State of Connecticut
REGULATION
of the

NAME OF AGENCY:
Energy and Environmental Protection

Concerning

SUBJECT MATTER OF REGULATION:

Amendment of Sections 22a-174-24, 22a-174-1(10), 22a-174-1(88), 22a-174-3a(k)(5) and 22a-174-28(a)(5) of the Regulations of Connecticut State Agencies

Section 1. Subdivision (10) of section 22a-174-1 of the Regulations of Connecticut State Agencies is revised as follows:

(10) "AAQS" or "[Ambient] ambient air quality standard" means any standard [which] that establishes the largest allowable concentration of a specific pollutant in the ambient air [of a region or subregion] as established by the [United States Environmental Protection Agency] Administrator in 40 CFR 50 or by the commissioner [and which is listed] in section 22a-174-24 of the Regulations of Connecticut State Agencies.

Sec 2. Subdivision (88) of section 22a-174-1 of the Regulations of Connecticut State Agencies is revised as follows:

(88) "PM 10" means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by a reference method set forth in 40 CFR 50, Appendix [M] J, and designated as a reference method in accordance with 40 CFR 53 or by an equivalent method approved by the Administrator in accordance with 40 CFR 53.

Sec. 3. Subdivision (5) of section 22a-174-3a(k) of the Regulations of Connecticut State Agencies is revised as follows:

(5) Ambient Monitoring

(A) The permit application shall contain an analysis of the effect on ambient air quality in the area of the subject source or modification, of the following pollutants:

(i) those that have allowable emissions in excess of the amount listed in Table 3a(k)-1 of this subsection, or

(ii) those [listed in section 22a-174-24 of the Regulations of Connecticut State Agencies,] for which an ambient air quality standard exists;

(B) For any pollutant listed in Table 3a(k)-1 for which [a National Ambient Air Quality Standard] an AAQS does not exist, the analysis shall contain such air quality monitoring data as the commissioner determines is necessary to assess ambient air quality for that pollutant in any area that such pollutant may affect;

(C) For any pollutant [(other than nonmethane hydrocarbons)] for which [a National Ambient Air Quality Standard] an AAQS exists, the analysis shall contain [continuous] air quality monitoring data approved by the commissioner and gathered for purposes of determining whether emissions of that pollutant would cause or contribute to a violation of such standard or a Prevention of Significant Deterioration increment listed in Table 3a(k)-2 of this subsection;

(D) The [continuous] air quality monitoring data that is required by subparagraphs (B) and (C) of this subdivision shall have been gathered over a period of one (1) year and shall represent the year preceding receipt of the application, unless the commissioner determines in writing that a complete and adequate analysis can be accomplished with monitoring data gathered over a period shorter than one (1) year, but not to be less than four (4) months;

(E) The owner or operator shall, after construction of the subject source or modification, conduct such ambient monitoring as the commissioner determines is necessary to determine the effect which the emissions from such source or modification may have, or are having, on air quality in any area. In addition, the owner or operator shall submit the results of such ambient monitoring to the commissioner within thirty (30) days of data collection; and

(F) The owner or operator shall meet the requirements of 40 CFR 58, Appendix [B] A during the operation of monitoring.

Sec. 4. Section 22a-174-24 of the Regulations of Connecticut State Agencies is revised as follows:

Sec. 22a-174-24. Connecticut primary and secondary ambient air quality standards

(a) [Definitions.

(1) "Ambient air" means that portion of the atmosphere, external to buildings, to which the general public has access.

(2) "Reference method" means a method of sampling and analyzing for an air pollutant, as described in Title 40 Code of Federal Regulations part 50, as from time to time may be amended.

(3) "Equivalent method" means any method of sampling and analyzing for an air pollutant that has been designated in accordance with Title 40 of Federal Regulations part 53, as from time to time may be amended.

(4) "Acceptable method" means a reference method, an equivalent method, or any other method determined by the Commissioner.] **Reserved.**

(b) The concentration of pollutants in the ambient air, as measured by [an acceptable method] a reference or equivalent method designated in 40 CFR 50 or 40 CFR 53, shall conform with levels specified [below] in this section as the applicable air quality standards for these [substances] air pollutants throughout Connecticut. No person shall operate [a] any stationary source, which has a significant impact on air quality [listed in Table 3a(i)-1 set forth] as described in section 22a-174-3a(i)(1) of the Regulations of Connecticut State Agencies for the pollutants listed in Table 3a(i)-1 of section 22a-174-3a of the Regulations of Connecticut State Agencies, in such a manner as to cause or contribute to a violation of an ambient air quality standard [listed in Section 22a-174-24].

(c) [Reference conditions. All measurements of air quality are corrected to a reference temperature of twenty (20) degrees C. and to a reference pressure of 760 millimeters of mercury (1,013.2 millibars or 29.92 inches of mercury).] **Reserved.**

(d) Connecticut primary and secondary ambient air quality standards for sulfur oxides (sulfur dioxide).

(1) The level of the Connecticut primary 1-hour ambient air quality [standards] standard for sulfur oxides, measured as sulfur dioxide, [are:

(1) 80 micrograms per cubic meter (0.03 ppm) -- annual arithmetic mean.

(2) 365 micrograms per cubic meter (0.14 ppm) -- maximum 24-hour concentration not to be exceeded more than once per year.] is 75 parts per billion, as set out in 40 CFR 50.17.

(2) The level of the Connecticut primary 24-hour ambient air quality standard for sulfur oxides, measured as sulfur dioxide, is 0.14 parts per million, as set out in 40 CFR 50.4.

(3) The level of the Connecticut primary annual ambient air quality standard for sulfur oxides, measured as sulfur dioxide, is 0.030 parts per million, as set out in 40 CFR 50.4.

(4) The level of the Connecticut secondary 3-hour ambient air quality standard for sulfur oxides, measured as sulfur dioxide, is 0.5 parts per million, as set out in 40 CFR 50.5.

(e) [**Connecticut secondary ambient air quality standards for sulfur oxides (sulfur dioxide).** The Connecticut secondary ambient air quality standard for sulfur oxides, measured as sulfur dioxide, is:

(1) 1,300 micrograms per cubic meter (0.5 ppm) -- maximum 3-hour concentration not to be exceeded more than once per year.

(2) 260 micrograms per cubic meter (0.1 ppm) -- maximum 24-hour concentration not to be exceeded more than once per year.

(3) 1,300 micrograms per cubic meter (0.5 ppm) -- maximum 3-hour concentration not to be exceeded more than once per year.]

Connecticut primary and secondary ambient air quality standards for PM 10.

The level of the Connecticut primary and secondary 24-hour ambient air quality standards for particulate matter, measured as PM 10, is 150 micrograms per cubic meter, as set out in 40 CFR 50.6.

(f) Connecticut primary and secondary ambient air quality standards for PM 2.5 (fine particulate matter).

(1) [The level of the Connecticut primary 24-hour ambient air quality standard for particulate matter, measured as PM10, is 150 micrograms per cubic meter (*u*g/m3), 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 (*u*g/m3), 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.] The level of the Connecticut primary annual ambient air quality standard for fine particulate matter, measured as PM 2.5, is 12.0 micrograms per cubic meter, as set out in 40 CFR 50.18.

(2) [The level of the Connecticut primary annual standard for particulate matter, measured as PM10, is 50 micrograms per cubic meter (*u*g/m3), 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 (*u*g/m3).] The level of the Connecticut secondary annual ambient air quality standard for fine particulate matter, measured as PM 2.5, is 15.0 micrograms per cubic meter, as set out in 40 CFR 50.13.

(3) The level of the Connecticut primary and secondary 24-hour ambient air quality standards for fine particulate matter, measured as PM 2.5, is 35 micrograms per cubic meter, as set out in 40 CFR 50.18 and 40 CFR 50.13, respectively.

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

(1) The level of the Connecticut secondary 24-hour ambient air quality standard for particulate matter, measured as PM10, is 150 micrograms per cubic meter (*u*g/m3), 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 (*u*g/m3), 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) The level of the Connecticut secondary annual standard for particulate matter, measured as PM10, is 50 micrograms per cubic meter (*u*g/m3), 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 (*u*g/m3).] **Reserved.**

(h) Connecticut primary [and secondary] ambient air quality standards for carbon monoxide. [The Connecticut primary and secondary 1-hour ambient air quality standards for carbon monoxide, as set out in 40 CFR 50.8, are:] The levels of the Connecticut primary ambient air quality standards for carbon monoxide, as set out in 40 CFR 50.8, are as follows:

(1) [10 milligrams per cubic meter (9 ppm) -- maximum 8-hour concentration not to be exceeded more than once per year.] 9 parts per million for an 8-hour average concentration; and

(2) [40 milligrams per cubic meter (35 ppm) -- maximum 1- hour concentration not to be exceeded more than once per year.] 35 parts per million for a 1-hour average concentration.

(i) Connecticut primary and secondary ambient air quality standards for ozone.

[(1) **Connecticut 8-hour primary and secondary ambient air quality standards for ozone.**

(A) The level of the Connecticut 8-hour primary and secondary ambient air quality standards for ozone is 0.08 parts per million, daily maximum 8-hour average, measured by a reference method based on 40 CFR 50, Appendix D.

(B) The Connecticut 8-hour primary and secondary ambient air quality standards are met at an ambient air quality monitoring site when the average of the annual fourth-highest daily maximum 8-hour average ozone concentration is less than or equal to 0.08 parts per million, as determined in accordance with 40 CFR 50, Appendix I.

(2) **Connecticut 1-hour primary and secondary ambient air quality standards for ozone.**

(A) The level of the Connecticut 1-hour primary and secondary ambient air quality standards for ozone is 0.12 parts per million (235 µg/m3), measured by a reference method based on 40 CFR 50, Appendix D.

(B) The Connecticut 1-hour primary and secondary ambient air quality standards are met when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 parts per million is equal to or less than one day, as determined by 40 CFR 50, Appendix H.]

(1) The level of the Connecticut 8-hour primary and secondary ambient air quality standards for ozone is 0.08 parts per million, as set out in 40 CFR 50.10.

(2) The level of the Connecticut 8-hour primary and secondary ambient air quality standards for ozone is 0.075 parts per million, as set out in 40 CFR 50.15.

(j) [Connecticut primary and secondary ambient air quality standards for hydrocarbons. The hydrocarbons standard is for use as a guide in achieving oxidant standards. The Connecticut primary and secondary ambient air quality standard for hydrocarbons is: 160 micrograms per cubic meter (0.24 ppm) -- maximum 3-hour concentration (6 am to 9 am) not to be exceeded more than once per year.] **Reserved.**

(k) Connecticut primary and secondary ambient air quality standards for [nitrogen dioxide] oxides of nitrogen (nitrogen dioxide). [The Connecticut primary and secondary ambient air quality standard for nitrogen dioxide, is: 100 micrograms per cubic meter (0.05 ppm) -- annual arithmetic mean.]

(1) The level of the Connecticut primary and secondary annual ambient air quality standard for oxides of nitrogen, measured as nitrogen dioxide, is 53 parts per billion, as set out in 40 CFR 50.11.

(2) The level of the Connecticut primary 1-hour ambient air quality standard for oxides of nitrogen, measured as nitrogen dioxide, is 100 parts per billion, as set out in 40 CFR 50.11.

(*l*) Connecticut primary and secondary ambient air quality standards for lead.

The Connecticut primary and secondary ambient air quality [standard] standards for lead and its compounds[, measured as elemental lead is: 1.5 micrograms per cubic meter, maximum arithmetic mean averaged over three consecutive calendar months.] are 0.15 micrograms per cubic meter, as set out in 40 CFR 50.16.

(m) Connecticut primary ambient air quality standard for dioxin. The Connecticut primary ambient air quality standard for dioxin is 1.0 picograms per cubic meter annual average. For the purposes of determining compliance with this standard the commissioner may use a concentration of 7.0 picograms per cubic meter 8-hour average. [Within three years of the effective date of this subsection, the commissioner shall refer this standard for review and comment by the hazardous air pollutant advisory panel.]

Sec. 5. Section 22a-174-28(a)(5) of the Regulations of Connecticut State Agencies is revised as follows:

(5) "Control period" means the period from November 1 to the last day of February for the Central Control Area and the Southwestern Control Area if a violation of the ambient air quality standard for carbon monoxide, [as listed in subsection 22a-174-24(h) of the Regulations of Connecticut State Agencies] as determined in accordance with the procedures specified in [Title 40 Code of Federal Regulations Part 50] 40 CFR 50, occurs within such Control Area after November 1, 1998. If such violation occurs between December 1 and September 1, the Control Period for the Control Area in which such violation occurred begins the following November. If such violation occurs between September 1 and December 1, the Control Period for the Control Area in which such violation occurred begins sixty (60) days after such violation for the initial Control Period and begins November 1 for each succeeding year.

Statement of purpose:

The purpose of this proposal is to update the Department's ambient air quality standards as required by the U.S. Environmental Protection Agency (EPA). EPA has established ambient air

quality standards for each of six criteria pollutants at levels necessary to protect public health with an adequate margin of safety. EPA reviews each standard on a five-year cycle and updates the standard if warranted by the latest science. As the Department has not revisited the Connecticut air quality standards in a number of years, many standards require a change in the level of the standard in Connecticut's regulation.

The proposal also clarifies that the ambient air quality standards are relevant to emissions from stationary sources regardless of whether the source is subject to an individual air quality permit or not. As some of the sources without permits are old and high emitting, a prohibition on individual source emissions in relation to an ambient air quality standard is a useful enforcement tool, particularly as many of the newer ambient standards look at emissions over a short period of time, such as a day or an hour.

As the federal ambient air quality standards apply to Connecticut independently, Connecticut's air is judged against the most current and strict federal standards. Thus, the legal effect of these changes is consistency between state and federal ambient air quality standards, which is an element required by EPA before EPA may fully approve Connecticut's State Implementation Plan as sufficient for the regulation of recently adopted federal standards.