative sample and the cost of multiple analyses. This memorandum updates a similar question which we answered in a memorandum (attached) to the Regional Enforcement Division Directors on December 10, 1980.

If you have any questions on this subject, please call Gail Goldberg at FTS 426-7010.

Attachment