

1 **Preliminary Comments on the ISA from Dr. John Balmes**

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4 **Charge # 1 - Executive Summary and Chapter 1**

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

9
10 I think the revised Chapter 1 is much improved regarding reduced redundancy and greater clarity
11 for a non-technical audience.

12
13 I must say I wish I could say the same for Chapter 5. To me, Chapter 5 reads like an old Criteria
14 Document chapter with much redundancy and excessive detail about some studies that makes the
15 chapter harder to read and is unnecessary. I would like crisp summaries of the relevant literature
16 in appropriate categories with thoughtful integration at the end of each category. The integration
17 tends to be there and for that I applaud the authors, but is it really necessary to take XXX pages
18 to cover the SOx health effects literature?

19
20 p. 1-19, lines 14-16 “The limited and inconsistent evidence for these 14 nonasthma-related
21 respiratory effects does not contribute heavily to the causal determination.” I don’t think
22 ‘heavily’ is appropriate here. Does this limited and inconsistent evidence contribute at all to the
23 causal determination? I would say not.

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25 **Charge # 4 - Health Effects of Short-Term and Long-Term SO2 Exposure**

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27 *Please comment on the extent to which our characterization of the evidence and rationale for*
28 *these causal determinations is consistent with the EPA's causal framework.*

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30 In general, I approve of the characterization of the evidence and stated rationale for causal
31 determinations that are made. I think they follow the guidance of EPA’s causal framework.

32
33 One specific problem I have with the presentation of the evidence for respiratory effects among
34 healthy individuals is the inclusion of animal models of allergic sensitization (pp. 5-129 and 5-
35 130). While the animals started off “naïve” and healthy, they were made to be models of human
36 allergy. These animal models of allergic disease use experimental protocols characterized by
37 conditions that are very different from those by which humans acquire allergic sensitization. I
38 don’t have a problem with noting in an integrative discussion that SO2 exposure has been shown
39 to enhance allergic sensitization in animal models, but don’t think a whole section under
40 respiratory effects in healthy individuals is appropriate.

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1 *Please comment on the adequacy of the characterization of respiratory effects observed in*
2 *controlled human exposure and epidemiologic studies, particularly in different populations and*
3 *life stages.*

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5 In general, I think the respiratory effects of SO₂ are appropriately characterized in the discussion
6 of controlled human exposure and epidemiological studies.

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