



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



April 30, 1993

Legislative Regulation Review Committee
Room 1800
Legislative Office Building
Hartford, Connecticut 06106

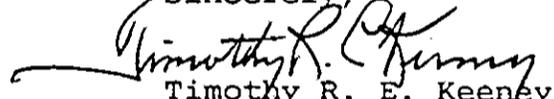
Gentlemen:

In accordance with the provisions of Section 4-170 of the Connecticut General Statutes, enclosed are the original and eighteen copies of a proposed amendment to the Regulations of Connecticut State Agencies. This amendment deals with changes to sections 22a-174-24 and 22a-174-6 concerning particulate matter. Also enclosed are a fiscal note, notice of hearing and a summary of the regulation and comments received at the hearing.

The purpose of this request is to enable this Department to adopt ambient air quality standards identical to National Ambient Air Quality Standards adopted by the US Environmental Protection Agency along with procedures for air quality emergency episodes as required by the Clean Air Act.

If there are any questions on this proposal, please feel free to contact Phil Florkoski at 566-4030. Thank you for your assistance.

Sincerely,


Timothy R. E. Keeney
Commissioner

TREK/F/pf

ENC.

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IMPORTANT: Read Instructions on bottom of Certification Page before completing this form. Failure to comply with instructions may cause disapproval of proposed Regulations.

STATE OF CONNECTICUT
REGULATION

OF

NAME OF AGENCY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Concerning

SUBJECT MATTER OF REGULATION
Abatement of Air Pollution - Particulate Matter

SECTION 1

Section 1

Subsections (f) and (g) of section 22a-174-24 of the Regulations of Connecticut State Agencies are amended to read as follows:

(f) Connecticut primary ambient air quality standards for particulate matter. [The Connecticut primary ambient air quality standards for particulate matter are:]

(1) [75 micrograms per cubic meter - annual geometric mean;]

THE LEVEL OF THE CONNECTICUT PRIMARY 24-HOUR AMBIENT AIR QUALITY STANDARD FOR PARTICULATE MATTER, MEASURED AS PM_{10} , IS 150 MICROGRAMS PER CUBIC METER ($\mu g/m^3$), 24-HOUR AVERAGE CONCENTRATION. THE STANDARD IS ATTAINED WHEN THE EXPECTED NUMBER OF DAYS PER CALENDAR YEAR WITH A 24-HOUR AVERAGE CONCENTRATION ABOVE 150 $\mu g/m^3$, AS DETERMINED IN ACCORDANCE WITH APPENDIX K OF TITLE 40 CODE OF FEDERAL REGULATIONS PART 50 REVISED AS OF JULY 1, 1989, IS EQUAL TO OR LESS THAN ONE.

(2) [260 micrograms per cubic meter - maximum 24-hour concentration not to be exceeded more than once per year.]

THE LEVEL OF THE CONNECTICUT PRIMARY ANNUAL STANDARD FOR PARTICULATE MATTER, MEASURED AS PM_{10} , IS 50 MICROGRAMS PER CUBIC METER ($\mu g/m^3$), ANNUAL ARITHMETIC MEAN. THE STANDARD IS ATTAINED WHEN THE EXPECTED ANNUAL ARITHMETIC MEAN CONCENTRATION, AS DETERMINED IN ACCORDANCE WITH APPENDIX K OF TITLE 40 CODE OF FEDERAL REGULATIONS PART 50 REVISED AS OF JULY 1, 1989, IS EQUAL TO OR LESS THAN 50 $\mu g/m^3$.

(g) Connecticut secondary ambient air quality standards for particulate matter [are:]

(1) [60 micrograms per cubic meter - annual geometric mean.]

THE LEVEL OF THE CONNECTICUT SECONDARY 24-HOUR AMBIENT AIR QUALITY STANDARD FOR PARTICULATE MATTER, MEASURED AS PM_{10} , IS 150 MICROGRAMS PER CUBIC METER ($\mu g/m^3$), 24-HOUR AVERAGE CONCENTRATION. THE STANDARD IS ATTAINED WHEN THE EXPECTED NUMBER OF DAYS PER CALENDAR YEAR WITH A 24-HOUR AVERAGE CONCENTRATION ABOVE 150 $\mu g/m^3$, AS DETERMINED IN ACCORDANCE WITH APPENDIX K OF TITLE 40 CODE OF FEDERAL REGULATIONS PART 50 REVISED AS OF JULY 1, 1989, IS EQUAL TO OR LESS THAN ONE.

STATE OF CONNECTICUT
REGULATION
OF

Page 2 of 4 pages

DEPARTMENT OF ENVIRONMENTAL PROTECTION

SECTION 2

- (2) [150 micrograms per cubic meter - maximum 24-hour concentration not to be exceeded more than once per year.]

THE LEVEL OF THE CONNECTICUT SECONDARY ANNUAL STANDARD FOR PARTICULATE MATTER, MEASURED AS PM_{10} , IS 50 MICROGRAMS PER CUBIC METER ($\mu g/m^3$), ANNUAL ARITHMETIC MEAN. THE STANDARD IS ATTAINED WHEN THE EXPECTED ANNUAL ARITHMETIC MEAN CONCENTRATION, AS DETERMINED IN ACCORDANCE WITH APPENDIX K OF TITLE 40 CODE OF FEDERAL REGULATIONS PART 50 REVISED AS OF JULY 1, 1989, IS EQUAL TO OR LESS THAN 50 $\mu g/m^3$.

Section 2

Subsections (a) and (b) of section 22a-174-6 are amended to read as follows:

Sec. 22a-174-6. Air pollution emergency episode procedures

(a) When air pollutant concentrations monitored by the Department [of Environmental Protection] indicate that short term high pollutant levels may be expected which are likely to have an adverse impact on human health, the Commissioner shall prepare for the declaration of an appropriate air pollution emergency episode.

(b) Industrial Emergency episode criteria. In determining that any stage of an air pollution industrial emergency episode exists, the Commissioner shall be guided by the following criteria:

(b)(1) First Stage: Industrial Air Pollution Alert. An air pollution industrial alert shall be declared whenever the concentration of one or more of the pollutants listed below reaches the described level at any monitoring site operated by the Department [of Environmental Protection] :

A SO_2 [:] CONCENTRATION OF 800 $\mu g/m^3$ (0.3 ppm), 24-hour average;

[Particulates: 3.0 COHs or 375 $\mu g/m^3$, 24-hour average;]

A PM_{10} CONCENTRATION OF 350 $\mu g/m^3$, AVERAGED OVER 24-HOURS, MEASURED IN ACCORDANCE WITH THE PROVISIONS OF APPENDIX C OF TITLE 40 CODE OF FEDERAL REGULATIONS PART 58 REVISED AS OF JULY 1, 1989; OR

[SO_2 and particulates combined: product of SO_2 ppm, 24-hour average, and COHs equal to 0.8; or product of SO_2 $\mu g/m^3$, 24-hour average, and particulate $\mu g/m^3$, 24-hour average equal to 65×10^3 ;]

A NO_2 [:] CONCENTRATION OF 1130 $\mu g/m^3$ (0.6 ppm), 1-hour average; 282 $\mu g/m^3$ (0.15 ppm), 24-hour average; and meteorological conditions are such that the pollutant concentrations can be expected, unless control actions are taken, to remain at the above levels or increase over a period of twelve (12) or more hours [or such other length of time determined by the Commissioner to constitute a threat to the safety and welfare of people] .

STATE OF CONNECTICUT
REGULATION
 OF

DEPARTMENT OF ENVIRONMENTAL PROTECTION

SECTION 2

(b)(2) Second Stage: Industrial Air Pollution Warning. An industrial air pollution warning shall be declared whenever one of the following levels is reached at any monitoring site operated by the Department [of Environmental Protection] :

A SO₂ [:] CONCENTRATION OF 1,600 $\mu\text{g}/\text{m}^3$ (0.6 ppm), 24-hour average;
 [Particulates: 5.0 COHs or 625 $\mu\text{g}/\text{m}^3$, 24-hour average;]

A PM₁₀ CONCENTRATION OF 420 $\mu\text{g}/\text{m}^3$, AVERAGED OVER 24-HOURS, MEASURED IN ACCORDANCE WITH THE PROVISIONS OF APPENDIX C OF TITLE 40 CODE OF FEDERAL REGULATIONS PART 58 REVISED AS OF JULY 1, 1989; OR

[SO₂ and particulates combined: product of SO₂ ppm, 24-hour average and COHs equal to 0.8; or product of SO₂ $\mu\text{g}/\text{m}^3$, 24-hour average and particulate $\mu\text{g}/\text{m}^3$, 24-hour average to 261 x 10³;]

A NO₂ [:] CONCENTRATION OF 2,260 $\mu\text{g}/\text{m}^3$ (1.2 ppm), 1-hour average; 565 $\mu\text{g}/\text{m}^3$ (0.3 ppm), 24-hour average; and meteorological conditions are such that pollutant concentrations can be expected, unless control actions are taken, to remain at the above levels or increase over a period of twelve (12) or more hours [or such other length of time determined by the commissioner to constitute a threat to the safety and welfare of people] .

(b)(3) Third Stage: [Industrial Air Pollution Emergency. An industrial air pollution emergency shall be declared whenever evidence shows that air quality has degraded to a level deemed unacceptable by the Commissioner under any circumstances and requiring the most stringent control actions.] An industrial air pollution emergency shall be declared when any one of the following levels is reached at any monitoring site operated by the Department. [of Environmental Protection.] :

A SO₂ [:] CONCENTRATION OF 2,100 $\mu\text{g}/\text{m}^3$ (0.8 ppm), 24-hour average;

[Particulates: 7.0 COHs or 875 $\mu\text{g}/\text{m}^3$, 24-hour average;]

A PM₁₀ CONCENTRATION OF 500 $\mu\text{g}/\text{m}^3$, AVERAGED OVER 24-HOURS, MEASURED IN ACCORDANCE WITH THE PROVISIONS OF APPENDIX C OF TITLE 40 CODE OF FEDERAL REGULATIONS PART 58 REVISED AS OF JULY 1, 1989; OR

[SO₂ and particulates combined: product of SO₂ ppm, 24-hour average and COHs equal to 1.2; or product of SO₂ $\mu\text{g}/\text{m}^3$, 24-hour average and particulate $\mu\text{g}/\text{m}^3$, 24-hour average equal to 393 x 10³;]

A NO₂ [:] CONCENTRATION OF 3,100 $\mu\text{g}/\text{m}^3$ (1.6 ppm), 1-hour average; 750 $\mu\text{g}/\text{m}^3$ (0.4 ppm), 24-hour average; and meteorological conditions are such that this condition can be expected to continue for twelve (12) or more hours [or such other length of time determined by the Commissioner to justify an industrial air pollution emergency] .

(b)(4) Termination. Once any stage of an industrial air pollution emergency episode has been declared, it shall remain in effect until the Commissioner announces its termination.

STATEMENT OF PURPOSE: To adopt the ambient air quality standards and air pollution emergency episode levels for particulate matter smaller than 10 microns in diameter which are identical to the standards set by the EPA.

It is known that the foregoing:

Regulations Emergency Regulations

Are:

Adopted Amended as hereinabove stated Repealed

By the aforesaid agency pursuant to:

Section 22a-174 of the General Statutes.

Section _____ of the General Statutes, as amended by Public Act No. _____ of the _____ Public Acts.

Public Act No. _____ of the Public Acts.

After publication in the Connecticut Law Journal on February 16, 1993, of the notice of the proposal to:

Adopt Amend Repeal such regulations

(If applicable): And the holding of an advertised public hearing on 18th day of March 1993

WHEREFORE, the foregoing regulations are hereby:

Adopted Amended as hereinabove stated Repealed

Effective:

When filed with the Secretary of the State.

(OR)

The _____ day of _____ 19____.

| | | | |
|---------------------|------------------------|---|---|
| In Witness Whereof: | DATE <u>4/26/93</u> | SIGNED (Head of Board, Agency or Commission) <i>Christoph R. Perry</i> | OFFICIAL TITLE, DULY AUTHORIZED Commissioner |
|---------------------|------------------------|---|---|

| | | | |
|---|---------------------------------|------------------------|---|
| Approved by the Attorney General as to legal sufficiency in accordance with Sec. 4-169, as amended, C.G.S.: | SIGNED <i>H. U. B. L. K.</i> | DATE <u>4/29/93</u> | OFFICIAL TITLE, DULY AUTHORIZED Assoc. Atty. General |
|---|---------------------------------|------------------------|---|

- Approved
- Disapproved
- Disapproved in part, (Indicate Section Numbers disapproved only)
- Rejected without prejudice.

| | | |
|--|------|---|
| By the Legislative Regulation Review Committee in accordance with Sec. 4-170, as amended, of the General Statutes. | DATE | SIGNED (Clerk of the Legislative Regulation Review Committee) |
|--|------|---|

Two certified copies received and filed, and one such copy forwarded to the Commission on Official Legal Publications in accordance with Section 4-172, as amended, of the General Statutes.

| | | |
|------|----------------------------------|----|
| DATE | SIGNED (Secretary of the State.) | BY |
|------|----------------------------------|----|

INSTRUCTIONS

1. One copy of all regulations for adoption, amendment or repeal, except emergency regulations, must be presented to the Attorney General for his determination of legal sufficiency. Section 4-169 of the General Statutes.
2. Seventeen copies of all regulations for adoption, amendment or repeal, except emergency regulations, must be presented to the standing Legislative Regulation Review Committee for its approval. Section 4-170 of the General Statutes.
3. Each regulation must be in the form intended for publication and must include the appropriate regulation section number and section heading. Section 4-172 of the General Statutes.
4. Indicate by "(NEW)" in heading if new regulation. Amended regulations must contain new language in capital letters and deleted language in brackets. Section 4-170 of the General Statutes.

AGENCY FISCAL ESTIMATE OF PROPOSED REGULATION

AGENCY SUBMITTING REGULATION Environmental Protection DATE 4/26/93
 SUBJECT MATTER OF REGULATION Air Pollution Control Regulations to adopt standards
for particulate matter with a diameter of 10 microns or less.
 REGULATION SECTION NO. 22a-174-24 & 6 STATUTORY AUTHORITY 22a-174
 OTHER AGENCIES AFFECTED None
 EFFECTIVE DATE USED IN COST ESTIMATE 7/1/93
 ESTIMATE PREPARED BY Phil Florkoski TELEPHONE 566-5024

SUMMARY OF STATE COST AND REVENUE IMPACT OF PROPOSED REGULATION

Agency Environmental Protection Fund Affected General

| | First Year 19 <u>94</u> | Second Year 19 <u>95</u> | Full Operation 19 <u>96</u> |
|--------------------------------|----------------------------|-----------------------------|--------------------------------|
| Number of Positions | 0 | 0 | |
| Personal Services | | | |
| Other Expenses | | | |
| Equipment | | | |
| Grants | | | |
| Total State Cost (Savings) | 0 | 0 | |
| Estimated Revenue Gain (Loss) | | | |
| Total Net State Cost (Savings) | 0 | 0 | |

EXPLANATION OF STATE IMPACT OF REGULATION:

These regulations adopt existing federal standards which replace the present standards for total suspended particulate matter.

EXPLANATION OF MUNICIPAL IMPACT OF REGULATION :

These federal standards will not directly impact municipal activities.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Notice of Intent to Amend Regulations

The Commissioner of Environmental Protection hereby gives notice of a public hearing as part of a rulemaking proceeding. The purpose of this proceeding is to amend the Regulations of Connecticut State Agencies concerning abatement of air pollution. The amended regulations along with narrative materials will be submitted to the U.S. Environmental Protection Agency (EPA) for their review and approval as a revision to the State Implementation Plan for air quality (SIP). The public hearing will cover the following topic and proposed amendments to the Regulations of Connecticut State Agencies:

To adopt the ambient air quality standards and air pollution emergency episode levels for particulate matter smaller than ten microns in diameter (PM-10) which are identical to the standards set by the EPA and to amend the requirements for air pollution emergency episodes and for the control of fugitive dust. This will require amendments to sections 22a-174-24, 22a-174-6 and 22a-174-18 respectively.

All interested persons are invited to express their views and arguments on the proposed revision and regulations. Comments should be submitted to the Bureau of Air Management, Room 144, 165 Capitol Avenue, Hartford, Connecticut 06106. All comments must be received by March 19, 1993.

In addition to accepting written comments, the DEP will also hold the public hearing described below. Persons appearing at the hearing are requested to submit a written copy of their statement. Oral comments, however, will also be made part of the record and are welcome. Information on the public hearing is as follows:

March 18, 1993 - 1:30 pm
Intergovernmental Conference Room
Office of Policy and Management
80 Washington Street
Hartford, Connecticut

Copies of the materials listed above will be available for public inspection during normal business hours at the Bureau of Air Management at the above address. Additional copies will be available at the New London Public Library, Torrington Public Library and at the main branch of the Bridgeport Public Library. For further information contact Phil Florkoski of the Bureau of Air Management at 566-4030.

The authority to adopt this plan and regulations is granted by sections 22a-6 and 22a-174 of the Connecticut General Statutes (CGS). This notice is required by sections 4-168 and 22a-6 CGS and Title 40 Code of Federal Regulations Part 51.104.

TIMOTHY R. E. KEENEY
Commissioner



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PM₁₀ Particulate Matter Standard - 22a-174-24 and -6

SUMMARY OF AMENDMENTS

The DEP must adopt the National Ambient Air Quality Standard for particulate matter with a diameter of ten (10) microns or less PM₁₀. The current standard is based on a measurement of total suspended particulates which do not represent the actual threat to public health. The proposed PM₁₀ standard protects against the type of particles which may be inhaled. This amendment requires the elimination of the current standards and adoption of the PM₁₀ standards in (22a-174-24), and modification of the levels used to determine when an air pollution emergency exists (22a-174-6).

22a-174-24

Subsection (f) describes the Connecticut primary standards for particulate matter.

Subsection (f)(1) establishes the twenty four (24) hour primary standard for particulate matter measured as PM₁₀.

Subsection (f)(2) establishes the annual standard primary standard for particulate matter measured as PM₁₀.

Subsection (g) describes the Connecticut secondary standards for particulate matter.

Subsection (g)(1) establishes the annual secondary standard for particulate matter measured as PM₁₀.

Subsection (g)(2) establishes the twenty four (24) hour secondary standard for particulate matter measured as PM₁₀.

22a-174-6

Subsection (b) describes the criteria used for calling various air pollution alerts.

Subsection (b)(1) describes the criteria used to declare a First Stage Episode (Industrial Air Pollution Alert).

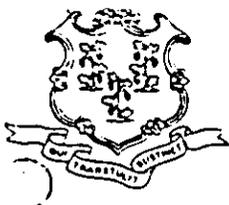
Subsection (b)(2) describes the criteria used to declare a Second Stage Episode (Industrial Air Pollution Warning)

Subsection (b)(3) describes the criteria used to declare a Third Stage Episode (Industrial Air Pollution Emergency).

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STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



HEARING REPORT

Amendments to the Regulations of Connecticut State Agencies
Sections 22a-174-24, 22a-174-6 and 22a-174-18
Concerning the Abatement of Air Pollution

April, 1993

In the February 16, 1993 Connecticut Law Journal the Commissioner of Environmental Protection gave notice of his intent to amend the Department's Regulations Concerning Abatement of Air Pollution Sections 22a-174-24, 22a-174-6 and 22a-174-18.

As required by 4-168 of the Connecticut General Statutes (CGS), this report discusses the final wording of the proposed amendments to the regulations, the principal reasons in support of the final regulations, and the principal considerations raised in opposition to the regulations along with the Department's reasons for rejecting such considerations. This report describes the content of portions of the regulation as proposed for the hearing, summarizes the issues raised during the public hearing, provides a response from the Department which describes the actions taken by the Department and the reasons for the changes and provides the final regulation recommended in this report. A listing of the individuals who provided comments is also included in this report.

PRINCIPAL REASONS IN SUPPORT OF THE AMENDMENTS

Since June of 1972 the Department of Environmental Protection (DEP) has enforced Section 22a-174-24 (formerly 19-508-24), subsections (f) and (g), of the Regulations of Connecticut State Agencies concerning Connecticut primary and secondary standards for particulate matter. Upon promulgation of the new national ambient air quality standards (NAAQS) for PM_{10} , Connecticut was required to undertake a State Implementation Plan (SIP) revision which would adopt and protect the new NAAQS. PM_{10} designates particulate matter with an aerodynamic diameter less than or equal to 10 micrometers. This size range exhibits a higher probability of avoiding the body's defense mechanisms and penetrating deeper into the lung than the particulate matter associated with the older standard.

In response, the DEP formulated regulation changes which would adopt the federal PM_{10} standards as the state's primary and secondary standards for particulate matter and incorporate them as criteria that will trigger corrective actions during emergency episodes.

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Summary of Comments:

GENERAL COMMENTS: James T. Owens, Chief, Air Planning and Implementation Branch, United States Environmental Protection Agency (EPA) - Region I and C.F. Sears, Vice President, Northeast Utilities Service Company made general comments on the proposed amendments.

The EPA stated that they approved of the proposed amendments, but Mr. Owens expressed his concern that the regulations alone did not constitute a complete revision under Connecticut's State Implementation Plan (SIP)

Response: The Bureau of Air Management is aware that additional items must be submitted to EPA in order to gain approval of the revisions to Connecticut's SIP as required under Section 189(a) of the Clean Air Act as amended. As soon as possible these additional items will be forwarded to EPA.

Northeast Utilities Service Company's Vice President, C.F. Sears, generally applauded the Connecticut Department of Environmental Protection for: 1) achieving consistency, both in the terminology and in the ambient air quality standards, with federal regulations; 2) better defining an air pollution emergency episode; and 3) clarifying what constitutes a nuisance.

Response: We appreciate receiving such positive comments.

No commenters objected to Part 1 (22a-174-24) or Part 2 (22a-174-6) of the proposed amendments to the Regulations of Connecticut State Agencies (R.C.S.A.). However, Brian Holmes presented oral and written testimony on behalf of the Connecticut Construction Industries Association, Inc. (CCIA) on Part 3 (22a-174-18) of the proposed amendments.

Conclusion: The Hearing Officers recommend that amendments proposed in Part 1 (22a-174-24) and Part 2 (22a-174-6) of the duly noticed Intent to Amend Regulations be adopted. The Hearing Officers recommend no action at this time on Part 3 (22a-174-18).


Gudmun S. Lovvoll


Robert La France

PM₁₀ Particulate Matter Standard - 22a-174-24 and -6

SUMMARY OF CHANGED REGULATIONS

The DEP must adopt the National Ambient Air Quality Standard for particulate matter with a diameter of ten (10) microns or less. This involves a change in the standards (22a-174-24), and modification of the levels used to determine when an air pollution emergency exists (22a-174-6).

22a-174-24

Subsection (f) describes the Connecticut primary standards for particulate matter.

Subsection (f)(1) establishes the twenty four (24) hour primary standard for particulate matter measured as PM₁₀.

Subsection (f)(2) establishes the annual standard primary standard for particulate matter measured as PM₁₀.

Subsection (g) describes the Connecticut secondary standards for particulate matter.

Subsection (g)(1) establishes the annual secondary standard for particulate matter measured as PM₁₀.

Subsection (g)(2) establishes the twenty four (24) hour secondary standard for particulate matter measured as PM₁₀.

22a-174-6

Subsection (b) describes the criteria used for calling various air pollution alerts.

Subsection (b)(1) describes the criteria used to declare a First Stage Episode (Industrial Air Pollution Alert).

Subsection (b)(2) describes the criteria used to declare a Second Stage Episode (Industrial Air Pollution Warning)

Subsection (b)(3) describes the criteria used to declare a Third Stage Episode (Industrial Air Pollution Emergency).