

02-03-13 Preliminary Draft Comments from Clean Air Scientific Advisory Committee (CASAC) Lead Review Panel. These preliminary pre-meeting comments are from individual members of the Panel and do not represent CASAC consensus comments nor EPA policy. Do not cite or quote.

Preliminary Comments on the ISA from Dr. Philip Hopke

In general, EPA has done a good job of responding to comments on the prior versions and this draft of the ISA is in good shape.

Comments on Chapter 3

This version is quite well written and is pretty much ready to go. There are some useful new results that EPA may wish to take note of

Sources

Wood Combustion - Lead concentrations in 132 samples of wood pellets and 23 samples of wood chips from the northeastern US were presented by Chandrasekaran et al. (2012). It appears that some of the commercially available pellets used waste wood that included lead-painted material. The actual compositions of the emissions measured in the effluent of two high efficiency, low emissions commercial scale wood pellet boilers burning virgin wood pellets were provide by Chandrasekaran et al. (2011).

Analytical methods

There is now a semi-continuous field monitoring system for elements, the Cooper Environmental Services Ambient Metals Monitor (Xact 620) for Near-Real Time PM10 Metals Monitoring that is now commercially available. It has been used in several field studies and deserves a mention as an approach that would permit near real-time monitoring of lead in ambient PM.

References cited

Chandrasekaran, S.R., J. Laing, T.M. Holsen, S. Raja, P.K. Hopke, (2011) Emission Characterization and Efficiency Measurements of High Efficiency Wood Boilers, *Energy and Fuels* 25, 5015–5021.

Chandrasekaran, S.R., P.K. Hopke, L. Rector, G. Allen, L. Lin, 2012. Chemical Composition of Wood Chips and Wood Pellets, *Energy and Fuel* 26: 4932–4937.