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DIRECTOR OF HEALTH AND SAFETY

June 9, 1967

To: All Members of the LIA Health and Safety Committee

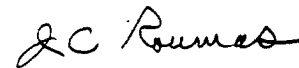
Re: Pennsylvania and Montana Air Quality Standards

Attached you will find a copy of the official Pennsylvania "Ambient Air Quality Criteria" as adopted April 25, 1967. Also attached you will find a listing of the Ambient Air Quality Standards adopted by the Montana State Board of Health on May 27, 1967. A copy of the official decision in Montana is not yet available.

You will note that, in the Pennsylvania publication, there is no explanation of the "tentative" used after the substance lead.

This action in Pennsylvania and Montana reflects the pressure on public bodies to take affirmative action relating to pollution, whether fully necessary or not.

Very truly yours,



James C. Roumas
Assistant Director
Health and Safety

JCR/jv
Att.

cc: J.R. Englehorn
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Look Ahead with Lead

PNYC00001277

N10207

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF HEALTH
AIR POLLUTION COMMISSION

Ambient Air Quality Criteria

Adopted:
April 25, 1967

PNYC00001278

N10207.01

Pennsylvania Ambient Air Quality Criteria - 1987

1. Introduction

In accordance with Section 5 (f) (8) of the Pennsylvania Air Pollution Control Act, the Act of January 6, 1960, P. L. 2118, on April 25, 1987 the Air Pollution Commission adopted the Ambient Air Quality Criteria shown below.

On this same date, the Commission appointed a Council of Technical Advisors on Ambient Air Quality Criteria as a continuing body to periodically review the adopted criteria and report to the Commission at least once every year and to advise the Commission on the need for, and the criteria and/or standards for, standard sampling and analytical procedures.

2. Purpose

The following criteria will be used by the Commission in:

1. Evaluating the results of community air pollution studies conducted by the Department of Health.
2. Determining the need for air pollution control regulations in regions of the Commonwealth to achieve these objectives.
3. Developing rules and regulations in accordance with Section 5 (f) (2) of the Pennsylvania Air Pollution Control Act.

3. Criteria

Until additional pertinent information becomes available with respect to the effects of the substances listed below which leads to recommendations by the Council and to revision or addition by the Commission, the following air quality criteria shall apply in Pennsylvania:

Ambient Air Quality Criteria (a) - 1987

Substance	30-day	24-hr.	1-hr.
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A. Air Basin Average(b)

1. suspended particulates (total) 100 µg/M³
2. settled particulates (total) 1.0 mg/cm²

B. Single Point Measurement

1. suspended particulates (total) 150 µg/M³ 500 µg/M³
2. settled particulates (total) 1.5 mg/cm²(c)
3. lead (tentative) 5 µg/M³
4. beryllium 0.01 µg/M³ (d)
5. sulfates (as H₂SO₄) 10 µg/M³ 10 µg/dl³
6. sulfuric acid mist (d)
7. fluorides (total soluble, as HF) 5 µg/M³
8. sulfur dioxide 0.05 ppm 0.25 ppm 0.5 ppm
9. nitrogen dioxide (d)
10. oxidants (d)
11. hydrogen sulfide 0.005 ppm 0.1 ppm
12. carbon monoxide 25 ppm

(a) Maximum values, not to be exceeded.

(b) Based upon results from geographically uniformly spaced sampling stations.

(c) Not to be exceeded as the average of three successive sampling periods.

(d) The Council of Technical Advisors on Ambient Air Quality Criteria is directed to consider such criterion.

PNYC00001279

The values listed above should be considered as representing minimum quality, not necessarily desirable quality. They should be considered as goals, not necessarily immediately obtainable. The values are not precise and some deviation from the values is not evidence of injury or adverse effects. In general, the criteria are based on a dosage concept and require both the presence of a receptor and an exposure time equal to or greater than those listed.

Plank species in the listing are purposeful. In general, for the most part, the listing is based on chronic effects; substances with 24 hr or 1-hr values only have acute effects; substances with all three time interval values have both chronic and acute effects. Effects considered are both biological and physical.

The Commission will publish and make available a supplement to this criteria containing information on which the criteria are based. This supplement will be revised from time to time as the criteria are revised or as additional information becomes available.

IV. Sampling and Analytical Procedures

The sampling and analytical procedures employed to measure levels of contaminants are to be consistent with obtaining accurate results which are representative of the condition being evaluated. The following sampling and analytical techniques may be used directly or employed as reference standards against which other methods may be calibrated. Those listed techniques are subject to revision, as provided for in Section I.

Reference Standards - 1967

Substance	Sampling Method	Analytical Method
suspended particulates (total)	high-volume filtration (1)*	gravimetric (1)
settled particulates (total)	open top cylinder (2)	gravimetric (2)
lead	high-volume filtration (1)	spectrographic (1)
beryllium	high-volume filtration (1)	spectrographic (1)
sulfates	high-volume filtration (1)	turbidimetric (3)
fluorides	filtration plus gas absorption (4)	zirconium eriochrome cyanine (4)
sulfur dioxide	gas absorption (5) (6)	Pate, et al modification of West-Gaeke method (5) (6)
nitrogen dioxide	gas absorption (7)	Griss-Saltsman method (7)
hydrogen sulfide	gas absorption (8)	methylene blue method (8)
carbon monoxide	long path cell (9)	infrared absorption (9)

* Numbers in parentheses refer to reference listed at end of document.

V. References

- (1) "Air Pollution Control Act of the National Air Pollution Network," *Public Law 85-624*, 978, Washington D. C., 1958.
- (2) "Recommended Method for Continuous Dust Fall Sampling," *Environmental Health*, 16:372 (1966).
- (3) Interbranch Laboratory Committee, "Selected Methods for the Measurement of Air Pollutants," *PHS Pub. No. 999-AP-11*, Cincinnati, Ohio, 1965, p. 1-1.
- (4) "Standard Method of Test for Inorganic Fluoride in the Atmosphere," *ASTM Standards on Methods of Atmospheric Sampling and Analyses*, Philadelphia, Penna., 1962, p. 67.
- (5) West, P.W. and Cooke, G.C., "Fixation of Sulfur Dioxide as Disulfite-mercurate (40), Subsequent Colorimetric Estimation," *Anal. Chem.*, 28:1916 (1956).
- (6) Pate, J.J. et al., "Nitrite Interference in Spectrophotometric Determination of Atmospheric Sulfur Dioxide," *Anal. Chem.*, 37:1042 (1965).
- (7) Saltzman, A., "Colorimetric Microdetermination of Nitrogen Dioxide in the Atmosphere," *Anal. Chem.*, 26:1949 (1954).
- (8) Jacobs, M.B. et al., "Ultramicrodetermination of Sulfides in Air," *Anal. Chem.*, 29:1349 (1957).
- (9) Jacobs, M.B. et al., "Continuous Determination of Carbon Monoxide and Hydrocarbons in Air by a Modified Infrared Analyzer," *J. Air Poll. Control Assoc.*, 9:110 (1959).

PNYC00001281

PROPOSED AMBIENT AIR QUALITY STANDARDS

Standards

Pollutant	Board of Health Staff Recommendations -- 3/29/67 Letter	Advisory Council Recommendations at Meeting May 4, 1967	Adopted by State Board of Health May 27, 1967
Sulfur Dioxide (West-Gaeke Method only)	0.02 ppm 0.10 ppm	Need further advice on EPA 0.10 ppm 7 and 10 to be exceeded over 1%.	0.02 ppm maximum annual average, 0.10 ppm 24 hr. average not to be exceeded over 1% of days 3 month period, 0.25 ppm 1 hr average in 4 days (max.)
Reactive Sulfur	0.25 mg SO ₃ /100 ² CH PMA 0.50 mg SO ₃ /100 ² CH PMA	0.25 mg SO ₃ /100 ² CH PMA 0.50 mg SO ₃ /100 ² CH PMA	0.25 mg SO ₃ /100 ² CH PMA 0.50 mg SO ₃ /100 ² CH PMA
Suspended Sulfate	4 µg/H ³ of Air PMAA 12 µg/H ³ of Air PMAA	4 µg/H ³ of Air PMAA 12 µg/H ³ of Air PMAA	4 µg/H ³ of Air PMAA 12 µg/H ³ of Air PMAA
Sulfuric Acid Mist	4 µg/H ³ of Air PMAA 12 µg/H ³ of Air -- 1% of Time 30 µg/H ³ of Air Hourly Ave., 1% of Time	4 µg/H ³ of Air PMAA 12 µg/H ³ of Air -- 1% of Time 30 µg/H ³ of Air Hourly Ave., 1% of Time	4 µg/H ³ of Air PMAA 12 µg/H ³ of Air -- 1% of Time 30 µg/H ³ of Air Hourly Avg. 1% of Time
Hydrogen Sulfide	0.03 ppm-½ hr. avg. twice in 5 days 0.05 ppm-½ hr. avg. twice per year	Need further advice Recommendation no standard be set at present time	0.03 ppm-½ hr. avg. twice in 5 days 0.05 ppm-½ hr. avg. twice per year
Oxide	0.02 ppm avg. for 8 hrs	" "	Deferred setting of Standard
Carbon Monoxide	5 ppm max. for 8 hrs	No standard necessary	Deferred setting of Standard
Total Suspended Particulate	75 µg/H ³ of Air ACH 200 µg/H ³ of Air -- Not over 1% of days	75 µg/H ³ of Air ACH 200 µg/H ³ of Air -- Not over 1% of days	75 µg/H ³ of Air ACH 200 µg/H ³ of Air -- Not over 1% of days

Notes: μA is maximum annual average,

WMM is tracking all of the usual averages

AGH is annual geometric mean.

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Public Law 86-360

is minor

Service in: 1.

time in year 2000

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