



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

EPA-SAB-LTR-90-006

September 18, 1990

Honorable William K. Reilly  
Administrator  
U.S. Environmental Protection  
Agency  
401 M Street, SW  
Washington, D.C. 20460

OFFICE OF  
THE ADMINISTRATOR

Re: CASAC Recommendations on the  
Pollutant Standards Index

Dear Mr. Reilly:

During the May 8, 1990 meeting of the Clean Air Scientific Advisory Committee (CASAC) the members expressed concern over the adequacy of the EPA's recommended cautionary statements for public reporting of the air quality Pollutant Standards Index (PSI).

The EPA and CASAC have labored to establish a firm scientific basis for setting National Ambient Air Quality Standards (NAAQS) particularly for ozone. However, we realize that it is highly unlikely that the ozone standard will be met in all regions of the country in the foreseeable future. Given the present NAAQS, we anticipate that millions of U.S. citizens will be subject to ozone levels above the standard for many days each year. The Clean Air Act, anticipating this possibility, requires that the States adopt contingency plans to prevent concentrations from reaching "Significant Harm Levels" and to take appropriate actions if those levels are reached or are expected to be reached. The plans are based on two or more "episode criteria" stages, i.e., situations where the ambient concentrations are or are expected to be progressively above the NAAQS. EPA establishes significant harm levels and proposes the episode criteria levels as guidelines for the States.

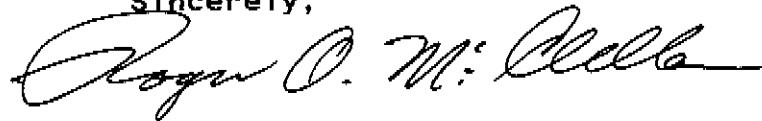
The actions taken when Episode Criteria Levels (or Alert Levels) are reached or expected to be reached include the issuance of health advisories (or cautionary statements) to the public. Since EPA's advice is intended to be applied by local air pollution agencies in preparing daily air quality summaries which are disseminated to the media, it is important this advice reflect current adverse health effects knowledge.

Attached is a copy of the cautionary statement from EPA's guidance document (EPA-450/2-76-013). Neither this table nor the document as a whole has been updated since 1976. As a result the health effects statements and cautionary language do not represent current knowledge, particularly for ozone. For example, ozone toxicity has been demonstrated to occur in some healthy exercising individuals at and below the existing Federal standards. Also, the particulate matter standard refers to the old TSP standard.

Therefore, we recommend that EPA update this 1976 document with particular emphasis on the cautionary statements. Although we do not anticipate that this would be major undertaking, we believe this is an important task that should be done soon. Put simply, the NAAQS will mainly protect future generations, but correct cautionary language is needed to minimize health effects to the present generation.

We look forward to your reply and are willing to assist in this task as you deem necessary.

Sincerely,

A handwritten signature in cursive script, reading "Roger O. McClellan". The signature is written in black ink and is positioned below the word "Sincerely,".

Roger O. McClellan, D.V.M.  
Chairman  
Clean Air Scientific Advisory  
Committee

Attachment

TABLE 3. COMPARISON OF PSI VALUES WITH POLLUTANT CONCENTRATIONS, DESCRIPTOR WORDS, GENERALIZED HEALTH EFFECTS, AND CAUTIONARY STATEMENTS

INDEX VALUE	AIR QUALITY LEVEL	POLLUTANT LEVELS					HEALTH EFFECT DESCRIPTOR	GENERAL HEALTH EFFECTS	CAUTIONARY STATEMENTS
		TSP (24-hour), $\mu\text{g}/\text{m}^3$	SO <sub>2</sub> (24-hour), $\mu\text{g}/\text{m}^3$	CO (8-hour), $\text{mg}/\text{m}^3$	O <sub>3</sub> (1-hour), $\mu\text{g}/\text{m}^3$	NO <sub>2</sub> (1-hour), $\mu\text{g}/\text{m}^3$			
500	SIGNIFICANT HARM	1000	2620	67.5	1200	3750		Premature death of ill and elderly. Healthy people will experience adverse symptoms that affect their normal activity.	All persons should remain indoors, keeping windows and doors closed. All persons should minimize physical exertion and avoid traffic.
400	EMERGENCY	876	2100	48.0	1000	3000	HAZARDOUS	Premature onset of certain diseases in addition to significant aggravation of symptoms and decreased exercise tolerance in healthy persons.	Elderly and persons with existing diseases should stay indoors and avoid physical exertion. General population should avoid outdoor activity.
300	WARNING	628	1600	34.0	800	2250	VERY UNHEALTHFUL	Significant aggravation of symptoms and decreased exercise tolerance in persons with heart or lung disease, with widespread symptoms in the healthy population.	Elderly and persons with existing heart or lung disease should stay indoors and reduce physical activity.
200	ALERT	375	800	17.0	400 <sup>a</sup>	1130	UNHEALTHFUL	Mild aggravation of symptoms in susceptible persons, with irritation symptoms in the healthy population.	Persons with existing heart or respiratory ailments should reduce physical exertion and outdoor activity.
100	NAADS	260	365	10.0	180		MODERATE		
50	50% OF NAADS	75 <sup>b</sup>	80 <sup>b</sup>	6.0	80		GOOD		
0		0	0	0	0	0			

<sup>a</sup>No index values reported at concentration levels below those specified by "Alert Level" criteria.

<sup>b</sup>Annual primary NAADS.

6400  $\mu\text{g}/\text{m}^3$  was used instead of the O<sub>3</sub> Alert Level of 200  $\mu\text{g}/\text{m}^3$  (see text).

August 1990

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