

PPC 9441.1992(26)

CLARIFICATION ON SAMPLING AND DATA INTERPRETATION

United States Environmental Protection Agency
Washington, D.C. 20460
Office of Solid Waste and Emergency Response

August 26, 1992

Mr. W. Z. Baumgartner
W. Z. Baumgartner & Associates, Inc.
110 Westwood Place, Suite 101
Brentwood, Tennessee 37027

Dear Mr. Baumgartner:

I am writing in response to your letter of July 30, 1992 to Ms. Gail Hansen, Chief of the Methods Section in the Office of Solid Waste of the U.S. Environmental Protection Agency, in which you request clarification and guidance from EPA on sampling and data interpretation.

The Office of Solid Waste is currently revising Chapter 9 of SW-846 to make it more user-friendly, scientifically correct, and statistically sound. This is a massive undertaking and it will be at least a year before the first draft is ready for review. As interim guidance, as your letter suggests, we recommend first testing the normal distribution and if that fails then testing the lognormal distribution. The Shapiro-Wilk test is a robust method for determining goodness-of-fit to statistical distributions. We do not recommend the arcsine or square root transformations. They are difficult to apply and don't model real distributions of natural or environmental chemical data.

If both of these distributions fail, then non-parametric statistics or attribute testing may have to be employed. As we have no guidance on this at this point, I would go back and use the normal mean and standard deviation to calculate your upper confidence level. See what reasonable, justifiable, common-sense solution you can work out with your regulators.

We do not require generators to test or to specifically use the methods listed in SW-846 including Chapter 9, except under the

five circumstances listed in the following sections of 40 CFR:

- (1) 260.22(d)(1)(i) - Submission of data in support of petitions to exclude a waste product at a particular facility (delisting petitions).
- (2) 261.22(a) - Evaluation of wastes against the Corrosivity Characteristic (corrosivity).
- (3) 261.24(a) - Evaluation of wastes against the Toxicity Characteristic (mobility of toxic species).
- (4) 264.314(c) and 265.314(d) - Evaluation of wastes to determine if free liquid is a component of the waste (free liquid).
- (5) 270.62(b) (2) (i) (C) - Analysis of wastes prior to conducting a trial burn in support of an application for a hazardous waste incineration permit (incinerator permit).

SW-846 is only intended to serve as guidance for the regulated community. If you can demonstrate that your method of sampling and data interpretation is scientifically and statistically correct, then you may use that procedure in place of a SW-846 method.

I hope that this information will be of use to your analytical program. If you have any questions, please feel free to call me at (202) 260-4778.

Sincerely,
Oliver M. Fordham, Jr.
Chemist
Methods Section

cc: Alec McBride, TAB
Gail Hansen, TAB
Tom Beisswenger, OGC