# Monsanto

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MONSANTO COMMENTS ON THE EPA HEARINGS ON PCBs
EPA EXHIBIT E - AFFIDAVIT OF THOMAS O. MUNSON, PH.D.

On page 3 and 4 and in Appendix A of Exhibit B, Munson understates the difficulties in determining PCBs at 0.1 - 0.05 ppb concentrations in effluents and at 1 ppt in landfill leachates.

His statements about detection limits are theoretically true for waters containing no interferences and for pristine laboratory conditions which contribute no laboratory background. However, in our experience, most effluents and leachates contain interfering components which are difficult to remove. We agree with Dr. Munson, "that not all laboratories..... can routinely achieve these results....".

To illustrate this point, we learned through private communication that a competent EPA laboratory analyzed two aliquots of the same sample submitted by a capacitor manufacturer and reported concentrations of 1 and 3 ppb, respectively. Hence, the variability for that laboratory at that time was 2,000 ppt. Without more information on the cause of this variability, it is questionable whether this EPA laboratory could reproducibly measure 1 ppt.

We are not aware of any multilaboratory studies of the reproducibility and accuracy of the EPA method for PCBs at these low levels. Unless multilaboratory testing has been conducted, Munson's claimed detection limits should not be extrapolated to other laboratories

On page 3 of Exhibit B, the material of construction of the sample bottles and bottle caps are not given. Unless the bottles were glass and the cap liners aluminum foil, significant contamination and/or sample loss could have occurred.

A more significant deficiency exists on page 3 of Exhibit E. The sampling gear was fabricated from PVC pipe. Plastic tubing or pipe is a known source of contamination by organic compounds which could interfere with PCB analysis (see Junk et. al., Environmental Science



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and Technology, 8, 1100 (1974)). These contaminants may represent impurities from the manufacture of the plastic or desorbed residues from previous analyses. In either case, this deficiency sheds doubt on the validity of all data for samples obtained with this equipment.



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