## COMMENTS ON PCB EXTERNAL REVIEW QUESTIONS

7. We assume that if the composition of PCBs is unknown, the sample chromatogram does not match the chromatogram of any commercial PCB standard mixture. In this case, measurement by electron capture gas chromatography is inadequate for two reasons. First, interferences may be present which may account for the differences in the chromatograms. Secondly, as pointed out in Table I of the draft, electron capture detector response varies by orders of magnitude for different PCB isomers. Hence, the analyst would not know what response factor to apply, even using the weight factor technique of Webb & McCall (see attached comments for line 5354).

   Therefore, when the PCB composition is unknown, a more specific and accurate technique must be used. We recommend using GC/MS in the selected ion monitoring mode as the detector device. The parent ion and a characteristic fragment ion are monitored for each PCB homolog. This technique is much less subject to interferences and is more accurate because MS response factors are nearly constant. GC/MS detection can be used with samples collected on Florisil if sensitivity is adequate. If sensitivity is inadequate, samples should be collected on a porous polymer sorbent such as Tenax GC. Collected components are then thermally desorbed directly into the GC/MS for analysis.

8. In those cases where the sample chromatogram matches a standard PCB chromatogram, the sampling procedure is adequate. However, as mentioned in 7., we recommend sampling with Tenax GC as a more general method. Collected components can be thermally or solvent desorbed from Tenax GC. For further details, see pp 147-160 of the transcript of the Second NIOSH Solid Sorbents Roundtable in December, 1973.

9. No, several deficiencies should be corrected. See attached comments relative to lines 5252, 5253, 5258, 5273, 5291, 5292, 5303, 5310, and 5320 of the draft.

10. A. We recommend collection on Tenax GC adsorbent, thermal desorption and measurement by GC/MS. See 7., 8., and attached notes.

    B. See attached comments, especially the notes relevant to lines 5354, 5381, 5396, 5410, 5460, 5515, 5533, and 5590 of the draft.

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