

**Preliminary Comments on the ISA from Mr. George Allen**

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*Charge Question #1:*

*Please comment on the extent to which revisions to the Executive Summary and Chapter 1 have reduced redundancy and made the Executive Summary more accessible to a nontechnical audience.*

Overall the revisions to these sections are responsive to the comments in the CASAC review of the first draft of the SO<sub>x</sub> ISA. The Executive Summary is now reasonably free from technical jargon. Table ES-1 is a concise summary of health effect causal determinations; it reflects the requested changes for several categories from suggestive to inadequate, leaving only long-term respiratory effects as a change from the last NAAQS review (from inadequate to suggestive). Table 1-1, the more detailed version of this table in the Integrated Synthesis, is well done.

I still have some concerns with how the term SO<sub>x</sub> is used in the Executive Summary and Chapter 1. As used in this ISA, SO<sub>x</sub> only means gaseous SO<sub>x</sub> (SO<sub>2</sub> and SO<sub>3</sub>, not sulfur oxides in the particle phase). However, the first paragraph of the Executive Summary uses “sulfur oxides” to describe both gas phase SO<sub>x</sub> (SO<sub>2</sub> health effects, first sentence) and deposition of SO<sub>x</sub> (welfare effects, last sentence), which is of course sulfate. For a general audience, this could be confusing. Chapter 1 Section 1.1 first paragraph and elsewhere has similar usage.

The Chapter 1 discussion of observed ambient SO<sub>2</sub> concentrations from the national monitoring network (Section 1.4.1, pg. 1-8, lines 1-15) is similar (the same level of minimal detail) as the corresponding paragraph in the ES. Some discussion here of how common 5-minute SO<sub>2</sub> concentrations over the 200 to 300 ppb range of concern occur would be helpful here, now that a more robust ambient 5-minute dataset is available; this discussion could parse out the Hawaii volcano SO<sub>2</sub> data separately since that is an unusual and uncontrollable “natural” case.