

This draft is a work in progress, does not reflect consensus advice or recommendations, has not been reviewed or
approved by the chartered CASAC and does not represent EPA policy.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46

The Honorable Lisa P. Jackson
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Subject: Review of the *Policy Assessment for the Review of the Secondary National
Ambient Air Quality Standard for NO_x and SO_x: Second Draft*

Dear Administrator Jackson:

The Clean Air Scientific Advisory Committee (CASAC or Committee) NO_x-SO_x
Secondary NAAQS Review Panel met on October 6-7, 2010 to review EPA's *Policy Assessment
for the Review of the Secondary National Ambient Air Quality Standards for NO_x and SO_x:
Second Draft*. **(To be inserted pending review/approval by CASAC: "The Chartered CASAC
held a public teleconference on XXXX to review and approve the report.")** This letter provides
CASAC's overall comments and evaluation. We highlight the most important issues which need
to be addressed as the second draft Policy Assessment (PA) is revised. The CASAC and Panel
membership is listed in Enclosure A. The Panel's responses to EPA's charge questions are
presented in Enclosure B. Finally, Enclosure C is a compilation of individual panel member
comments.

EPA staff is to be complimented on the progress that has been made since the time of the
Panel's review of the first draft, and likewise we very much appreciate how responsive EPA has
been towards addressing our comments. EPA continues to break new ground in their
development of a multipollutant, ecologically relevant standard. The approach that EPA staff
has developed is very novel, and has led to an indicator, called the Atmospheric Acidification
Protection Index (AAPI) that integrates the impacts of NO_x and SO_x deposition on aquatic
acidification. While the AAPI approach is very responsive to recent recommendations by the
National Research Council for multipollutant air quality management, it also introduces a
number of complexities in to the process. However, it is not apparent how one would construct
an equally appropriate, and significantly simpler, indicator that captures the many important
processes that influence the relationship between observable atmospheric concentrations and
aquatic deposition.

The panel's review of this document has been difficult. The complexities and novelty of
the indicator have led to the PA being harder to fully understand than similar documents that
have been reviewed by panelists who have served on prior CASAC panels. Further, the Panel
received the document less than three weeks before the review meeting. In contrast to PAs for
other pollutant, no staff recommendation was given, along with the associated rationales, which
could be used for guiding our directions, or for us to comment upon the soundness of their
rationale. Finally, as is delineated further below, and in our responses to the Charge Questions,
there are sections of the PA that need to be made more clear and/or where further analyses are

1 warranted. Thus, at this point, the Panel is not prepared to provide specific consensus
2 recommendations on all aspects of the standard, and we think that the document requires further
3 revision to adequately inform us, or you, on the specifics of a revised (and in this case novel)
4 NO_x-SO_x NAAQS. We do, however, in our response to Charge Question 24, provide our current
5 thoughts on aspects of a NAAQS based on using the AAPI.
6

7 Chapter 5 presents the options for elements of the standard. The discussion in Chapter 5
8 on ecoregions is one of the more difficult concepts to grasp, but also critically important. This
9 section needs to be made more clear. It is not apparent what are the ramifications of a particular
10 choice of approach. This section would also be much more effective if there was a concluding
11 staff recommendation as to which approach(es) they think is(are) best and provide the rationale.
12 The rationales behind what fraction of lakes are to be protected at a given choice of ANC are not
13 clear. Feasibility is an obvious issue. However, nowhere in the current document does one get a
14 feel for what is or is not feasible. Unlike other NAAQS, the novelty and complexity of the AAPI
15 approach leads to it being more difficult to connect how a choice of standard would be reflected
16 in a required level of control. Chapter 5 also lacks a section that adequately summarizes all of
17 the elements of the standard and how they work together. The pieces are in the chapter, but are
18 not integrated at the end such that the Panel could develop a clear understanding of how all of the
19 elements interact, and what are the outcomes of specific choices.
20

21 Chapter 7 on uncertainty is a welcome addition, though is not as informative as desired.
22 EPA staff provides a nice analysis on the elasticities of the calculation of the AAPI on each
23 component of the “AAPI equation,” and this is helpful. However, it is the sensitivities of the
24 allowable concentrations of NO_x and SO_x, that are most critical, and this chapter should be
25 extended to include an analysis of the sensitivities of those quantities to components of the AAPI
26 equation. Further, a more comprehensive uncertainty assessment is called for, as described in
27 our responses to the Charge Questions. If such an analysis is not possible given the time and
28 resource constraints, a caveated set of example calculations of the magnitude of uncertainties in
29 the allowable NO_x and SO_x concentrations would be informative.
30

31 The above two paragraphs highlight two areas of needed work on the PA. Additional
32 analyses that the Panel views would be critical additions include incorporation of sulfur retention
33 as a process captured by the AAPI, a more thorough analysis of the AAPI using historical data, a
34 more comprehensive evaluation of CMAQ, with particular attention to the uncertainties in the
35 estimates of the deposition of chemically-reduced nitrogen and the deposition transference ratios.
36

37 While we have identified various needs for additional analyses and added clarity, the
38 Panel remains very supportive of the approach. We support EPA staff continuing to work on
39 developing the document for the purpose of being a foundation for determining a revised
40 NAAQS. The current state of the document, and that it is not apparent that CASAC will have
41 the opportunity to further review the PA before it is made final in accordance with the court-
42 ordered timeline, may necessitate including a broader range of alternatives for consideration in
43 the proposed rulemaking. Further, the current level of uncertainties should be considered in the
44 proposed NAAQS as well.
45

1 In closing, the Panel was pleased with the development of the PA and trust that our
2 comments are useful in the PA's revision and in the Administrator developing a proposal for a
3 multipollutant NAAQS.

4
5 Sincerely,

6
7
8
9
10
11
12