EXHIBIT E
HEARING REPORT

Prepared Pursuant to Section 4-168(d)
of the Connecticut General Statutes and
Section 22a-3a-3(d)(5) of the Department of Environmental Protection Rules of Practice

Regarding Amendment of Sections 22a-174-18, 22a-174-38, 22a-174-19(f) and 22a-174-22(a)(21) of the
Regulations of Connecticut State Agencies

Hearing Officer: Merrily A. Gere

Date of Hearing: April 29, 2003

On March 7, 2003, the Commissioner of the Department of Environmental Protection ("Department") signed a notice of intent to propose an amendment to the Regulations of Connecticut State Agencies ("R.C.S.A."): sections 22a-174-18, 22a-174-38, 22a-174-19(f) and 22a-174-22(a)(21). Pursuant to such notice, a public hearing was held on April 29, 2003, with the public comment period closing on May 2, 2003. The originally announced comment deadline of April 29, 2003 was extended through May 2, 2003 in response to a request for such an extension.

I. Hearing Report Content

As required by section 4-168(d) of the Connecticut General Statutes ("C.G.S."), this report describes the amendment as proposed for hearing; the principal reasons in support of the Department's proposed amendment; the principal considerations presented in oral and written comments in opposition to the Department's proposed amendment; all comments and responses thereto on the proposed amendment; and the final wording of the proposed amendment. Commenters are identified in Attachment 1.

This report also includes an explanation to comply with C.G.S. section 22a-6(h).

II. Compliance with Section 22a-6(h) of the General Statutes

Section 22a-6(h) of the C.G.S. requires the Commissioner of the Department to distinguish clearly, at the time of public hearing,[1] all provisions of a proposed regulation or amendment thereto that differ from adopted federal standards and procedures, provided: (1) such proposed amendment pertains to activities addressed by adopted federal standards and procedures; and (2) such adopted federal standards and procedures apply to persons subject to the provisions of such

1 Section 5 of Public Act 03-276, effective July 1, 2003, amended C.G.S. section 22a-6(h) to require that the Commissioner make the required information available at the time of public notice. This proceeding is not subject to Public Act 03-276.

proposed amendment. In addition, the Commissioner must provide an explanation for all such provisions in the regulation-making record required under C.G.S. Title 4, Chapter 54.

In accordance with the requirements of C.G.S. section 22a-6(h), the Hearing Officer made a written statement available at the public hearing. Such statement, incorporated into the administrative record for this matter, indicated that the requirements of C.G.S. section 22a-6(h) do not apply to the provisions of the proposed amendment for one of the following two reasons: (1) there are no applicable federal standards or procedures; or (2) the provisions of the amendment are the same as the federal standards and procedures.

Section 1 of the proposed amendment includes revisions to R.C.S.A. section 22a-174-18 ("Section 18"). Each revision made and its relationship to existing federal standards and procedures is summarized as follows:

- Specifies the form and averaging time of the existing opacity standards for stationary sources. While the federal government has adopted opacity standards for specific types of stationary sources, there are no federal standards for opacity that apply to all stationary sources;
- Adds particulate matter standards appropriate to fuel-burning equipment using certain fossil fuels. There are no federal particulate matter standards that apply to stationary fuel-burning equipment based on the type of fuel burned;
- Adds particulate matter emissions standards and requirements for stationary reciprocating internal combustion engines. The federal government has proposed standards for hazardous air pollutants emitted from stationary reciprocating internal combustion engines, but no federal particulate matter standards apply to such sources;
- Adds an exemption from the visible emissions standards for sources subject to federal New Source Performance Standards ("NSPS") for opacity. This exemption results in only the federal NSPS standards for opacity applying;
- Adds an exemption from the visible emissions standards for smoke generating units used for training purposes by a branch of the U.S. military. No federal particulate matter standards apply to such sources;
- Adds an exemption from the section for municipal waste combustors ("MWCs") to recognize the promulgation of R.C.S.A. section 22a-174-38 ("Section 38"), which includes opacity and particulate matter standards for these sources. Since Section 38 includes requirements for MWCs that are based on the U.S. Environmental Protection Agency's ("EPA's") emission guidelines and standards for MWCs and since Section 38 has been approved by EPA as meeting its guidelines and standards, this exemption conforms Section 18 to federal standards and procedures; and
- Makes non-substantive changes that do not involve standards or procedures to conform the overall format and language to current practices.

Sections 2 through 4 of the amendment are minor revisions to Section 38. EPA has approved Section 38 as the enforceable mechanism of the Connecticut "Plan for Implementing the Municipal Waste Combustor Emission Guidelines and New Source Performance Standards" because it includes requirements that are identical to or more stringent than EPA's emissions

guidelines for MWCs. None of the revisions made by the proposed amendment create differences from EPA's emissions guidelines. The specific revisions to Section 38 are as follows:

- Section 2 adds a provision to subsection (c) regarding the calculation of emission levels for reciprocating grate waste tire-fired incinerators, incinerators for which EPA has not adopted standards or procedures;
- Section 3 clarifies the use of emission reduction credits in the nitrogen oxides ("NOx") trading program established by subsection (d) and changes the reporting date for submission of the annual NOx trading report. While EPA does not include NOx trading requirements in its emissions guidelines for MWCs, EPA did review and approve the trading program of Section 38. The revision to Section 3 includes minor clarifications to the approved state program for which there are no adopted federal standards or procedures; and
- Section 4 deletes opacity from the list of pollutants in subsection (k)(10) for which owners or operators must keep records of annual performance tests. In accordance with EPA's emission guidelines for MWCs, only an initial performance test is required for opacity. Subsequent to the initial performance test, compliance with the opacity limit is measured using data from continuous emissions monitoring equipment. Thus, this revision is a change that makes Section 38 identical to federal procedures.

Sections 5 and 6 of the amendment are non-substantive revisions to R.C.S.A. sections 22a-174-19(f) and 22a-174-22(a)(21), to revise internal references to match the revisions to Section 18, and thus involve no federal standards or procedures.

III. Summary and Text of the Amendment as Proposed

A description of the revisions made by the amendment is set forth in Section II of this report. The text of the amendment as proposed is located in Attachment 2 to this report.

IV. Principal Reasons in Support of the Proposed Amendment

The amendment serves two general purposes, to update and clarify the opacity and visible emissions standards for stationary sources in Section 18 and to make minor technical corrections to the current requirements for MWCs in Section 38. Comments in general support the proposed clarifications and corrections, particularly the following:

- Addressing technological limitations of some older sources;
- Addressing instances in Section 18 when equally stringent but conflicting federal standards apply;
- Exempting MWCs from Section 18's standards given the adoption of Section 38, which includes standards at least as protective as the requirements of Section 18; and
- Making minor changes to Section 38 for consistency with federal standards and guidelines.

V. Principal Considerations in Opposition to the Proposed Amendment

While comments were submitted recommending technical revisions to the proposed amendment, no comments were submitted in opposition to moving the amendment forward for approval and promulgation.

All comments submitted are addressed in detail in Section VI of this report.

VI. Summary of Comments

The Department received both general comment on the amendment development process and specific comment on the content of the proposed amendment.

Specific to the Amendment Development Process

Comment regarding the amendment development process was overwhelmingly positive.[2] Over a period of approximately seven years, members of a working group organized under the Air Bureau's State Implementation Plan Revision Advisory Committee ("SIPRAC") attended monthly meetings in Hartford and reviewed numerous drafts of the proposed amendment. The working group members gained an understanding of the Department's air quality goals and intentions, and the Department staff gained an understanding of how these goals could be achieved in a manner that takes into account, in certain respects, the needs of regulated source owners and operators.

Commenters stressed the importance of public participation processes such as SIPRAC and its subcommittees for proposed regulatory changes and held up the development of this amendment as an excellent example of such a process, noting in particular the Department's commitment to maintain the process over seven years through changes in the working group members both for the Department and the participants. SIPRAC was identified as "one of the best examples of an effective public participation process to be found in state government" (comment by PSEG) and "an excellent example of the public participation process at its best" (comment by UTC). To quote CRRA's submitted comments regarding SIPRAC and its subcommittees: "These cooperative forums allow the regulators to hear from stakeholders who are directly affected by the Department's programs and regulations. This communication fosters greater understanding among the stakeholders and allows Department policies and regulations to be thoughtfully crafted in a way that achieves the environmental goals without unnecessarily burdening the regulated community."

Specific to the Amendment Content

In general, commenters expressed support for the amendment of Section 18. *E.g.*, comment by Pfizer, CRRA, NRG. While supportive of the adoption of the amendment, many commenters suggested that the proposed amendment could be improved by: 1) revising the proposed visible emissions standards of Section 18(b)(1) and (b)(2) to address enforceability and compliance determination issues resulting from the revised text; (2) revising the proposed exceptions from the visible emissions standards in Section 18 to make them more rational; and (3) providing more explanation to owners and operators of MWCs of how the proposed revisions to Section 38's emissions trading program serve the Department's goals and objectives.

All comments submitted are summarized below with the Department's responses; comment on

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2 Including comment by PSEG, CBIA, Sussman, CRRA, Pfizer and UTC. Commenters are identified in full in Attachment 1 to this report.

Section 18 is presented first followed by comment on Section 38. No comments were submitted on the revisions to R.C.S.A. sections 22a-174-19(f) and 22a-174-22(a)(21). Location and topic organize the comments in the sections of this report specific to Section 18 and Section 38. Commenters are identified by abbreviation in this section of this report and are identified fully in Attachment 1 to this report. When changes to the proposed text are indicated in response to comment, new text is indicated in bold font and deleted text in strikethrough font.

COMMENT ON SECTION 18

Subsections (b)(1) and (b)(2), stationary source visible emissions standards

1. Comment: Regarding proposed subsection (b)(1)(A), PSEG and NRG comment that Method 9 consists of taking a series of visual observations at fifteen-second intervals over a period of at least six minutes and averaging those observations. Hence, any observation of a violation of the 20% opacity standard by Method 9 would be for a six-minute average time period. For accuracy, PSEG recommends that subparagraph (A) read "twenty percent (20%) opacity during any six-minute block average as measured by 40 CFR 60, Appendix A, Reference Method 9."

Response: PSEG and NRG are correct in stating that a Method 9 observation would be made for a six-minute average time period, and the Department should revise subsection (b)(1)(A) per the comment, as follows:

> (A) TWENTY PERCENT (20%) OPACITY ~~FOR A PERIOD OR PERIODS AGGREGATING MORE THAN FIVE (5) MINUTES DURING ANY SIXTY MINUTE PERIOD~~ **DURING ANY SIX-MINUTE BLOCK AVERAGE** AS MEASURED BY 40 CFR 60, APPENDIX A, REFERENCE METHOD 9; AND

In addition, the proposed definition of "six-minute bock average" in subsection (a) should be revised as follows since the proposed definition applies only to measurements by opacity continuous emissions monitoring ("CEM") equipment:

> (6) "SIX-MINUTE BLOCK AVERAGE" MEANS, FOR MEASUREMENTS TAKEN AT A SOURCE USING OPACITY CEM EQUIPMENT, THE AVERAGE OF THIRTY-SIX (36) OR MORE DATA POINTS EQUALLY SPACED OVER A SIX (6) MINUTE PERIOD; **AND, FOR MEASUREMENTS TAKEN USING 40 CFR 60, APPENDIX A, REFERENCE METHOD 9, THE AVERAGE OF TWENTY-FOUR OR MORE DATA POINTS EQUALLY SPACED OVER A SIX (6) MINUTE PERIOD;**

2. Comment: This section establishes visible emissions standards for stationary sources. Subsection (b)(1)(A) identifies Reference Method 9 as the means for establishing compliance with the 20% opacity standard. However, subsection (b)(1)(B) simply states the limit as "forty percent (40%) opacity" with no averaging time and no reference method. It is necessary to include an averaging period and a reference method for the 40% opacity standard. (UTC, PSEG,

CBIA, Sussman, Pfizer, NRG) Opacity determinations are subjective and visual observations can be affected by many different parameters. (CBIA, Sussman, Pfizer, PSEG, UTC)

Specifically, several commenters (CBIA, Sussman, Pfizer) recommend that subsection (b)(1)(B) include the following additional language, which includes a one-minute average for consistency with the averaging times specified for sources using opacity CEM equipment:

> (B) Forty percent (40%) opacity **AS MEASURED BY 40 CFR 60, APPENDIX A, REFERENCE METHOD 9, REDUCED TO FOUR (4) CONSECUTIVE READINGS AT 15-SECOND INTERVALS FOR A ONE-MINUTE AVERAGE.**

UTC recommends the addition of the following language:

> (B) Forty percent (40%) opacity **FOR A PERIOD OR PERIODS AGGREGATING MORE THAN ONE (1) MINUTE AS MEASURED BY 40 CFR 60, APPENDIX A, REFERENCE METHOD 9.**

NRG recommends the following:

> (B) **Forty percent (40%) opacity, AS MEASURED BY 40 CFR 60, APPENDIX A, REFERENCE METHOD 9, AS FOUR CONSECUTIVE READINGS FOR A ONE-MINUTE BLOCK PERIOD.**

PSEG also recommends that the forty percent opacity standard in subsection (b)(1)(B) should be measured using a variant of Method 9, with the number of observations limited to at least four individual observations taken at fifteen-second intervals and averaged to give a one-minute average.

Commenters recommend the addition of a reference method and averaging time to the opacity standard of subsection (b)(1)(B) because the proposed standard ("forty percent (40%) opacity') is unenforceable without an established, reliable method for determining an instantaneous violation of an opacity standard. (CBIA, Sussman, PSEG) CBIA and Sussman provide the following comment on the enforceability of the proposed 40% opacity standard:

- Connecticut has adopted the "Daubert" standard for determining the admissibility of scientific evidence. State v. Porter, 241 Conn. 57 (1997). Under the Daubert standard, in order for expert testimony to be admissible it must be scientifically valid and rooted in the methods and procedures of science. Id. at 64. It must be "more than subjective belief or unsupported speculation." Id. (internal quotes omitted). Among the factors that can be applied to determine whether the science underlying specific testimony meets this standard for evidentiary reliability are
  (1) whether it can be, and has been, tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) the known or potential rate of error, including the existence and maintenance of standards controlling

the technique's operation; and (4) whether the technique is, in fact, generally accepted in the relevant scientific community. Id.

- Thus, evidentiary reliability is predicated on evidence being based on an established, objective methodology rather than variable and subjective measurements such as instantaneous visual observations of opacity.
- An opacity violation based on a visual observation that is not performed using a reliable, objective, and scientifically recognized method of visual observation, could also be easily attacked by comparison to what is required in order to perform an opacity observation using an established method such as Method 9. For example, performing a Method 9 observation requires that the visible emissions observer control certain variables and take other, non-controllable variables into account. Controllable variables include the angle of the observer in relation to the sun, the point of observation of detached and attached steam plumes, and the angle of the observer with respect to a plume emitted from a rectangular stack with a large length to width ratio. In addition, the observer must be positioned perpendicular to the plume direction and there must be no more than one plume at a time in his line of sight. Non-controllable variables include luminescence and color contrast between the plume and the background against which the plume is viewed, moisture in the air, and ambient air temperature.
- Also, an established method would have a known error rate. In the case of Method 9, any observation must be adjusted for the known error rate which is 5% positive error. It is worth emphasizing that one of the Daubert evaluation criteria is whether the method has a known error rate. Importantly, the Method 9 error rate assumes that an observer is retrained every six (6) months. In the absence of a clear method and training to support its use, the testimony of any visual emissions observer would be even more vulnerable to attack. The foregoing Method 9 variables and controls would serve to highlight the absence of such controls in any visual observation performed without reference to an established and accepted visual observation method for opacity.

In addition to the legal unenforceability of the proposed standard, commenters note the practical difficulty the proposed method-less 40% opacity standard causes in determining compliance. Of critical importance to the regulated community is the ability to know when a facility is in compliance or non-compliance. Without an established test for measuring instantaneous opacity, a facility would never truly know whether its operations comply with the Section 22a-174-18(b)(1)(B) opacity standard. (CBIA, Sussman)

UTC comments that the suggested addition of Method 9 and a one-minute average to the proposed 40% opacity standard supports the Department's ability to assess source operation and maintenance, the basic reason for requiring source owners and operators to meet opacity requirements. When promulgating the first opacity standards for the New Source Performance Standard ("NSPS") program, EPA articulated that the purpose of opacity limits is to "supplement" the emission concentration standards. 39 Fed. Reg. 9308, 9309 (March 1974). However, opacity standards were not to be "more restrictive than the concentration/mass

standards." Id at 9309. Emissions concentration limits were to "result in the design, installation and operation of the best adequately demonstrated system of emission reduction," while opacity standards were to "help ensure that sources and emission control systems continue to be properly maintained and operated so as to comply with concentration/mass standards." Id. As such, the opacity standards were "established at a level which will require proper operation and maintenance of such control systems on a day-to-day basis but not require the design and installation of a control system more efficient or expensive than that required by the concentration/mass standard." Id. Because opacity standards were created as a tool to help assess operating and maintenance practices, those limits were not set with the goal of assuring that sources were complying with the specified opacity limit at every minute. To this end, establishing opacity limits with Method 9 as the compliance determination measure allowed regulators to gather data indicating whether sources were properly operating and maintaining controls, while also accommodating the variations in opacity that are normal and expected at even the most well-controlled and well operated sources. (UTC)

Response: To address the enforceability and compliance concerns stated in comments, the Department should revised proposed subsection (b)(1)(B) to specify an averaging time and a reference method as follows:

(B) FORTY PERCENT (40%) OPACITY **AS MEASURED BY 40 CFR 60, APPENDIX A, REFERENCE METHOD 9, REDUCED TO A ONE-MINUTE BLOCK-AVERAGE.**

In addition, the proposed definition of "one-minute block average" in subsection (a) should be revised as follows to apply to visual observations:

(4) "ONE-MINUTE BLOCK AVERAGE" MEANS, FOR MEASUREMENTS TAKEN AT A SOURCE USING OPACITY CEM EQUIPMENT, THE AVERAGE OF SIX (6) OR MORE DATA POINTS EQUALLY SPACED OVER ONE MINUTE; **AND, FOR MEASUREMENTS TAKEN USING 40 CFR 60, APPENDIX A, REFERENCE METHOD 9, THE AVERAGE OF FOUR OR MORE DATA POINTS EQUALLY SPACED OVER A ONE MINUTE PERIOD;**

3. Comment: The Department proposed subsection (b)(1) to apply to ALL stationary sources, whether or not they have acceptable CEM for opacity. However, the best evidence of an opacity violation is CEM data. (CBIA, PSEG) Therefore, subsection (b)(1) should be clarified to apply only to stationary sources without opacity CEM and subsection (b)(2) to apply only to stationary sources with opacity CEM. (CBIA, PSEG, Pfizer, UTC, NRG)

The proposed opacity standard in subsection (b)(1)(B), which is based on an instantaneous event, could lead to the absurd result in which a stationary source using an opacity CEM could be in compliance with the subsection (b)(2)(B), but in violation of the subsection (b)(1)(B) standard. Moreover, such a reading of these provisions would render the subsection (b)(2)(B) standard irrelevant by eliminating the ability to average opacity data as provided in subsection (b)(2)(B).

(CBIA, PSEG)

To the extent that the Department's purpose in applying the subsection (b)(1) standard to stationary sources with opacity CEM is to simplify field inspectors' tasks, it would not be any hardship for such an inspector to request CEM data from a stationary source in the event a field inspector suspects that a violation of the subsection (b)(2)(B) standard has occurred. (CBIA, PSEG, Pfizer) NRG adds that a field inspector has the right and ability to review the CEM documentation of a source. Ultimately, CEM data is much more reliable than opacity measured by visual observation. (CBIA, PSEG, Pfizer, NRG)

In sum, CBIA, PSEG, UTC, NRG and Pfizer request that the Department clarify subsection (b)(1) to apply only to stationary sources without opacity CEM, using the following language:

"(b) Visible Emission Standards.

(1) Stationary Sources **WITHOUT OPACITY CEM EQUIPMENT**."

Response: To recognize that, when available, opacity CEM data is the best evidence of opacity emissions, the Department should revise proposed subsection (b)(1) as follows:

(1) STATIONARY SOURCES **WITHOUT OPACITY CEM EQUIPMENT**. EXCEPT AS PROVIDED IN SUBSECTION (j) OF THIS SECTION, AN OWNER OR OPERATOR OF ANY STATIONARY SOURCE **WITHOUT OPACITY CEM EQUIPMENT** FOR WHICH . . .

4. Comment: Both subsections (b)(1) and (b)(2) would be clearer if the "and" between subparagraphs (A) and (B) were replaced with "or" since a violation occurs when either subparagraph (A) or (B) is exceeded. An exceedance of both standards is not necessary for a violation. (EPA)

Response: EPA is correct in stating that an exceedance of either subparagraph (A) or subparagraph (B) in subsections (b)(1) and (b)(2) is a violation of the section. Therefore, the Department should revise the proposed amendment as follows:

(1) STATIONARY SOURCES. EXCEPT AS PROVIDED IN SUBSECTION (j) OF THIS SECTION, AN OWNER OR OPERATOR OF ANY STATIONARY SOURCE FOR WHICH OPACITY IS MEASURED USING VISUAL OBSERVATION SHALL NOT EXCEED THE FOLLOWING VISIBLE EMISSIONS LIMITS:

(B) TWENTY PERCENT (20%) OPACITY FOR A PERIOD OR PERIODS AGGREGATING MORE THAN FIVE (5) MINUTES DURING ANY SIXTY MINUTE PERIOD AS MEASURED BY 40 CFR 60, APPENDIX A, REFERENCE METHOD 9; ~~AND~~ **OR**

(C) FORTY PERCENT (40%) OPACITY.

(2) STATIONARY SOURCES WITH OPACITY CEM EQUIPMENT. EXCEPT AS PROVIDED IN SUBSECTION (j) OF THIS SECTION, AN OWNER OR OPERATOR OF A STATIONARY SOURCE FOR WHICH OPACITY IS MEASURED USING OPACITY CEM EQUIPMENT SHALL NOT EXCEED THE FOLLOWING VISIBLE EMISSIONS LIMITS:

(A) TWENTY PERCENT (20%) OPACITY DURING ANY SIX-MINUTE BLOCK AVERAGE; ~~AND~~ **OR**

(B) FORTY PERCENT (40%) OPACITY DURING ANY ONE-MINUTE BLOCK AVERAGE.

5. Comment: The Department should add a new subdivision (3) to subsection (b) to make clear that the visible emission standards do not apply during "startup, shutdown or malfunction." (CBIA, Sussman) Such a provision is consistent with the NSPS. When EPA adopted opacity standards for new sources under the NSPS, EPA specified that such standards do not apply during such conditions. In light of EPA's decision to exempt new sources from visible emissions standards during startup, shutdown or malfunction, the commenters find it reasonable to exempt older sources in the same circumstances. Therefore, the commenters suggest the addition of the following language, which is identical to 40 CFR 60.43c(d):

"(b)(3) The opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction." (CBIA, Sussman)

Response: The Department should not provide a blanket exemption from the opacity standards of subsections (b)(1) and (b)(2) for older stationary sources during periods of startup, shutdown and malfunction. In subsection (j)(1), the amendment provides for exemption from the opacity standards, which is limited to exemption necessary based on a review of historical opacity measurements at Connecticut sources. *See also* comment 17 and response.

Subsection (b)(3), mobile source visible emissions standards

6. Comment: Subsection (b)(3)(C)(ii)(b) includes language that states "has passengers aboard or will soon receive passengers for which heating or air conditioning is being provided for comfort." However, "...will soon receive passengers..." is vague and it is unclear how this would be enforced. (EPA) Therefore, EPA recommends the following language:

(ii) When it is necessary to operate heating or cooling equipment that is located in or on the mobile source provided that the vehicle **is intended for passenger transport, and**

(a) has passengers aboard for which heat or air conditioning is being provided for passenger comfort; or

(b) is scheduled to have passengers onboard within 5 minutes and the ambient outside temperature is greater than 80^{o} F (27^{o} C) or less than 40^{o} F (5^{o} C).

Response: The Department should not revise proposed subsection (b)(3)(C)(ii)(b) as suggested by EPA at this time. While a five-minute restriction on idling for heating or cooling provides a clear measure for enforcement, such a restriction on the length of the exemption defeats the purpose of the exemption. The exemption is intended to allow for heating, defrosting and cooling necessary for safe operation of a vehicle and the health and reasonable comfort of the driver and passengers. Five minutes is not adequate time to heat a bus on many days in a New England winter and could create a safety concern if, for example, a driver could not adequately defrost windshields and windows in that time yet must put the vehicle in motion or violate Section 18.

Furthermore, the California Air Resources Board, a recognized authority on standards to control emissions from mobile sources, recently issued a regulation to control emissions from buses, which, like Section 18, contains an exemption for heating and cooling without a time limit.

The Department agrees that proposed subsection (b)(3)(C)(ii) could be more clearly stated to reflect its purpose, and the Department should revised proposed subsection (b)(3)(C)(ii) as follows:

(ii) WHEN IT IS NECESSARY TO OPERATE **DEFROSTING,** HEATING OR COOLING EQUIPMENT **TO ENSURE THE SAFETY OR HEALTH OF THE DRIVER OR PASSENGERS,** ~~THAT IS LOCATED IN OR ON THE MOBILE SOURCE PROVIDED THAT THE VEHICLE:~~

~~(a) IS INTENDED FOR PASSENGER TRANSPORT, AND~~

~~(b) HAS PASSENGERS ABOARD OR WILL SOON RECEIVE PASSENGERS FOR WHICH HEATING OR AIR CONDITIONING IS BEING PROVIDED FOR COMFORT,~~

7. Comment: In subsection (b)(3)(C)(iii), for alternative power operations, the section could include requirements for diesel control equipment. (EPA) Therefore, EPA recommends the following language for this section:

(iii) When the vehicle is engaged in an operation for which engine power is necessary for a power take-off unit and substitute alternate means cannot be made available, provided that measures have been taken to reduce emissions of diesel exhaust during engine operation such that the vehicle:

(a) is equipped with an oxidation catalyst or other technology certified by the U.S. Environmental Protection Agency, or

(b) is a 2007 or later model year on-road engine that meets EPA's diesel emission standards.

Response: The Department should not revise subsection (b)(3)(C)(iii) as suggested by EPA at this time. While controlling emissions from diesel vehicles is a high Department priority, proposed subparagraph (iii) applies to all mobile sources, not just diesel sources, and should continue to do so. Furthermore, the Department operates several programs to control emissions from highway diesel engines such as R.C.S.A. section 22a-174-36a, which requires all 2006 and later model year heavy-duty highway diesel engines sold in Connecticut to be certified by the California Air Resources Board ("CARB") to meet CARB's requirements, and the Clean School Bus Program, which retrofits school bus engines to control emissions. The Department should consider the need to add EPA's suggested revision to Section 18 to augment existing and planned requirements to control diesel source emissions.

8. Comment: Proposed section 22a-174-18(b)(3)(C)(vi) provides an exception for mobile sources to allow them to operate for more than three (3) minutes when undergoing repair or maintenance. The same exception should allow for the testing of mobile sources. During testing mobile sources typically are not moving as they have test equipment connected to them. Testing is an integral part of maintenance and repair. Testing is also performed by manufacturers for research and development as well as production testing prior to delivery to customers. In all these cases it is necessary for the mobile source to be operated for greater that three minutes without being in motion. (UTC, CBIA)

UTC and CBIA recommend that section 22a-174-18(b)(3)(C)(vi) be modified to read as follows:

(vi) WHEN THE MOBILE SOURCE IS UNDERGOING REPAIR OR MAINTENANCE **OR TESTING** THAT REQUIRES SUCH MOBILE SOURCE BE OPERATED FOR MORE THAN THREE (3) CONSECUTIVE MINUTES.

Response: Section (b)(3)(C)(vi) provides an exception from the three-minute idling restriction for mobile sources undergoing repair or maintenance. The comment, which recommends broadening this exemption to include mobile sources undergoing testing, should be considered along with the exception provided in proposed subsection (j)(4)(C) and comment on that subsection. Subsection (j)(4)(C) provides an exemption for mobile sources undergoing repairs from the visible emissions standards of subsection (b)(3) including the three-minute idling restriction.

As stated fully in comment 22 and the response thereto, commenters recommend that the exception in (j)(4)(C) should be broadened to including "testing." To take into consideration operation of mobile sources in engines testing programs, subsection (j)(4)(C) should be revised to add testing to the conditions under which a mobile source would quality for an exemption from subsection (b)(3). Also, "repair" should be deleted from subsection (b)(3)(C)(vi) since its

exception is subsumed within proposed subsection (j)(4)(C).

As a result of these revisions to the proposed text, mobile sources undergoing maintenance are exempt only from the three-minute idling restriction of subsection (b)(3)(C), and mobile sources undergoing repair or testing are exempt from all the visible emissions requirements of subsection (b)(3). These revisions take into account possible limited, short-term exceedances of the visible emissions standards that may be necessary to make and test certain repairs as well as the unique situation presented by engine testing and development programs, while also placing an appropriate limitation on maintenance to only allow necessary exceptions from the three-minute idling restriction.

Specifically, to make the changes explained above, the Department should revise proposed subsection (b)(3)(C)(vi) as follows:

(vi) WHEN THE MOBILE SOURCE IS UNDERGOING ~~REPAIR OR~~ MAINTENANCE THAT REQUIRES SUCH MOBILE SOURCE BE OPERATED FOR MORE THAN THREE (3) CONSECUTIVE MINUTES.

And proposed subsection (j)(4)(C) should be revised as follows:

(C) A MOBILE SOURCE WHILE IT IS UNDERGOING A MECHANICAL REPAIR **OR TESTING** THAT AFFECTS THE EMISSION OF VISIBLE AIR POLLUTANTS FROM SUCH SOURCE;

9. Comment: An exemption should be added to subsection (b)(3)(C) from the restriction on mobile source operation when a mobile source is not in motion. Such an exemption is necessary to address security measures at military installations, including the Naval Submarine Base New London in Connecticut, that have been added since September 11, 2001. Such security measures include vehicle searches and inspections that are performed before a vehicle may access a military installation. Such inspections normally require five to seven minutes per vehicle, and several vehicles may be in line and operating while waiting for inspection. Such operation may therefore exceed the three-minute idling restriction. (DOD)

Response: In order to allow for personnel at U.S. military installations to carry out required security searches and inspections of vehicles seeking entrance to such installations, an exception from the three-minute idling restriction of subsection (b)(3)(C) should be added to subsection (b)(3)(C) as new subparagraph (vii) as follows:

(C) A MOBILE SOURCE TO OPERATE FOR MORE THAN THREE (3) CONSECUTIVE MINUTES WHEN SUCH MOBILE SOURCE IS NOT IN MOTION EXCEPT AS FOLLOWS:

(i) WHEN A MOBILE SOURCE IS FORCED TO REMAIN MOTIONLESS BECAUSE OF TRAFFIC CONDITIONS OR MECHANICAL

DIFFICULTIES OVER WHICH THE OPERATOR HAS NO CONTROL,

. . . . . .

(v) WHEN THE OUTDOOR TEMPERATURE IS BELOW TWENTY DEGREES FAHRENHEIT (20 DEGREES F), ~~OR~~

(vi) WHEN THE MOBILE SOURCE IS UNDERGOING ~~REPAIR OR~~ MAINTENANCE THAT REQUIRES SUCH MOBILE SOURCE BE OPERATED FOR MORE THAN THREE (3) CONSECUTIVE MINUTES, **OR**

(vii) WHEN A MOBILE SOURCE IS IN QUEUE TO BE INSPECTED BY U.S. MILITARY PERSONNEL PRIOR TO GAINING ACCESS TO A U.S. MILITARY INSTALLATION.

Subsection (e), particulate matter emission standards for fuel-burning equipment

10. Comment: The proposed standards for particulate matter emissions pertaining to stationary reciprocating internal combustion engines in subsection (e)(3) are reasonable and achievable standards for stationary engines. (EMA)

Response: The Department notes EMA's confirmation of the appropriateness of the standards proposed for stationary reciprocating internal combustion engines.

11. Comment: Best available control technology ("BACT") is a requirement for all new sources. (EPA) Therefore, the requirements set forth in subsection (e) may be superceded by more stringent BACT requirements. Subsection (e) should be made clear in this regard, as follows:

(e) "Particulate matter emissions standards for fuel burning equipment, **unless superceded by BACT requirements**."

Response: The Department agrees that, for some sources, BACT requirements may be more stringent than the standards in subsection (e). The Department drafted proposed Section 18 accordingly and therefore the clarification suggested by EPA is not necessary. Subsection (j)(8) includes an exception from the requirements of subsections (e), (f) and (g) for the "owner or operator of a source subject to more stringent BACT requirements, provided that the source is operated in compliance with a BACT determination." (See also Section VII, additional comment by hearing officer on proposed subsection (e)(1), regarding more stringent permit requirements.)

Subsection (f), industries using process sources - general

12. Comment: The proposed amendment changes the former title of this subsection from "Process industries - general" to the new "Industries using process sources - general." Though seemingly the same title this change could have unexpected consequences. The new name now refers to "process sources," which have a specific definition under R.C.S.A. section 22a-174-1. The original title refers to a group of industries. Although not clear in the current regulation, this

subsection has long been considered to be applicable to industries that process large quantities of material such as mineral processing industries. This is supported by the use of emission limits expressed as an emission rate for a given process weight rate. Chapter 11 of AP-42 lists emission factors for "Mineral Products Industries." Emission factors in AP-42 Chapter 11 are typically listed as emission rates for a given process weight rate. The proposed change in title could result in the subsection's application to sources not currently regulated under the subsection such as small industrial machines, drill presses or grinding machines. Such sources do not generate large quantities of particulate matter and emissions typically occur inside buildings with relatively little particulate escaping into the ambient atmosphere. While such sources would likely meet the standard, the demonstration of meeting it would be unduly burdensome especially in facilities where hundreds of such sources are in operation. (UTC, CBIA)

CBIA requests that the Department clarify the applicability of subsection (f), and UTC suggests that the title of subsection (f) be revised to read:

MINERAL PROCESSING INDUSTRIES – GENERAL

Alternatively, UTC recommends that the current title be retained:

PROCESS INDUSTRIES – GENERAL

Response: The use of the term "process source" in proposed subsection (f) is intended to make the application of the subsection clearer. However, as noted in the comment, the proposed change creates, rather than eliminates, uncertainty and confusion about the applicability of the subsection.

To avoid uncertainty and confusion regarding the applicability of subsection (f), the Department should retain the current title, "process industries -- general" and eliminate the term "process source" from proposed subsections (f)(2), (f)(5) and (f)(6) as follows:

(f) PROCESS INDUSTRIES -- GENERAL.

. . . .

(2) EXCEPT AS PROVIDED IN SUBSECTION (g) OF THIS SECTION, NO OWNER OR OPERATOR OF A ~~PROCESS SOURCE~~ **PROCESS INDUSTRY SOURCE** SHALL

. . . .

(5) TO DETERMINE COMPLIANCE WITH THE REQUIREMENTS OF THIS SUBSECTION, AN INTERPRETATION RESULTING IN THE LOWEST ALLOWABLE EMISSION RATE SHALL APPLY IF THE NATURE OF ANY PROCESS OR OPERATION, OR THE DESIGN OF ANY PROCESS ~~SOURCE~~ **UNIT**, ALLOWS MULTIPLE INTERPRETATIONS.

(6) TO DETERMINE THE MAXIMUM ALLOWABLE EMISSION RATE IN ACCORDANCE WITH THIS SUBSECTION FOR EMISSIONS THAT PASS

THROUGH A STACK OR STACKS AT A PREMISES CONTAINING SEVERAL SIMILAR PROCESS ~~SOURCES~~ **UNITS**, THE TOTAL PROCESS WEIGHT SHALL INCLUDE ALL SUCH SIMILAR PROCESS ~~SOURCES~~ **UNITS**.

The phrase "industries using process sources -- general" in the title of Table 18-1 should be replaced with "process industries -- general" as follows:

TABLE 18-1. INTERPOLATION/EXTRAPOLATION TABLE FOR DETERMINING PARTICULATE MATTER EMISSION RATES AND PROCESS WEIGHT RATES FOR ~~INDUSTRIES USING PROCESS SOURCES~~ PROCESS INDUSTRIES -- GENERAL.

In addition, the Department should retain the current title of subsection (g), "process industries -- specific" since the title of subsection (g) was only revised to be parallel in construction to the proposed title of subsection (f).

~~(g) INDUSTRIES USING PROCESS SOURCES -- SPECIFIC.~~
(g) PROCESS INDUSTRIES -- SPECIFIC.

13. Comment: The proposed definition for "process weight" in subsection (f)(1)(A) may inadvertently cause confusion regarding possible application of this subsection to fuel-burning sources. The Department should revise the definition of "process weight" in new subsection (f)(1)(A) to clarify that this subsection does not apply to the burning of fossil fuels, including solid fuels, in any fossil fuel-fired combustion unit and only applies to the use of solid fuels in processes where they are used for purposes other than combustion. (PSEG, CBIA)

PSEG and CBIA explain the recommendation as follows: The proposed definition of "process weight" in subsection (f)(1)(A) is "the total weight, in pounds, of all materials introduced into any specific process . . . <u>including solid fuels burned</u> and excluding combustion air, liquid fuels and gaseous fuels" [emphasis added]. The previous definition for process weight in Section 18(e)(3) states that "<u>solid fuels charged</u> will be considered as part of the process weight, but liquid and gaseous fuels and combustion air will not" [emphasis added]. PSEG and CBIA understand that it is not the intent of the Department to regulate the <u>burning</u> of solid fuels under this subdivision. However, the slight shift in wording in this definition may make this intent unclear.

Response: PSEG and CBIA are correct in stating that the burning of solid fuels should not be included in the determination of process weight for a process source. Therefore, in the final text of the amendment, the Department should revise Section 18(f)(1)(A) as follows:

(A) "PROCESS WEIGHT" MEANS THE TOTAL WEIGHT, IN POUNDS, OF ALL MATERIALS INTRODUCED INTO ANY SPECIFIC PROCESS THAT MAY CAUSE THE EMISSION OF PARTICULATE MATTER, INCLUDING SOLID FUELS ~~BURNED~~ **USED IN SUCH PROCESS FOR PURPOSES OTHER THAN COMBUSTION** AND EXCLUDING COMBUSTION AIR, **AND** LIQUID FUELS**, SOLID FUELS** AND GASEOUS FUELS **BURNED**;

14. Comment: EPA recommends that a subdivision be added to the end of subsection (f) to clarify that the requirements set forth in this subsection can be superceded by more stringent BACT requirements, as follows:

> **(8) The requirements of subsection (f) may be superceded by more stringent BACT requirements for any emissions source.**

Response: The revision for clarity suggested by EPA is not necessary since subsection (j)(8) includes an exception from the requirements of subsections (e), (f) and (g) that applies to the "owner or operator of a source subject to more stringent BACT requirements, provided that the source is operated in compliance with a BACT determination."

Subsection (g), industries using process sources - specific

15. Comment: EPA recommends that a subdivision be added to the end of subsection (g) to clarify that the requirements set forth in this subsection can be superceded by more stringent BACT requirements, as follows:

> **(5) The requirements of subsection (g) may be superceded by more stringent BACT requirements for any emissions source.**

Response: The revision for clarity suggested by EPA is not necessary since subsection (j)(8) includes an exception from the requirements of subsections (e), (f) and (g) that applies to the "owner or operator of a source subject to more stringent BACT requirements, provided that the source is operated in compliance with a BACT determination."

Subsection (j), excepted activities

16. Comment: Proposed subsection (j)(1) implements an exemption for stationary sources equipped with opacity CEM based on calendar quarter operations. NRG requests that revised Section 18 become effective at the start of a calendar quarter such as October 1, 2003 or January 1, 2004.

Response: In the supporting documents accompanying the submission of this amendment to the Legislative Regulations Review Committee, the Department should specify an effective date at the beginning of a calendar quarter, such as October 1, 2003 or January 1, 2004, depending on the date of submission.

17. Comment: Proposed subsection (j)(1) creates an internal inconsistency. Commenters identify two concerns with the subsection and recommend the following revisions to the proposed text: (1) the exceptions in subsection (j)(1) apply to both subsections (b)(1) and (b)(2) (NRG, PSEG, UTC, Sussman, CBIA, Pfizer); and (2) subsection (j)(1)(A) should be deleted in its entirety and the remaining subparagraphs re-lettered accordingly (Pfizer, NRG, PSEG). UTC notes that its recommendation for the exception in (j)(1) apply to subsections (b)(1) and (b)(2) is an alternative to its recommended revision to limit subsection (b)(1) to sources without opacity CEM equipment and subsection (b)(2) to sources with opacity CEM equipment. Commenters

state the following on subsection (j)(1):

- The most significant problem with this provision [*proposed subsection (j)(1)*] is that it does not except such sources from the subsection (b)(1) opacity standard that allows a maximum of (1) 20% opacity emissions for five minutes over any sixty minute period as measured by Method 9, and (2) 40% opacity as, apparently, measured instantaneously. If the Department fails to include such an exception, the subsection (j)(1) provision would be rendered largely meaningless since there is no way in which a source to which subsection (j)(1) is applicable could have opacity emissions in excess of 40% at any time. In order for subsection (j)(1) to provide a meaningful exception, the language should be modified such that the exceptions apply to both subsections (b)(1) and (b)(2). (Pfizer, PSEG, CBIA) CBIA recommends the following revision to proposed subsection (j)(1):

  (1) THE OWNER OR OPERATOR OF A STATIONARY SOURCE SHALL NOT BE SUBJECT TO THE VISIBLE EMISSIONS STANDARDS OF SUBDIVISION**S (b)(1) AND (b)(2)** . . .

- A second problem with subsection (j)(1) is that it does not include sources for which construction commenced on or after August 17, 1971. There is no substantive rationale for distinguishing between sources that were constructed before or after that date, provided the sources are equipped with CEM. (CBIA, Pfizer, PSEG, NRG)

  There can be two identical sources, whose only difference is construction date that would be regulated differently. Also, there are sources that were built after August 17, 1971 that are equipped with CEMS that should be allowed to use the excepted activities. If not, then, two sets of standards exist for stationary sources equipped with CEMS. This seems to be an internal inconsistency with the proposed revisions. (NRG) For example, a boiler constructed after that date but before the applicability date for 40 CFR 60, Subpart Db or Dc would not be in any different position than a boiler that was constructed prior to August 17, 1971, and that, except for the construction date, satisfied all other Subpart Db or Dc applicability criteria. There is no discernible reason why such pre- and post-August 17, 1971 boilers should be treated differently. Since individual NSPS provide a startup, shutdown and malfunction exemption from the opacity standard, it is not clear why all stationary sources with opacity CEM should not also have such an exemption. (PSEG, CBIA, Pfizer) In addition, the inclusion of sources that commenced construction on or after August 17, 1971 could have the beneficial effect of encouraging such sources to install opacity CEM. (PSEG, CBIA, Pfizer) Installing CEM is a more accurate and consistent method for assuring compliance with the opacity standards of Section 18 than relying on infrequent visual observations. (PSEG, CBIA, Pfizer) Therefore, subsection (j)(1)(A) should be deleted in its entirety and the remaining subparagraphs re-lettered accordingly. (PSEG, CBIA, NRG, Pfizer)

  Sussman comments similarly, as follows: Subsection (j)(1) should not be limited to sources constructed on or before August 17, 1971. It is our understanding that August 17, 1971, is the cut off date, because it is the date that the first boiler NSPS with an opacity standard became applicable. See, 40 CFR 60.40(c). Therefore, this subsection

provides a different opacity standard for soot blowing, fuel switching and sudden load changing for non-NSPS sources. However, the section fails to provide similar relief to smaller boilers constructed before 40 CFR subparts Db or Dc became effective on June 19, 1984, and June 9, 1989, respectively. Taken together, sections (j)(1) and (j)(2) provide very old sources and newer NSPS sources with relief from the 40% one-minute opacity standard for soot blowing and other activities, but boilers installed between August 17, 1971 and June 9, 1989, are not provided any such relief. The numerous boilers built after August 17, 1971, but before the effective dates of the NSPS for different size boilers, should be treated similarly to the pre-August 17, 1971 boilers. To rectify this situation, section (j)(1) should apply to any source constructed prior to otherwise applicable NSPS visible emissions standards.

In order to implement the suggested change that subsection (j)(1) apply to both subsections (b)(1) and (b)(2), UTC recommends that the phrase "(b)(1) and " be inserted into the text of subsection (j)(1), subparagraph (C) of subsection (j)(1) and subparagraph (D) of subsection (j)(1) following the word "subdivision" and prior to "(b)(2)."

Response:

- Regarding the comment that subsection (j)(1) should apply to both subsections (b)(1) and (b)(2): The suggested revision is not necessary given the revisions to proposed subsections (b)(1) and (b)(2) explained in the responses to comments 1 through 3.
- Regarding the comment that subsection (j)(1)(A) should be deleted since it is not necessary: The Department should not limit the exemption in subsection (j)(1)(A) to sources constructed on or prior to August 17, 1971 in order to address sources constructed after that date but that are similarly situated technologically to those sources constructed on or before August 17, 1971. The requirements for the exemption in subsections (j)(1)(B) through (j)(1)(D) are sufficient in themselves to limit the scope of the exemption. The Department should revised subsection (j)(1) as follows:

(1) THE OWNER OR OPERATOR OF A STATIONARY SOURCE SHALL NOT BE SUBJECT TO THE VISIBLE EMISSIONS STANDARDS OF SUBDIVISION (b)(2) OF THIS SECTION FOR MEASUREMENTS OF OPACITY USING OPACITY CEM EQUIPMENT DURING A PERIOD OF STARTUP, SHUTDOWN OR MALFUNCTION; COMMISSIONER-APPROVED STACK TESTING; OR INTENTIONAL SOOTBLOWING, FUEL SWITCHING OR SUDDEN LOAD CHANGING DONE IN ACCORDANCE WITH GOOD ENGINEERING PRACTICES PROVIDED THAT:

~~(A) CONSTRUCTION COMMENCED PRIOR TO AUGUST 17, 1971;~~

~~(B)~~**(A)** THE OWNER OR OPERATOR IS REQUIRED BY PERMIT, ORDER OR REGULATION TO INSTALL, OPERATE AND MAINTAIN OPACITY CEM EQUIPMENT AT SUCH STATIONARY SOURCE, AND THE OWNER OR

OPERATOR IS IN COMPLIANCE WITH SUCH PERMIT, ORDER OR REGULATION WITH REGARD TO SUCH OPACITY CEM EQUIPMENT;

~~(C)~~**(B)** THE PERIOD OF EXCEPTION FROM THE VISIBLE EMISSIONS STANDARDS OF SUBDIVISION (b)(2) OF THIS SECTION DOES NOT EXCEED ONE-HALF OF ONE PERCENT (0.5%) OF THE TOTAL OPERATING HOURS OF SUCH STATIONARY SOURCE DURING ANY CALENDAR QUARTER; AND

~~(D)~~**(C)** THE OWNER OR OPERATOR OF THE STATIONARY SOURCE DOES NOT CAUSE OR ALLOW VISIBLE EMISSIONS IN EXCESS OF SIXTY PERCENT (60%) OPACITY DURING ANY SIX-MINUTE BLOCK AVERAGE OF THE PERIOD OF EXCEPTION FROM THE VISIBLE EMISSIONS STANDARDS OF SUBDIVISION (b)(2) OF THIS SECTION.

18. Comment: Subsection (j)(1) only applies to those sources required by "permit, order or regulation to install, operate and maintain opacity CEM equipment. . . ." Subsection (j)(1) does not specify a whether there is a process for obtaining a permit or order that requires installation, operation and maintenance of an opacity CEM. (CBIA, Sussman, Pfizer) Many sources faced with the compliance certifications under Title V may prefer to install voluntarily more rigorous monitoring equipment in order to assure compliance and should be encouraged to do so and supported by the Department through some expedited means. These sources would, under the current wording, be faced with the worst possible outcomes. (Pfizer)

Section 22a-174-2a(f)(2)(D), which authorizes permit revisions for "requiring more frequent or additional monitoring, record keeping or reporting," should be available to sources wanting to use opacity CEMs to fall within the terms of section 22a-174-18(j)(1). (CBIA, Sussman) In the Hearing Report or in the final regulations, the Department should explain how sources can become subject to section 22a-174-18(j)(1). An alternative approach would be to add an "opt-in" provision to section 22a-174-18(j)(1)(B) as follows:

(B) The owner or operator is required by permit, order or regulation to install, operate and maintain opacity CEM equipment as such stationary source, and the owner or operator is in compliance with such permit, order or regulation with regard to such opacity CEM equipment. <u>IF A STATIONARY SOURCE IS NOT ALREADY SUBJECT TO A PERMIT, ORDER OR REGULATION REQUIRING OPERATION AND MAINTENANCE OF OPACITY CEM EQUIPMENT, AN OWNER OR OPERATOR MAY, IN LIEU OF SUCH REQUIREMENT, CERTIFY ON A FORM ACCEPTABLE TO THE COMMISSIONER THAT SUCH STATIONARY SOURCE HAS INSTALLED OPACITY CEM EQUIPMENT THAT MEETS THE APPLICABLE CRITERIA OF 40 C.F.R. PART 60, APPENDIX B AND F, AND THAT SUCH OPACITY CEM EQUIPMENT SHALL BE OPERATED AND MAINTAINED IN COMPLIANCE WITH THE REQUIREMENTS OF 40 C.F.R. PART 60,</u>

APPENDIX B AND F THAT GOVERN THE INSTALLATION, OPERATION AND MAINTENANCE OF OPACITY CEMS.
(Sussman, CBIA)

Response: To allow owners and operators of sources not subject to an applicable requirements requiring installation and operation of opacity CEM equipment to install such equipment, subsection (j)(1)(B) should be revised as follows:

(B) The owner or operator is required by permit, order or regulation to install, operate and maintain opacity CEM equipment as such stationary source, and the owner or operator is in compliance with such permit, order or regulation with regard to such opacity CEM equipment. **IF A STATIONARY SOURCE IS NOT SUBJECT TO A PERMIT, ORDER OR REGULATION REQUIRING OPERATION AND MAINTENANCE OF OPACITY CEM EQUIPMENT, AN OWNER OR OPERATOR MAY CERTIFY ON A FORM ACCEPTABLE TO THE COMMISSIONER THAT:**

(i) THE OWNER OR OPERATOR OF SUCH STATIONARY SOURCE HAS INSTALLED OPACITY CEM EQUIPMENT THAT MEETS THE APPLICABLE CRITERIA OF 40 CFR 60, APPENDICES B AND F, AND

(ii) THE OWNER OR OPERATOR OPERATES AND MAINTAINS SUCH INSTALLED OPACITY CEM EQUIPMENT IN COMPLIANCE WITH THE REQUIREMENTS OF 40 CFR 60, APPENDICES B AND F;

19. Comment: The reference in subsection (j)(1)(C) to subsection (b)(2) of this section should be broadened to subsections (b)(1) and (b)(2) if (j)(1) is revised as recommended in comment 17. This subsection should except the source from both the requirements of (b)(1) and (b)(2), during the applicable periods noted. (Pfizer)

Response: The recommended revision to proposed subsection (j)(1)(C) is not necessary. *See* the explanation in response to comment 17.

20. Comment: Under proposed subsection (j)(1)(D), sources would not be able to have exempted activities if a single opacity reading greater than 60% for a six-minute block period occurred in the quarter. While the excepted activities recognize that the operation of a large fossil fuel fired boiler is complex, partially because of the number of ancillary systems associated with their operation, the regulation does not fully recognize the issues surrounding an equipment malfunction. Though not common, power boilers can be subject to malfunctions such as a boiler tube blowout, a precipitator fire or a plugged oil gun, to name a few examples. When any of these events occur, the first and primary action of the equipment operators is to safely, but as quickly as possible, shut the unit down. Depending on the load at which the boiler may be operating when the event happens (which relates to the steam pressure), shutdown may take

longer than six minutes. By trying to limit opacity to no greater than 60% in a six minute period could force the operators to bring the unit's load down too quickly, possibly causing additional damage to the equipment and jeopardizing personal safety. Based on our records of events, we believe that the limit should be a balance of the environmental standard and safe operations. For these reason, we request that the limit in Subsection (j)(1)(D) be revised to 75%. (NRG)

Response: The Department should not revise the proposed 60% opacity limit in proposed subsection (j)(1)(D) in response to this comment. The 60% opacity limit was identified as the appropriate level after conducting a review of historical opacity data for Connecticut sources. Based on this review, an increase in the limit to 75% is neither necessary to take into account source operation nor appropriate to best serve air quality needs.

21. Comment: Subsection (j)(2) provides that sources subject to an opacity standard in an NSPS adopted after August 17, 1971 are not subject to the visible emission standards in subsections (b)(1) and (b)(2). This is a significant and positive clarification to the current regulations. The NSPS for various size boilers, 40 CFR Subparts Da, Db, and Dc, include specific opacity requirements, which are not entirely consistent with subsections (b)(1) and (b)(2). For example, the NSPS sets the maximum opacity at 27 percent for up to six minutes, rather than a shorter-term opacity of 40 percent. Furthermore, the NSPS provide an exemption for startup, shutdown and malfunction. *See, e.g.,* 40 CFR 60.43b(g) and 60.43c(d). By exempting NSPS sources from the general opacity standards of section 22a-174-18(b), the new regulations represent a great improvement over the current regulations. (CBIA, Sussman)

Response: The Department notes the commenter's support for proposed subsection (j)(2).

22. Comment: Section 22a-174-18(j)(4)(C) provides an exemption for mobile sources undergoing mechanical repair that affects the emission of visible air pollutants.

- The same exemption should apply to the testing of mobile sources. (UTC, Stanadyne, CBIA) Testing is often an integral part of mechanical repair. Testing is also performed by manufacturers for research and development as well as production testing prior to delivery to customers. By their very nature, engine testing programs subject mobile sources to varying conditions that affect the emission of visible air pollutants.
- The exception should be expanded to apply to nonroad and stationary engines. (Stanadyne)

UTC and CBIA recommend that section 22a -174-18(j)(4)(C) be modified to read as follows:

> A MOBILE SOURCE WHILE IT IS UNDERGOING A MECHANICAL REPAIR **OR TESTING** THAT AFFECTS THE EMISSION OF VISIBLE AIR POLLUTANTS FROM SUCH SOURCE;

Similarly, Stanadyne recommends that section 22a -174-18(j)(4)(C) be modified to read as follows:

> A MOBILE SOURCE**, NONROAD OR STATIONARY ENGINE** WHILE IT IS UNDERGOING A MECHANICAL REPAIR, **RESEARCH AND DEVELOPMENT OR TESTING** THAT AFFECTS THE EMISSION OF VISIBLE AIR POLLUTANTS

FROM SUCH SOURCE.

Stanadyne includes nonroad engines in its recommended revision because the engines used in its research, development and testing program remain in place at the Stanadyne facility for more than twelve months, although they are not necessarily operated, and therefore could be considered nonroad engines under EPA's definition in 40 CFR 89.2.

Response: Proposed subsection (j)(4)(C) is an exception from the mobile source visible emissions standards in proposed subsection (b)(3). A "mobile source" for the purposes of Section 18 is defined in R.C.S.A. section 22a-174-1 and includes sources such as the engines used in Stanadyne's testing program. Therefore, Stanadyne's recommendation to apply that exception to nonroad and stationary sources is not necessary. However, to take into consideration operation of mobile sources in engine testing programs such as those conducted by UTC and Stanadyne, the Department should revise subsection (j)(4)(C) as follows in the final version of Section 18 to add to the conditions under which a mobile source would qualify for an exemption:

(C) A MOBILE SOURCE WHILE IT IS UNDERGOING A MECHANICAL REPAIR **OR TESTING** THAT AFFECTS THE EMISSION OF VISIBLE AIR POLLUTANTS FROM SUCH SOURCE.

See also comment and response 8.

23. Comment: As written, subsection (j)(4)(E) provides an exemption for locomotives from the idling restrictions in subsection 18(b). Locomotive idling, particularly for switchyard locomotives, can be reduced or eliminated through innovative approaches that reduce emissions, noise and fuel consumption. EPA is currently developing guidance on quantifying emission reductions from strategies that reduce locomotive emissions. By imposing reasonable idling restrictions on locomotives, Connecticut can achieve NOx emission reductions for SIP credit. Therefore, we recommend that Connecticut subject locomotives to idling restrictions by deleting subsection 18(j)(4)(E). (EPA)

Response: The Department should not change the proposed exemption from idling restrictions for locomotives at this time. That exemption continues an exemption now allowed in current Section 18. The Department should take EPA's suggestion under advisement and consider EPA's guidance when it becomes available, in particular the potential emissions reductions that may be achieved from such measures. As necessary, the Department should then consider the need to amend Section 18 to impose idling restrictions on locomotives.

24. Comment: As written in subsection (j)(4)(F), all marine vessels are exempt from the idling restrictions in subsection 18(b). However, there are approaches that can be taken to reduce marine vessel idling for vessels that are docked. We would suggest the following revisions to this section to decrease unnecessary idling:

(j)(4)(F) A vessel operating on water, **unless such vessel is secured to a**

stationary dock; and
(EPA)

Response: The Department should not at this time restrict the exception from the idling restrictions as recommended by EPA to reduce emissions from marine vessel idling by docked vessels. The Department should take EPA's suggestion under advisement and consider the potential emissions reductions from such a measure and its effect on the potentially regulated entities. The Department should then consider the need to amend Section 18 to impose idling restriction on docked marine vessels.

25. Comment: The exclusions listed in subsection (j)(7) regarding emergency generators and engines less than 175 hp are necessary and appropriate and should be adopted in the final regulation. (EMA)

Response: The Department notes EMA's confirmation of the appropriateness of the exceptions included for emergency engines and engines less than 175 hp and support for the adoption of these requirements.

26. Comment: The exemption from Section 18 in subsection (j)(11) for MWCs is logical given the adoption of section 22a-174-38 of the R.C.S.A. (CRRA)

Response: The Department notes CRRA's support for the exemption in subsection (j)(11).

COMMENT ON SECTION 38

Subsection (d), NOx emissions trading program

27. Comment: New subparagraph (G) of subsection (d)(6) of the proposed amendment specifies that an emission reduction credit ("ERC") is considered created on the date the NOx emissions reduction occurs at a plant or source for the purposes of subparagraphs (E) and (F). CRRA wishes to comment on this amendment in the context of the larger regulatory and policy framework of which it is a part.

The Department, through a series of actions, has begun to restrict certain aspects of its NOx ERC trading programs. Unlike the usual rulemaking process, involving participation of the regulated community and other stakeholders, these actions have been taken without public consultation and have become evident piecemeal as part of other, more routine actions such as ERC approvals and extensions of Trading Agreements and Orders. The Department has not, to date, presented its new policy *in toto* to the regulated community. CRRA's comments are based on conversations with Department staff and written statement by the Department in an ERC approval and a Trading Agreement and Order.

A NOx ERC is an asset that is intentionally created by a participating source according to a Department-administered program. Such a source is voluntarily controlling NOx emissions to levels below those required. Such control improves air quality and benefits human health and the environment. This is typically done through purchase, installation and operation of emission control equipment, the one-time cost and ongoing operation costs of which are not insignificant. The Department, in quantifying emissions reductions reflected in created credits, discounts the emissions significantly to benefit the environment. The Department gives the source credit for the remainder of the emissions reductions. However, according to subsection (d)(5)(B), "prior to the use, sale or transfer of such ERCs," the participating source must "submit a written request to the commissioner for approval." In effect, the participating source can make no practical use of ERCs it has "created" until the Commissions approves them.

Subsection (d)(5)(A) requires the participating source to maintain records that document the NOx mass emissions, concentrations, operating hours and ERCs created. The participating source accumulates these records and makes periodic submissions of this information to the Department for approval of the ERCs. Upon receipt of such submissions, the Department staff review the information and send a letter to the participating source of the approval of the ERCs. Only after receiving this approval can a participating source make any practical use of the asset created.

If the Department chooses to restrict the life of an ERC to five years and defines creation as the date on which a NOx reduction occurs, the effective useful life will always be less than five years, perhaps significantly less, due to the ERC approval process.

The result is an owner or operator is likely to submit documentation for ERC approval frequently in order to reduce the time lost between creation and approval when an ERC may not be used. More frequent submissions, monthly or even weekly compared to the current practice of one annual submission, would be more burdensome to Department staff. It would seem much more

logical to define ERC creation as occurring at the time of ERC approval by the Department and setting the expiration date of a given block of ERCs explicitly.

The concept of 'vintage restrictions' or expiration dates for ERCs has both positive and negative implications. Such restrictions would allow the Department to create a registry of ERCs to better understand how many credits are held and by whom. CRRA feels that using expiration dates to eliminate older credits may have unintended effects. Since an ERC is a salable asset, it is a means by which the participating source can recoup some of the cost of creating that ERC. Limiting the useful life of an ERC limits the value of the asset. If the value of an ERC becomes less than, perhaps significantly less than, the cost to create one, some participating sources may choose to cease "over-controlling." This would adversely impact Connecticut's air quality.

CRRA believes that, if vintage restrictions are imposed, existing ERCs should be "grandfathered," that is, have no expiration date. CRRA holds 114 ERCs created in 1998 (but not approved until December 2000). Even though the Department has set an expiration date of December 31, 2004 for these ERCs rather than simply declaring them expired, the perceived value of these ERCs has undoubtedly plummeted. These credits were created at some finite cost to CRRA and CRRA has, or had, an expectation of recouping the cost through the sale of the ERCs. It is likely that only a fraction of that cost is now recoverable due to the imminent expiration.

CRRA recommends that the Department standardize its use of the terms "generation" and "creation" with respect to ERCs. Section 38 is consistent in its use of the term "creation." CRRA received an ERC approval certification from the Department dated September 13, 2002 containing the following sentence: "These ERCs shall only be used for five (5) calendar years from the year of the generation of such ERCs or until April 30, 2007, whichever is earlier, as shown on the following table." It is unclear if "generation" means the actual period of time when the reduced emissions occurred or when the ERCs were approved. This sentence appears to define a "year of generation" from which the five-year usable life span is measured. This seems inconsistent with what the amendment in Section 38 subsection (d)(6)(G) is defining as the date of ERC creation. Practically speaking, is the Department seeking to have sources that use ERCs track the date, to the day, of creation of every ton or part of a ton to assure timely usage? This seems quite onerous on both the source and Department staff, who would audit ERC usage.

CRRA is strongly in favor of emissions credit trading as a tool to improve Connecticut's air quality. The Department has demonstrated that the emissions reductions and air quality improvements achieved since ERC trading began are far greater than what would have been expected through old-style "command and control" methods or regulations. CRRA appreciates the efforts of Department staff who have worked cooperatively with regulated sources to make the ERC trading programs work so well. CRRA understand the Department's desire to improve its ERC trading program and is prepared to work with Department staff to do so. CRRA is an active participant in SIPRAC and SIPRAC subcommittees and workgroups. These cooperative forums allow the regulators to hear from stakeholders who are directly affected the Department's programs and regulations. This communication fosters greater understanding among the stakeholders and allows the Department's policies and regulations to be thoughtfully crafted in a

way that achieves the environmental goals without unnecessarily burdening the regulated community. CRRA urges the Department to hold open, cooperative discussions on this important and successful program so that a consistent, fair, sustainable and environmental protective trading program can continue to benefit us all.

Response: Much of CRRA's comment addresses an ERC life span restriction, which was not the subject matter of the proposed amendment. The Department presented its policy on and reasons for the ERC life span restriction to the regulated community on July 10, 2003, made available a written statement regarding the life span restriction and provided an opportunity for informal discussions with all interested parties on July 10 and August 14, 2003 on the issue of ERC life span restrictions. CRRA participated in those discussions. CRRA also submitted similar comments to those submitted here on a separate amendment to Section 38 for which a public hearing was held on May 15, 2003 and in which the referred to ERC life span restriction was proposed. The Department fully responded to CRRA's comments on the proposed life span restriction in the hearing report prepared in that amendment process. This response does not repeat the responses in that hearing report. The relevant comments on this amendment are those that apply to the date of ERC creation, proposed in this amendment in Section 38(d)(6)(G) as "the date the NOx emissions reduction occurs at a plant or source."

Regarding subsection (d)(6)(G), CRRA comments that the Department uses the terms "creation" and "generation" interchangeably. The terms "generation" and "creation" are used consistently within Section 38 as proposed for amendment. In this context, both terms refer to the actual period of time when the reduced emissions occur. This usage does not create conflict with any other applicable requirements. As a general matter, the Department strives for appropriate consistency in the use of terms in its actions.

Furthermore, CRRA comments that subsection (d)(6)(G) will require tracking of ERC creation on a daily basis, which is an onerous burden on owners and operators and the Department. To address CRRA's concern and make the proposed language defining creation as the ***date*** the reduction occurs consistent with recently issued MWC Trading Agreements and Orders that limit ERC life span based on the ***year*** the reduction occurs, the Department should revise the text of proposed subsection (d)(6)(G) as follows:

> (G) FOR THE PURPOSES OF SUBPARAGRAPHS (E) AND (F) OF THIS SUBDIVISION, AN ERC IS CONSIDERED CREATED ~~ON THE DATE~~ **IN THE SAME CALENDAR YEAR** THE NOx EMISSION REDUCTION OCCURS AT A PLANT OR SOURCE.

28. Comment: The vintage restriction on ERCs proposed in (d)(6)(G) will penalize creation of credits early in the winter (non-ozone) season by shortening their useful life. If the Department certifies ERCs after submittal of the emissions statements in the spring of the calendar year following the year of creation, the winter non-ozone season credits have already aged 15 months (25% of their useful life). Any delay in approval following that period further reduces the eligible trading life for such credits. The Department should reconsider and make any vintage limitation effective from the date of approval, not the date of creation. (BRRFOC)

Response: The comment is not pertinent to this amendment process. Rather, the comment addresses a vintage restriction that was proposed in a separate amendment to Section 38 for which a hearing was held on May 15, 2003. BRRFOC submitted the same comment on that amendment, and the Department responsed to this comment in the hearing report on that amendment. BRRFOC should refer to that hearing report.

28. Comment: The proposed rule refers to the Department's "Emissions Trading Unit Vintage Restriction Policy." BRRFOC would like to have a copy of this policy made available.

Response: The text of the amendment to Section 38 does not refer to the Department's "Emissions Trading Unit Vintage Restriction Policy." However, the revisions to subsection (d)(6) are based in part on such a policy. The Department made that policy available on July 10, 2003 and held a discussions with the regulated community on July 10 and August 14, 2003 on the issue of ERC life span restrictions.

Subsection (k)(10), recordkeeping

29. Comment: BRRFOC supports the deletion of opacity from the list of pollutants measured during annual performance tests. Compliance with opacity limits is measured using CEM equipment, which is routinely subject to audit and calibration.

Response: The Department notes BRRFOC's support for the deletion of opacity from the list of pollutants for which a source must record the results of annual performance tests.

VII. Additional Comment by Hearing Officer

The Department should make the following technical corrections to the identified subsections of the proposed amendment to Section 18:

- **Subsection (c)(3):** The term "open air" should be replaced with "ambient air" for accuracy and consistency with current Department definitions and usage, as follows:

[(b)(4)](3) No PERSON SHALL EMIT [“]particulate matter[” shall be emitted] into the ~~open~~ **AMBIENT** air in such a manner as to cause a nuisance.

- **Subsection (e)(1):** The relationship of the standard in subsection (e)(1) to particulate matter standards in permits should clearly state that the more stringent standard applies, as follows:

(1) THE OWNER OR OPERATOR OF FUEL-BURNING EQUIPMENT SUBJECT TO SECTION 22a-174-3a OR FORMER SECTION 22a-174-3 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES SHALL EMIT NO MORE THAN 0.10 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT **OR THE PARTICULATE MATTER STANDARD OF A PERMIT APPLICABLE TO SUCH EQUIPMENT, WHICHEVER IS**

MORE STRINGENT.

- **Subsection (e)(2)(A):** Subparagraph (A) of subsection (e)(2) is not necessary since the identical standard is required in proposed subparagraph (E), which standing alone encompasses subparagraph (A). Subparagraph (A) of subsection (e)(2) should be deleted from the final version of the amendment and remaining subparagraphs (B) through (E) re-lettered, as follows:

~~(A) 0.20 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT IF THE FUEL BURNED IS ANTHRACITE COAL;~~

~~(B)~~(**A**) 0.14 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT IF THE FUEL BURNED IS RESIDUAL OIL (NO. 4 OR NO. 6 OIL);

~~(C)~~(**B**) 0.12 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT IF THE FUEL BURNED IS DISTILLATE OIL (NO. 2 OIL);

~~(D)~~(**C**) 0.10 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT IF THE FUEL BURNED IS NATURAL GAS; OR

~~(E)~~(**D**) 0.20 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT FOR ANY OTHER FUEL BURNED.

- **Subsections (e)(3)(A) and (B):** The standards for particulate matter emissions from stationary reciprocating internal combustion engines in subparagraphs (A) and (B) of subsection (e)(3) are listed to one significant figure when two were intended, and these standards should be revised, as follows:

(A) ~~0.1~~ **0.10** POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT OR COMBUST ONLY FUEL WITH A SULFUR CONTENT LESS THAN OR EQUAL TO 0.05% BY WEIGHT, IF THE STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE WAS MANUFACTURED PRIOR TO OR IN MODEL YEAR 1996; OR

(B) ~~0.1~~ **0.10** POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT IF THE STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE WAS MANUFACTURED AFTER MODEL YEAR 1996.

- **Subsections (f)(3) and (f)(4):** The formulas in subsections (f)(3) and (f)(4) should more clearly identify "E" as the maximum emission rate and "log" as the natural logarithm, as follows:

(3) TO MATHEMATICALLY INTERPOLATE FROM TABLE 18-1 PROCESS WEIGHT RATES UP TO AND INCLUDING SIXTY THOUSAND POUNDS

PER HOUR (60,000 LBS/HR), THE FOLLOWING EQUATION SHALL BE USED:

$$\text{Log } E = \text{Log } 3.59 + 0.62 \times \left(\text{Log } \frac{P}{2000} \right)$$

WHERE: P = PROCESS WEIGHT RATE IN POUNDS PER HOUR
E = **MAXIMUM ALLOWABLE** emission rate in pounds per hour
LOG = THE NATURAL LOGARITHM OF THE INDICATED VALUE

(4) TO MATHEMATICALLY INTERPOLATE AND EXTRAPOLATE FROM TABLE 18-1 PROCESS WEIGHT RATES IN EXCESS OF SIXTY THOUSAND POUNDS PER HOUR (60,000 LBS/HR), THE FOLLOWING EQUATION SHALL BE USED:

$$\text{Log } E = \text{Log } 17.31 + 0.16 \times \left(\text{Log } \frac{P}{2000} \right)$$

WHERE: P = PROCESS WEIGHT RATE IN POUNDS PER HOUR
E = **MAXIMUM ALLOWABLE** emission rate in pounds per hour
LOG = THE NATURAL LOGARITHM OF THE INDICATED VALUE

- **Subsection (g)(2)(A):** The particulate matter standards for a hot mix asphalt plant is listed to one significant figure when two were intended, and the standards should be revised as follows:

(A) PARTICULATE MATTER EMISSIONS ARE LESS THAN ~~0.1~~ **0.10** POUNDS OF PARTICULATE MATTER PER TON OF ASPHALT PRODUCED; AND

- **Subsections (j)(1)(D), (j)(2), (j)(3), (j)(4):** To include appropriate labels, the term "subdivision" should be replaced with "subsection" and, in subsection (j)(3), the reference to a "general statute" should specify a "Connecticut general statute."

- **Subsection (j)(2):** The phrase "and promulgated on or after August 17, 1971" is a redundant modifier to the reference to a new source performance standard in 40 CFR 60 and should be deleted as follows:

(2) THE OWNER OR OPERATOR OF AN EMISSIONS UNIT THAT IS SUBJECT

TO A VISIBLE EMISSIONS STANDARD PURSUANT TO A NEW SOURCE PERFORMANCE STANDARD SET FORTH IN 40 CFR 60 ~~AND PROMULGATED ON OR AFTER AUGUST 17, 1971~~ SHALL NOT BE SUBJECT TO THE VISIBLE EMISSIONS STANDARDS OF SUBDIVISION (b)(1) AND (b)(2) OF THIS SECTION.

- **Subsection (j)(6):** The requirement that the owner or operator of a stationary reciprocating internal combustion engine that is an emergency engine and has a maximum bhp rating greater than or equal to 175 many only be exempt from the particulate standards of subsection (e) if it submits a certification in writing to the Commissioner is unnecessary. The owner or operator of such an engine is required to apply for and obtain either a general permit, a permit under R.C.S.A. section 22a-174-3a or to operate such engine under R.C.S.A. section 22a-174-3b or section 22a-174-3c. Under either permit option, the owner or operator would submit a certification of such information to the Commissioner. Engines operated under sections 22a-174-3b and 22a-174-3c have limits on operating requirements sufficient to address air quality concerns. Therefore, the Department should delete the certification requirement and revise subsection (j)(6) as follows:

(6) THE OWNER OR OPERATOR OF ANY STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE ~~WITH~~ **THAT IS AN EMERGENCY ENGINE, AS DEFINED IN SUBSECTION (a)(2) OF SECTION 22a-174-22 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES AND HAS** A MAXIMUM CONTINUOUS BRAKE HORSEPOWER OUTPUT RATING, AS SPECIFIED BY THE MANUFACTURER, GREATER THAN OR EQUAL TO 175 BHP SHALL NOT BE SUBJECT TO THE PARTICULATE MATTER EMISSIONS STANDARDS OF SUBSECTION (e) OF THIS SECTION. ~~PROVIDED THAT SUCH OWNER OR OPERATOR CERTIFIES THE FOLLOWING, IN WRITING, TO THE COMMISSIONER:~~

~~(A) THE STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE IS AN EMERGENCY ENGINE, AS DEFINED IN SUBSECTION (a)(2) OF SECTION 22a-174-22 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES; AND~~

~~(B) THE FOLLOWING CERTIFICATION:~~

~~"I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS THERETO, AND I CERTIFY THAT BASED ON REASONABLE INVESTIGATION, INCLUDING MY INQUIRY OF THOSE INDIVIDUALS RESPONSIBLE FOR OBTAINING THE INFORMATION, THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF. I UNDERSTAND THAT ANY FALSE STATEMENT~~

~~MADE IN THE SUBMITTED INFORMATION MAY BE PUNISHABLE AS A CRIMINAL OFFENSE UNDER SECTION 22a-175 OF THE CONNECTICUT GENERAL STATUTES, UNDER SECTION 53a-157b OF THE CONNECTICUT GENERAL STATUTES AND IN ACCORDANCE WITH ANY APPLICABLE STATUTE."~~

- **Subsection (j)(9):** The reference to Public Act No. 00-1 should be deleted, as that section is now codified within the referenced statute, as follows:

  (9) A PERSON CONDUCTING OPEN BURNING PURSUANT TO SECTION 22a-174(f) OF THE CONNECTICUT GENERAL STATUTES OR REGULATIONS ADOPTED ~~PURSUANT TO PUBLIC ACT NO. 00-1~~ **THEREUNDER** SHALL NOT BE SUBJECT TO THE REQUIREMENTS OF THIS SECTION.

VIII. Final Text of Proposed Amendment

The final text of the amendment is located at Attachment 3 to this report.

IX. Conclusion

Based upon the comments submitted by interested parties and addressed in this Hearing Report, I recommend the final amendment, as contained in Attachment 3 to this report, be submitted by the Commissioner of Environmental Protection for approval by the Attorney General and the Legislative Regulations Review Committee. Based upon the same considerations, I also recommend the proposed amendment, upon promulgation, be submitted to the U.S. Environmental Protection Agency as a revision to the Connecticut State Implementation Plan for Air Quality.

November 26, 2003

/s/Merrily A. Gere
Hearing Officer

Date

Attachment 1
List of Commenters

1. David B. Conroy
   Manager, Air Quality Planning Unit
   United States Environmental Protection Agency
   Region 1
   One Congress Street, Suite 1100
   Boston, MA 02114 - 2023

2. Andrew Stackpole
   Commander Navy Region Northeast
   Environmental Program Manager
   U.S. Department of Defense ("DOD")
   Naval Submarine Base New London
   Groton, CT 06349-5000

3. Joseph L. Suchecki
   Engine Manufacturers Association ("EMA")
   Two North LaSalle Street
   Suite 2200
   Chicago, Illinois 60602

4. Darryl R. Conner
   Pfizer PGM Division ("Pfizer")
   Eastern Point Road MSN 9077
   Groton, CT 06340

5. David B. Damer
   Environmental Policy Manager
   PSEG Power Connecticut LLC ("PSEG")
   New Haven Harbor
   1 Waterfront Street
   New Haven, CT 06512

6. Steven Yates
   Environmental Scientist
   Connecticut Resources Recovery Authority ("CRRA")
   100 Constitution Plaza, 17th Floor
   Hartford, CT 06103-1772

7. Rick Bennett
   Vice President of Environment, Health and Safety
   United Technologies Corporation ("UTC")

8. Eric J. Brown, Associate Counsel
Director, Environmental Policies Council
Connecticut Business and Industry Association ("CBIA")
350 Church Street
Hartford, CT 06103-1126

9. Mark R. Sussman ("Sussman")
Murtha Cullina LLP
CityPlace I
Hartford, CT 06103-3469

10. Robert Silvestri
PSEG Power Connecticut LLC ("PSEG")
New Haven Harbor
1 Waterfront Street
New Haven, CT 06512

11. Cynthia L. Karlic
Regional Environmental Manager
NRG Middletown Operations Inc. ("NRG")
P.O. Box l00l
l866 River Road
Middletown, CT 06457

12. Kathleen C. Golas
Manager, Environmental Affairs
Stanadyne Corporation ("Stanadyne")
92 Deerfield Road
Windsor, CT 06095-4209

13. Mark H. Bobman
Assistant Director
Bristol Resource Recovery Facility Operating Committee ("BRRFOC")
43 Enterprise Drive
Bristol, CT 06010

Attachment 2

Text of Proposed Amendment

Draft – January 13, 2003

Section 1.

Section 22a-174-18 of the Regulations of Connecticut State Agencies is amended, as follows:

Section 22a-174-18. Control of particulate matter and visible emissions.

[(a) Visible "emissions."

(a)(1) Visible "emission" restrictions for "stationary sources."

(i) No "person" shall cause or permit the "emission" of visible "air pollutants" of a shade or density equal to or darker than that designated as No. 1 on the "Ringelmann chart" or 20 percent "opacity."

(ii) A "person" may discharge "air pollutants" into the atmosphere from any "source" of "emission" for a period or periods aggregating not more than 5 minutes in any 60 minutes, provided that said "air pollutants" are of a shade or density not darker than No. 2 on the "Ringelmann chart" or 40 percent "opacity."

(iii) Open burning conducted under provisions of section 22a-174-17 shall not be subject to this subsection.

(a)(2) Visible "emission" restrictions for "mobile sources."

(i) No "person" shall cause or permit the "emission" of visible "air pollutants" from gasoline-powered "mobile sources" for longer than five (5) consecutive seconds.

(ii) No "person" shall cause or permit the "emission" of clearly visible "air pollutants" (comparable to a shade or density equal to or darker than No. 1 on the "Ringelmann chart" or 20 percent "opacity") from diesel powered motor vehicles for more than ten (10) consecutive seconds, during which time the maximum shade or density of "emissions" shall be no darker than No.2 on the "Ringelmann chart" or 40 percent "opacity."

(a)(3) Exceptions for uncombined water. Where the presence of uncombined water, such as water vapor, is the only reason for the failure of an "emission" to meet the requirements of this regulation then the provisions of this regulation shall not apply.

(a)(4) The following shall be exempt from the requirements of subsection (a)(2):

(i) Antique automobiles over 30 years old;

(ii) Vehicles used exclusively for racing; and

(iii) "Mobile sources" in the process of being repaired.

(a)(5) "Emissions" from stationary or idling "mobile sources." No "mobile source" engine shall be allowed to operate for more than three (3) consecutive minutes when the "mobile source" is not in motion except as follows:

(i) When a "mobile source" is forced to remain motionless because of traffic conditions or mechanical difficulties over which the "operator" has no control;

(ii) When it is necessary to operate heating, cooling or auxiliary equipment installed on the "mobile source" when such equipment is necessary to accomplish the intended use of the "mobile source";

(iii) To bring the "mobile source" to the manufacturer's recommended operating temperature;

(iv) When the outdoor temperature is below twenty (20) degrees Fahrenheit;

(v) When the "mobile source" is being repaired.

(a)(6) Subsections (a)(2) and (a)(5) shall not apply to aircraft, locomotives operating on rails, vessels for transportation on water, lawnmowers, snowblowers, and other small home appliances.]

(a) DEFINITIONS. FOR THE PURPOSES OF THIS SECTION, THE FOLLOWING DEFINITIONS SHALL APPLY:

(1) "CALENDAR QUARTER" MEANS A CONSECUTIVE THREE (3) MONTH PERIOD (NON-OVERLAPPING) BEGINNING ON JANUARY 1, APRIL 1, JULY 1 OR OCTOBER 1;

(2) "FLUE-FED INCINERATOR" MEANS AN INCINERATOR WITH A SINGLE FLUE THAT SERVES AS BOTH THE CHARGING CHUTE AND THE FLUE TO TRANSPORT COMBUSTION PRODUCTS TO THE ATMOSPHERE;

(3) "INCINERATOR" MEANS, NOTWITHSTANDING SECTION 22A-174-1 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES, ANY DEVICE, APPARATUS, EQUIPMENT OR STRUCTURE USED FOR DESTROYING, REDUCING OR SALVAGING BY FIRE ANY MATERIAL OR SUBSTANCE, INCLUDING BUT NOT LIMITED TO, REFUSE, RUBBISH, GARBAGE, TRADE WASTE, DEBRIS OR SCRAP, OR FACILITIES FOR CREMATING HUMAN OR ANIMAL REMAINS;

(4) "ONE-MINUTE BLOCK AVERAGE" MEANS, FOR MEASUREMENTS TAKEN AT A SOURCE USING OPACITY CEM EQUIPMENT, THE AVERAGE OF SIX (6) OR MORE DATA POINTS EQUALLY SPACED OVER ONE MINUTE;

(5) "SHUTDOWN" MEANS THE PERIOD OF TIME BEGINNING WHEN THE OWNER OR OPERATOR OF A STATIONARY SOURCE INITIATES THE PROCESS OF

CEASING THE OPERATION OF SUCH SOURCE AND ENDING WHEN OPERATION THEREOF HAS COMPLETELY CEASED;

(6) "SIX-MINUTE BLOCK AVERAGE" MEANS, FOR MEASUREMENTS TAKEN AT A SOURCE USING OPACITY CEM EQUIPMENT, THE AVERAGE OF THIRTY-SIX (36) OR MORE DATA POINTS EQUALLY SPACED OVER A SIX (6) MINUTE PERIOD;

(7) "STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE" MEANS ANY SPARK IGNITED OR COMPRESSION IGNITED ENGINE THAT IS ALSO A STATIONARY SOURCE AS DEFINED IN SECTION 22a-174-1 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES; AND

(8) "STARTUP" MEANS THE TIME BEGINNING WHEN THE OWNER OR OPERATOR OF A STATIONARY SOURCE INITIATES THE PROCESS OF SETTING SUCH SOURCE INTO OPERATION.

(b) VISIBLE EMISSION STANDARDS.

(1) STATIONARY SOURCES. EXCEPT AS PROVIDED IN SUBSECTION (j) OF THIS SECTION, AN OWNER OR OPERATOR OF ANY STATIONARY SOURCE FOR WHICH OPACITY IS MEASURED USING VISUAL OBSERVATION SHALL NOT EXCEED THE FOLLOWING VISIBLE EMISSIONS LIMITS:

(A) TWENTY PERCENT (20%) OPACITY FOR A PERIOD OR PERIODS AGGREGATING MORE THAN FIVE (5) MINUTES DURING ANY SIXTY MINUTE PERIOD AS MEASURED BY 40 CFR 60, APPENDIX A, REFERENCE METHOD 9; AND

(B) FORTY PERCENT (40%) OPACITY.

(2) STATIONARY SOURCES WITH OPACITY CEM EQUIPMENT. EXCEPT AS PROVIDED IN SUBSECTION (j) OF THIS SECTION, AN OWNER OR OPERATOR OF A STATIONARY SOURCE FOR WHICH OPACITY IS MEASURED USING OPACITY CEM EQUIPMENT SHALL NOT EXCEED THE FOLLOWING VISIBLE EMISSIONS LIMITS:

(A) TWENTY PERCENT (20%) OPACITY DURING ANY SIX-MINUTE BLOCK AVERAGE; AND

(B) FORTY PERCENT (40%) OPACITY DURING ANY ONE-MINUTE BLOCK AVERAGE.

(3) MOBILE SOURCES. EXCEPT AS PROVIDED IN SUBSECTION (j) OF THIS SECTION, NO PERSON SHALL CAUSE OR ALLOW:

(A) ANY VISIBLE EMISSIONS FROM A GASOLINE POWERED MOBILE SOURCE FOR LONGER THAN FIVE (5) CONSECUTIVE SECONDS;

(B) VISIBLE EMISSIONS FROM A DIESEL POWERED MOBILE SOURCE OF A SHADE OR DENSITY EQUAL TO OR DARKER THAN TWENTY PERCENT (20%) OPACITY FOR MORE THAN TEN (10) CONSECUTIVE SECONDS, DURING WHICH TIME THE MAXIMUM SHADE OR DENSITY SHALL BE NO DARKER THAN FORTY PERCENT (40%) OPACITY; OR

(C) A MOBILE SOURCE TO OPERATE FOR MORE THAN THREE (3) CONSECUTIVE MINUTES WHEN SUCH MOBILE SOURCE IS NOT IN MOTION EXCEPT AS FOLLOWS:

(i) WHEN A MOBILE SOURCE IS FORCED TO REMAIN MOTIONLESS BECAUSE OF TRAFFIC CONDITIONS OR MECHANICAL DIFFICULTIES OVER WHICH THE OPERATOR HAS NO CONTROL,

(ii) WHEN IT IS NECESSARY TO OPERATE HEATING OR COOLING EQUIPMENT THAT IS LOCATED IN OR ON THE MOBILE SOURCE PROVIDED THAT THE VEHICLE:

(a) IS INTENDED FOR PASSENGER TRANSPORT, AND

(b) HAS PASSENGERS ABOARD OR WILL SOON RECEIVE PASSENGERS FOR WHICH HEATING OR AIR CONDITIONING IS BEING PROVIDED FOR COMFORT,

(iii) WHEN IT IS NECESSARY TO OPERATE AUXILIARY EQUIPMENT THAT IS LOCATED IN OR ON THE MOBILE SOURCE TO ACCOMPLISH THE INTENDED USE OF THE MOBILE SOURCE,

(iv) TO BRING THE MOBILE SOURCE TO THE MANUFACTURER'S RECOMMENDED OPERATING TEMPERATURE,

(v) WHEN THE OUTDOOR TEMPERATURE IS BELOW TWENTY DEGREES FAHRENHEIT (20 DEGREES F), OR

(vi) WHEN THE MOBILE SOURCE IS UNDERGOING REPAIR OR MAINTENANCE THAT REQUIRES SUCH MOBILE SOURCE BE OPERATED FOR MORE THAN THREE (3) CONSECUTIVE MINUTES.

[(b) "Fugitive dust."]

(c) CONTROL OF AIRBORNE PARTICULATE MATTER AND FUGITIVE PARTICULATE MATTER.

[(b)](1) No ["]person["] shall cause or [permit] ALLOW any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered,

repaired or demolished without taking reasonable precautions to prevent [“]particulate matter[“] from becoming airborne. Such reasonable precautions shall be in accordance with good industrial practice as determined by the [“Commissioner“] COMMISSIONER and shall include, but not be limited to[, the following]:

[(i)](A) [Use, where possible,] THE USE of water [or chemicals for control dust in] OR OTHER APPROPRIATE MATERIAL TO PREVENT AIRBORNE PARTICULATE MATTER GENERATED BY the demolition of [existing] buildings or OTHER structures;[,] construction operations; [the grading of roads or] the clearing OR GRADING of land; OR THE GRADING, CONSTRUCTION OR IMPROVEMENT OF ROADS;

[(ii)](B) [Application] THE APPLICATION of asphalt, [oil,] water, suitable [chemicals] MATERIALS or [coverage on materials stockpiles] COVERS TO MATERIAL STOCKPILES and other surfaces [which] THAT can give rise to airborne [dusts] PARTICULATE MATTER;

[(iii)](C) [Installation and] THE use of hoods, fans, [AND] fabric filters OR OTHER DEVICES to enclose and vent the handling of [dusty] materials[. Adequate containment methods shall be employed during sandblasting or other similar operations;] THAT CAN GIVE RISE TO AIRBORNE PARTICULATE MATTER;

[(iv)](D) [Covering, at all times when] THE COVERING, WHILE in motion, OF open-bodied trucks,[and trains] OPEN-BODIED TRAILERS AND RAILROAD CARS transporting materials [likely to give rise to airborne dusts;] CAPABLE OF GIVING RISE TO AIRBORNE PARTICULATE MATTER;

[(v)](E) The prompt removal of earth or other material [from paved streets onto which earth or other material has been deposited] DEPOSITED ONTO PAVED STREETS by trucking [or], earth moving equipment, erosion [by water,] or other means; AND

(F) THE USE OF CONTAINMENT METHODS FOR SANDBLASTING OR SIMILAR OPERATIONS.

[(b)(2) Agricultural activities are exempt from the provisions of subsection (b)(1). However, agricultural practices such as tilling of land and application of fertilizers shall be conducted in such manner as to minimize dust from becoming airborne.

(b)(3)](2) No [“]person[“] shall cause or [permit the discharge of visible “emissions” beyond the lot line of the property on which the “emissions” originate when:] ALLOW THE EMISSION OF VISIBLE PARTICULATE MATTER BEYOND THE LEGAL BOUNDARY OF THE PROPERTY ON WHICH SUCH EMISSION OCCURS THAT EITHER:

[(i)] (A) [The "emissions" remain visible and exist near ground level outside the property boundaries;] REMAINS NEAR GROUND LEVEL BEYOND SUCH PROPERTY BOUNDARY; or

[(ii)] (B) [The "emissions" remain visible and impinge on a building or structure so] DIMINISHES the health, safety or enjoyment of [life of the public may be diminished] PEOPLE USING A BUILDING OR STRUCTURE LOCATED BEYOND THE PROPERTY BOUNDARY.

[(b)(4)](3) No PERSON SHALL EMIT ["]particulate matter[" shall be emitted] into the open air in such a manner as to cause a nuisance.

[(c) Incineration.

(c)(1) Definitions. The following terms as used in subsections (c)(1) to (c)(6) inclusive shall have the following meanings:

(i) "Incinerator" means any device, apparatus, equipment or structure used for destroying, reducing or salvaging by fire any material or substance, including but not limited to, refuse, rubbish, garbage, trade waste, debris or scrap, or facilities for cremating human or animal remains. "Small incinerator" means an "incinerator" designed and used to burn waste materials of types 0, 1, 2, and 3 only, in all capacities not exceeding two thousand pounds per hour of waste material input. "Special incinerator" means an "incinerator" designed and used to burn pathological waste type 4 or trade waste types 5 and 6 of any burning capacity. Crematories are included in this category. "Large incinerator" means an "incinerator" owned or operated by any government or any "person," firm or corporation, designed and used to burn waste materials generated by the public of any and all types, 0 to 6 inclusive, with a burning capacity in excess of two thousand pounds per hour of waste material input.

(ii) "New incinerator" means an incinerator which is a "new source," as defined in section 22a-174-1(r).

(iii) "Existing incinerator" means any "incinerator" which is not a "new source," as defined in section 22a-174-1(r).

(iv) "Flue-fed incinerator" means an "incinerator" provided with a single flue which serves as both the charging chute and the flue to transport products of combustion to the atmosphere.

(v) "Liquid particulates" means particles which have volume but are not of rigid shape and which upon collection tend to coalesce and create uniform homogeneous films upon the surface of the collecting media.

(vi) "Solid particulates" means particles of rigid shape and definite volume.

(vii) "Smoke" means and includes small gas-borne particles, excluding water vapor, arising from a process of combustion in sufficient number to be observable.

(viii) "Air pollution control equipment" means any device which prevents or controls the "emission" of any air contaminant.

(ix) "Type O waste" means trash, a mixture of highly combustible waste such as paper, cardboard, cartons, wood boxes and combustible floor sweepings, from commercial and industrial activities. The mixture may contain up to ten percent by weight of plastic bags, coated paper, laminated paper, treated corrugated cardboard, oily rags and plastic or rubber scraps. This type of waste contains approximately ten percent moisture and five percent incombustible solids and has a heating value of approximately eighty-five hundred "BTU" per pound as fired.

(x) "Type 1 waste" means rubbish, a mixture of combustible waste such as paper, cardboard cartons, wood scrap, foliage and combustible floor sweepings from domestic, commercial and industrial activities. The mixture may contain up to twenty percent by weight of restaurant or cafeteria waste, but contains little or no treated paper, plastic or rubber wastes. This type of waste contains approximately twenty-five percent moisture and ten percent incombustible solids and has a heating value of approximately sixty-five hundred "BTU" per pound as fired.

(xi) "Type 2 waste" means refuse, consisting of an approximately even mixture of rubbish and garbage by weight. This type of waste is common to apartment and residential occupancy, consisting of up to fifty percent moisture and approximately seven percent incombustible solids, and has a heating value of approximately forty-three hundred "BTU" per pound as fired.

(xii) "Type 3 waste" means garbage consisting of animal and vegetable wastes from restaurants, cafeterias, hotels, hospitals, markets and like installations. This type of waste contains up to seventy percent moisture and up to five percent incombustible solids and has a heating value of approximately twenty-five hundred "BTU" per pound as fired.

(xiii) "Type 4 waste" means human and animal remains, consisting of carcasses, organs and solid organic wastes from hospitals, laboratories, abattoirs, animal pounds and similar "sources," consisting of up to eighty-five percent moisture and approximately five percent incombustible solids and having a heating value of approximately one thousand "BTU" per pound as fired.

(xiv) "Type 5 waste" means by-product waste, gaseous, liquid or semi-liquid, such as tar, paints, solvents, sludge, and fumes from industrial operations.

(xv) "Type 6 waste" means solid by-product waste, such as rubber, plastics, wood waste from industrial operations and all salvage operations.

(c)(2) Flue-fed "incinerators." No "person" shall construct, install, use or cause to be used any new "incinerator" of the flue-fed type.

(c)(3) "Emission standards."

(i) Particulates. No "person" shall construct, install, use or cause to be used any new "incinerator" which will result in "particulate matter" in the effluent in excess of 0.08 gr/S.C.F. (0.18 gm/cubic meters) corrected to 12 percent CO2 maximum 2-hour average. No "person" shall use or cause to be used any existing "incinerator" which will emit more than four-tenths pound of particulates per one thousand pounds of flue gases adjusted to fifty percent excess air.

(ii) All "incinerators" must comply with subsection(a)(1).

(iii) Unburned waste and ash. No "person" shall cause, suffer, allow or permit the "emission" of particulates of unburned waste or ash from any "incinerator" which are individually large enough to be discernible by the human eye.

(iv) Odors. No "person" shall construct, install, use or cause to be used any "incinerator" which will result in violations of section 22a-174-23.

(c)(4) Operations.

(i) Approved operating procedures and rated burning capacity of the "incinerator" shall be posted at a convenient place as near as practical to the point of operation.

(ii) No "person" shall use or cause to be used any "incinerator" unless all components connected, or attached to, or serving the "incinerator" which affect "air pollution" are functioning properly and are in use, in accordance with the "permit to construct" and the certificate or "permit to operate."

(c)(5)

(i) "Emission" tests shall be conducted at the maximum-rate burning capacity of the "incinerator."

(ii) The burning capacity of an "incinerator" shall be the manufacturer's or designer's guaranteed maximum rate or such other rate as may be determined by the "Commissioner" in accordance with good engineering practices. In cases of conflict, the determination made by the "Commissioner" shall govern.

(iii) For the purposes of this regulation, the total of the capacities of all furnaces within one system shall be considered as the "incinerator" capacity.

(c)(6) Exceptions. The provisions of subsections (c)(1) to (c)(5) inclusive shall not apply to "incinerators" installed or used in dwellings containing six or fewer family units.

(c)(7) None of these regulations shall be construed to permit the "emission" of hazardous materials defined and limited by the Commissioner.]

(d) EMISSION STANDARDS FOR INCINERATORS AND PROHIBITIONS ON FLUE-FED INCINERATORS.

(1) NO OWNER OR OPERATOR SHALL CAUSE OR ALLOW THE CONSTRUCTION, INSTALLATION OR OPERATION OF A FLUE-FED INCINERATOR.

(2) PARTICULATE MATTER EMISSION STANDARDS FOR INCINERATORS. NO OWNER OR OPERATOR SHALL CAUSE OR ALLOW THE OPERATION OF ANY INCINERATOR THAT WILL RESULT IN PARTICULATE MATTER EMISSIONS IN EXCESS OF THE PARTICULATE MATTER EMISSION STANDARDS SET FORTH IN SUBPARAGRAPH (A) OR (B) OF THIS SUBDIVISION:

(A) FOR INCINERATORS FOR WHICH CONSTRUCTION OR MODIFICATION COMMENCED ON OR AFTER JULY 1, 1979, 0.08 GRAINS PER STANDARD CUBIC FOOT CORRECTED TO TWELVE PERCENT (12%) CARBON DIOXIDE (CO_2) OVER A TWO (2) HOUR AVERAGE OR 0.18 GRAMS PER CUBIC METER CORRECTED TO TWELVE PERCENT (12%) CARBON DIOXIDE (CO_2) OVER A TWO (2) HOUR PERIOD; AND

(B) FOR INCINERATORS FOR WHICH CONSTRUCTION OR MODIFICATION COMMENCED PRIOR TO JULY 1, 1979, 0.4 POUNDS OF PARTICULATE PER THOUSAND POUNDS OF FLUE GASES ADJUSTED TO FIFTY PERCENT (50%) EXCESS AIR.

(3) VISIBLE AND FUGITIVE EMISSION STANDARDS FOR INCINERATORS. NO OWNER OR OPERATOR OF ANY INCINERATOR SHALL CAUSE OR ALLOW UNBURNED WASTE OR ASH PARTICULATE EMISSIONS THAT ARE INDIVIDUALLY DISCERNIBLE BY THE HUMAN EYE MEASURED USING 40 CFR 60, APPENDIX A, REFERENCE METHOD 9 AND 40 CFR 60, APPENDIX A, REFERENCE METHOD 22.

[(d) "Fuel-burning equipment."

(d)(1) No "person" shall cause or permit the "emission" from "fuel-burning equipment" of "particulate matter" in excess of the limitations listed in table 18-D-1 below.

Table 18-D-1

Pounds of Particulate Matter per Million "BTU" of Heat Input	Type of Fuel	Type of "Source"
0.10	All	Permit required under section 22a-174-3 (except subsection (3)(g)(6))
0.14	"Residual Oil	Required to register under section 22a-174-2

		or to receive a permit under 22a-174-3(g)(6)
0.20	All except "residual oil"	All others

(d)(2) For purposes of this section, the heat input value used shall be the actual firing rate of the "fuel-burning equipment."

(d)(3) Fuel-burning "sources" which, as of the effective date of these regulations, have particulate control equipment in place must maintain such control equipment in proper operation.]

(e) PARTICULATE MATTER EMISSION STANDARDS FOR FUEL-BURNING EQUIPMENT.

(1) THE OWNER OR OPERATOR OF FUEL-BURNING EQUIPMENT SUBJECT TO SECTION 22A-174-3a OR FORMER SECTION 22A-174-3 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES SHALL EMIT NO MORE THAN 0.10 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT.

(2) THE OWNER OR OPERATOR OF FUEL-BURNING EQUIPMENT SUBJECT TO FORMER SECTION 22A-174-2 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES SHALL EMIT NO MORE THAN THE FOLLOWING PARTICULATE MATTER LEVELS:

(A) 0.20 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT IF THE FUEL BURNED IS ANTHRACITE COAL;

(B) 0.14 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT IF THE FUEL BURNED IS RESIDUAL OIL (NO. 4 OR NO. 6 OIL);

(C) 0.12 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT IF THE FUEL BURNED IS DISTILLATE OIL (NO. 2 OIL);

(D) 0.10 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT IF THE FUEL BURNED IS NATURAL GAS; OR

(E) 0.20 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT FOR ANY OTHER FUEL BURNED.

(3) NOTWITHSTANDING SUBDIVISIONS (1) AND (2) OF THIS SUBSECTION AND EXCEPT AS PROVIDED IN SUBSECTION (j) OF THIS SECTION, THE OWNER OR OPERATOR OF A STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE WITH A MAXIMUM CONTINUOUS BRAKE HORSEPOWER OUTPUT RATING, AS SPECIFIED BY THE MANUFACTURER, GREATER THAN OR EQUAL TO 175 BRAKE HORSEPOWER (BHP), SHALL EMIT NO MORE THAN:

(A) 0.1 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT OR COMBUST ONLY FUEL WITH A SULFUR CONTENT LESS THAN OR EQUAL TO 0.05% BY WEIGHT, IF THE STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE WAS MANUFACTURED PRIOR TO OR IN MODEL YEAR 1996; OR

(B) 0.1 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT IF THE STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE WAS MANUFACTURED AFTER MODEL YEAR 1996.

[(e) Process industries -- general.

(e)(1) No "person" shall cause or permit the "emission" of "particulate matter" in any one hour from any "source" in excess of the amount shown in Table 3-1 below for the process weight rate allocated to such "source," with the exception of "sources" specified in subsection (f).

Table 3-1

Process Weight Rate lbs./hr.	"Emission" Rate lbs./hr.	Process Weight Rate lbs./hr.	"Emission" Rate lbs./hr.
50	0.36	60,000	29.60
100	0.55	80,000	31.19
500	1.53	120,000	33.28
1,000	2.25	160,000	34.85
5,000	6.34	200,000	36.11
10,000	9.73	400,000	40.35
20,000	14.99	1,000,000	46.72

(e)(2) Interpolation of the data in Table 3-1 for the process weight rates up to 60,000 lbs./hr. shall be accomplished by the use of the equation:

$$\log E = \log 3.59 + .62 \log P$$

P equal to or less than 30 tons/hr. and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lbs/hr. shall be accomplished by the use of the equation:

$$\log E = \log 17.31 + .16 \log P$$

P greater than 30 tons/hr.
Where: E = "emission" in pounds per hour.
P = Process weight rate in tons per hour.

(e)(3) For the purpose of this regulation, process weight per hour is the total weight of all materials introduced into any specific process that may cause any "emission" of "particulate

matter." Solid fuels charged will be considered as part of the process weight, but liquid and gaseous fuels and combustion air will not. For a cyclical or batch operation, the process weight per hour will be derived by dividing the total process weight by the number of hours in one complete operation from the beginning of any given process to the completion thereof, excluding any time during which the equipment is idle. For a continuous operation, the process weight per hour will be derived by dividing the process weight for a typical period of time by the length of that period of time.

(e)(4) Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this regulation, the interpretation that results in the minimum value for "allowable emission" shall apply.

(e)(5) For purposes of the regulation, the total process weight from all similar process units at a plant or "premises" shall be used for determining the maximum "allowable emission" or "particulate matter" that passes through a "stack" or "stacks."

(e)(6) For the purposes of this regulation, when any material undergoes a series of operations which are capable of emitting "particulate matter" and which employ any combination of machines, equipment, or other devices used for processing the material either continuously or in batches, the total process weight for the series of operations shall be the weight of materials introduced to the series as a whole. Any material which is the product of any operation in the series shall not be counted as part of the process weight for any other operation in the series.]

(f) Industries using process sources – general.

(1) FOR THE PURPOSES OF THIS SUBSECTION, THE PROVISIONS OF SUBPARAGRAPHS (A) THROUGH (D) SHALL APPLY:

(A) “PROCESS WEIGHT” MEANS THE TOTAL WEIGHT, IN POUNDS, OF ALL MATERIALS INTRODUCED INTO ANY SPECIFIC PROCESS THAT MAY CAUSE THE EMISSION OF PARTICULATE MATTER, INCLUDING SOLID FUELS BURNED AND EXCLUDING COMBUSTION AIR, LIQUID FUELS AND GASEOUS FUELS;

(B) “PROCESS WEIGHT RATE” MEANS THE PROCESS WEIGHT FOR ANY SPECIFIC PROCESS MEASURED OVER A ONE (1) HOUR TIME PERIOD;

(C) THE PROCESS WEIGHT RATE OF A CYCLICAL OR BATCH OPERATION IS DERIVED BY DIVIDING THE PROCESS WEIGHT BY THE NUMBER OF HOURS IN ONE COMPLETE OPERATION OF THE PROCESS, EXCLUDING ANY TIME DURING WHICH THE EQUIPMENT IS IDLE; AND

(D) THE PROCESS WEIGHT RATE OF A CONTINUOUS OPERATION IS DERIVED BY DIVIDING THE PROCESS WEIGHT FOR A TIME PERIOD OF OPERATION BY THE LENGTH OF THAT PERIOD OF TIME.

(2) EXCEPT AS PROVIDED IN SUBSECTION (g) OF THIS SECTION, NO OWNER OR OPERATOR OF A PROCESS SOURCE SHALL CAUSE OR ALLOW THE EMISSION OF PARTICULATE MATTER TO THE AMBIENT AIR IN ANY ONE HOUR FROM SUCH SOURCE IN EXCESS OF THE EMISSION RATE CALCULATED AS REQUIRED BY SUBDIVISIONS (3) AND (4) OF THIS SUBSECTION.

(3) TO MATHEMATICALLY INTERPOLATE FROM TABLE 18-1 PROCESS WEIGHT RATES UP TO AND INCLUDING SIXTY THOUSAND POUNDS PER HOUR (60,000 LBS/HR), THE FOLLOWING EQUATION SHALL BE USED:

$$\text{Log } E = \text{Log } 3.59 + 0.62 \times \left(\text{Log } \frac{P}{2000} \right)$$

WHERE: P = PROCESS WEIGHT RATE IN POUNDS PER HOUR
E = EMISSION RATE IN POUNDS PER HOUR

(4) TO MATHEMATICALLY INTERPOLATE AND EXTRAPOLATE FROM TABLE 18-1 PROCESS WEIGHT RATES IN EXCESS OF SIXTY THOUSAND POUNDS PER HOUR (60,000 LBS/HR), THE FOLLOWING EQUATION SHALL BE USED:

$$\text{Log } E = \text{Log } 17.31 + 0.16 \times \left(\text{Log } \frac{P}{2000} \right)$$

WHERE: P = PROCESS WEIGHT RATE IN POUNDS PER HOUR
E = EMISSION RATE IN POUNDS PER HOUR

(5) TO DETERMINE COMPLIANCE WITH THE REQUIREMENTS OF THIS SUBSECTION, AN INTERPRETATION RESULTING IN THE LOWEST ALLOWABLE EMISSION RATE SHALL APPLY IF THE NATURE OF ANY PROCESS OR OPERATION, OR THE DESIGN OF ANY PROCESS SOURCE, ALLOWS MULTIPLE INTERPRETATIONS.

(6) TO DETERMINE THE MAXIMUM ALLOWABLE EMISSION RATE IN ACCORDANCE WITH THIS SUBSECTION FOR EMISSIONS THAT PASS THROUGH A STACK OR STACKS AT A PREMISES CONTAINING SEVERAL SIMILAR PROCESS SOURCES, THE TOTAL PROCESS WEIGHT SHALL INCLUDE ALL SUCH SIMILAR PROCESS UNITS.

(7) TO DETERMINE THE MAXIMUM ALLOWABLE EMISSION IN ACCORDANCE WITH THIS SUBSECTION FOR A PREMISES UTILIZING A SERIES OF OPERATIONS THAT EMPLOY COMBINATIONS OF MACHINES OR OTHER DEVICES TO PROCESS MATERIAL, EITHER CONTINUOUSLY OR IN BATCHES, THE TOTAL PROCESS WEIGHT FOR SUCH PREMISES SHALL BE THE WEIGHT OF ALL MATERIALS THAT MAY CAUSE PARTICULATE MATTER EMISSIONS AND ARE INTRODUCED INTO THE SERIES OF OPERATIONS, EXCLUDING

ALL MATERIAL THAT IS THE DESIRED END PRODUCT OF ANY SUCH SERIES OF OPERATIONS.

TABLE 18-1. INTERPOLATION/EXTRAPOLATION TABLE FOR DETERMINING PARTICULATE MATTER EMISSION RATES AND PROCESS WEIGHT RATES FOR INDUSTRIES USING PROCESS SOURCES -- GENERAL.

PROCESS WEIGHT RATE (POUNDS PER HOUR)	EMISSION RATE (POUNDS PER HOUR)
50	0.36
100	0.55
500	1.53
1,000	2.25
5,000	6.34
10,000	9.73
20,000	14.99
60,000	29.60
80,000	31.19
120,000	33.28
160,000	34.85
200,000	36.11
400,000	40.35
1,000,000	46.72

[(f) Process industries -- specific.

(f)(1) "Emission standards" (from cupolas). No "person shall cause or allow the operation of any iron foundry cupola unless such cupola is equipped with gas-cleaning devices and so operated as to remove ninety percent (90%) by weight of all "particulate matter" in the cupola discharge gases, or to release not more than one and seven-tenths (1.7) of a pound of "particulate matter" per ton of iron produced, whichever is more stringent. Gases, vapors and gas-entrained effluents from such cupolas shall be incinerated at a minimum temperature of 1300 degrees Fahrenheit for a period of not less than three-tenths of a second.

(f)(2) "Emission standards" (hot mix asphalt plants). No "person" shall cause or allow the "emission" of "particulate matter" from hot mix asphalt plants in excess of one tenth of a pound per ton of asphalt produced. In addition, the process must conform to subsection (b) of this regulation.

(f)(3) "Emission standards" (foundry sand). No "person" shall cause or allow the operation of a foundry sand process unless such process conforms to subsection (b) of this regulation and is equipped with dust control facilities and so operated as to remove ninety percent (90%) of the "particulate matter" from the foundry sand process, or to emit not more than seventy-five hundredths (0.75) of a pound of "particulate matter" per ton of material cast.

(f)(4) "Emission standards" (concrete batching). No "person" shall cause or allow the operation of a concrete batching process unless such process conforms to subsection (b) of this regulation and is equipped with "fugitive dust" control facilities with a collection efficiency of 90 percent or 0.02 pounds per cubic yard of concrete, whichever results in less "emission."]

(g) Industries using process sources – specific.

(1) IRON FOUNDRY CUPOLA. FOR THE PURPOSES OF THIS SUBDIVISION, "IRON FOUNDRY CUPOLA" MEANS A FURNACE USED IN THE IRON FOUNDRY INDUSTRY THAT USES COKE, A DERIVATIVE OF COAL, AS FUEL. NO OWNER OR OPERATOR SHALL CAUSE OR ALLOW THE OPERATION OF ANY IRON FOUNDRY CUPOLA UNLESS:

(A) PARTICULATE MATTER CONTROL MEASURES AND/OR CONTROL EQUIPMENT REMOVE AT LEAST NINETY PERCENT (90%) BY WEIGHT OF ALL PARTICULATE MATTER IN THE CUPOLA DISCHARGE GASES, OR PARTICULATE MATTER EMISSIONS ARE LESS THAN OR EQUAL TO 1.7 POUNDS OF PARTICULATE MATTER PER TON OF IRON PRODUCED, WHICHEVER PRACTICE OR COMBINATION OF PRACTICES RESULTS IN THE LOWEST PARTICULATE MATTER EMISSIONS; AND

(B) GASES, VAPORS AND GAS-ENTRAINED EFFLUENTS FROM SUCH CUPOLAS ARE INCINERATED AT A MINIMUM TEMPERATURE OF ONE THOUSAND THREE HUNDRED (1300) DEGREES FAHRENHEIT FOR A PERIOD OF NOT LESS THAN THREE-TENTHS (0.3) OF A SECOND.

(2) HOT MIX ASPHALT PLANT. NO OWNER OR OPERATOR SHALL CAUSE OR ALLOW THE OPERATION OF ANY HOT MIX ASPHALT PLANT UNLESS:

(A) PARTICULATE MATTER EMISSIONS ARE LESS THAN 0.1 POUNDS OF PARTICULATE MATTER PER TON OF ASPHALT PRODUCED; AND

(B) THE OPERATION CONFORMS TO THE REQUIREMENTS SET FORTH IN SUBSECTION (c) OF THIS SECTION.

(3) FOUNDRY SAND PROCESS. NO OWNER OR OPERATOR SHALL CAUSE OR ALLOW THE OPERATION OF A FOUNDRY SAND PROCESS UNLESS:

(A) PARTICULATE MATTER CONTROL MEASURES AND/OR CONTROL EQUIPMENT REMOVE AT LEAST NINETY PERCENT (90%) OF ALL

AIRBORNE PARTICULATE MATTER FROM SUCH PROCESS, OR PARTICULATE MATTER EMISSIONS ARE LESS THAN 0.75 POUNDS OF PARTICULATE MATTER PER TON OF MATERIAL CAST, WHICHEVER PRACTICE OR COMBINATION OF PRACTICES RESULTS IN THE LOWEST PARTICULATE MATTER EMISSIONS; AND

(B) THE OPERATION CONFORMS TO THE REQUIREMENTS SET FORTH IN SUBSECTION (c) OF THIS SECTION.

(4) CONCRETE BATCHING PROCESS. NO OWNER OR OPERATOR SHALL CAUSE OR ALLOW THE OPERATION OF A CONCRETE BATCHING PROCESS UNLESS:

(A) PARTICULATE MATTER CONTROL MEASURES AND/OR CONTROL EQUIPMENT REMOVE AT LEAST NINETY PERCENT (90%) OF ALL AIRBORNE PARTICULATE MATTER OR 0.02 POUNDS OF PARTICULATE MATTER PER CUBIC YARD OF CONCRETE, WHICHEVER PRACTICE OR COMBINATION OF PRACTICES RESULTS IN THE LOWEST PARTICULATE MATTER EMISSIONS; AND

(B) THE OPERATION CONFORMS TO THE REQUIREMENTS SET FORTH IN SUBSECTION (c) OF THIS SECTION.

(h) CONTROL TECHNOLOGY DETERMINATIONS.

TO IMPLEMENT A CONTROL TECHOLOGY DETERMINATION MADE BY THE COMMISSIONER, THE COMMISSIONER MAY MODIFY OR REVISE A PERMIT OR ISSUE AN ORDER TO THE OWNER OR OPERATOR OF A STATIONARY SOURCE FOR WHICH CONSTRUCTION OR MAJOR MODIFICATION COMMENCED AFTER JUNE 1, 1972 THAT REQUIRES MORE STRINGENT EMISSIONS LIMITATIONS THAN THOSE SET FORTH IN SUBDVISIONS (b)(1) AND (b)(2) OF THIS SECTION IF SUCH CONTROL TECHNOLOGY DETERMINATION DOES NOT RESULT IN A VIOLATION OF THE APPLICABLE PROVISIONS OF 40 CFR 52, 60, 61, 62 OR 63.

(i) HAZARDOUS AIR POLLUTANTS.

NOTHING IN THIS SECTION SHALL BE CONSTRUED TO RELIEVE AN OWNER OR OPERATOR FROM COMPLYING WITH ALL EMISSIONS LIMITATIONS FOR HAZARDOUS AIR POLLUTANTS, HAZARDOUS MATERIALS OR OTHER HAZARDOUS SUBSTANCES.

(j) EXCEPTED ACTIVITIES.

(1) THE OWNER OR OPERATOR OF A STATIONARY SOURCE SHALL NOT BE SUBJECT TO THE VISIBLE EMISSIONS STANDARDS OF SUBDIVISION (b)(2) OF THIS SECTION FOR MEASUREMENTS OF OPACITY USING OPACITY CEM EQUIPMENT DURING A PERIOD OF STARTUP, SHUTDOWN OR MALFUNCTION; COMMISSIONER-APPROVED STACK TESTING; OR INTENTIONAL SOOTBLOWING, FUEL SWITCHING OR SUDDEN LOAD

CHANGING DONE IN ACCORDANCE WITH GOOD ENGINEERING PRACTICES PROVIDED THAT:

(A) CONSTRUCTION COMMENCED PRIOR TO AUGUST 17, 1971;

(B) THE OWNER OR OPERATOR IS REQUIRED BY PERMIT, ORDER OR REGULATION TO INSTALL, OPERATE AND MAINTAIN OPACITY CEM EQUIPMENT AT SUCH STATIONARY SOURCE, AND THE OWNER OR OPERATOR IS IN COMPLIANCE WITH SUCH PERMIT, ORDER OR REGULATION WITH REGARD TO SUCH OPACITY CEM EQUIPMENT;

(C) THE PERIOD OF EXCEPTION FROM THE VISIBLE EMISSIONS STANDARDS OF SUBDIVISION (b)(2) OF THIS SECTION DOES NOT EXCEED ONE-HALF OF ONE PERCENT (0.5%) OF THE TOTAL OPERATING HOURS OF SUCH STATIONARY SOURCE DURING ANY CALENDAR QUARTER; AND

(D) THE OWNER OR OPERATOR OF THE STATIONARY SOURCE DOES NOT CAUSE OR ALLOW VISIBLE EMISSIONS IN EXCESS OF SIXTY PERCENT (60%) OPACITY DURING ANY SIX-MINUTE BLOCK AVERAGE OF THE PERIOD OF EXCEPTION FROM THE VISIBLE EMISSIONS STANDARDS OF SUBDIVISION (b)(2) OF THIS SECTION.

(2) THE OWNER OR OPERATOR OF AN EMISSIONS UNIT THAT IS SUBJECT TO A VISIBLE EMISSIONS STANDARD PURSUANT TO A NEW SOURCE PERFORMANCE STANDARD SET FORTH IN 40 CFR 60 AND PROMULGATED ON OR AFTER AUGUST 17, 1971 SHALL NOT BE SUBJECT TO THE VISIBLE EMISSIONS STANDARDS OF SUBDIVISION (b)(1) AND (b)(2) OF THIS SECTION.

(3) EXCEPT FOR THE USE OF OPEN-BODIED TRUCKS AND TRAILERS, WHICH IS SUBJECT TO THE REQUIREMENTS OF (c)(1)(D), A PERSON ENGAGED IN AGRICULTURAL OPERATIONS SHALL BE EXEMPT FROM THE REQUIREMENTS OF SUBDIVISION (c)(1) OF THIS SECTION PROVIDED SUCH OPERATIONS FOLLOW GENERALLY ACCEPTED AGRICULTURAL PRACTICES AND ARE IN COMPLIANCE WITH SECTION 19a-341 OF THE GENERAL STATUTES.

(4) THE OWNER OR OPERATOR OF ANY OF THE FOLLOWING SOURCES SHALL BE EXEMPT FROM THE REQUIREMENTS OF SUBDIVISION (b)(3) OF THIS SECTION:

(A) AN ANTIQUE MOBILE SOURCE OVER THIRTY YEARS OLD;

(B) A MOBILE SOURCE USED EXCLUSIVELY FOR RACING;

(C) A MOBILE SOURCE WHILE IT IS UNDERGOING A MECHANICAL REPAIR THAT AFFECTS THE EMISSION OF VISIBLE AIR POLLUTANTS FROM SUCH SOURCE;

(D) AN AIRCRAFT;

(E) A LOCOMOTIVE OPERATING ON RAILS;

(F) A VESSEL OPERATING ON WATER; AND

(G) COMMONLY USED RESIDENTIAL LAWN, GARDEN AND SNOW REMOVAL EQUIPMENT.

(5) THE OPERATION OF EQUIPMENT TO GENERATE SMOKE OR FOG BY ANY BRANCH OF THE UNITED STATES MILITARY OR ANY OTHER FEDERAL OR STATE AGENCY SHALL BE EXEMPT FROM THE REQUIREMENTS OF SUBSECTIONS (b) AND (e) OF THIS SECTION PROVIDED SUCH OPERATION IS LIMITED TO TRAINING EXERCISES OR THE PREPARATION THEREOF.

(6) THE OWNER OR OPERATOR OF ANY STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE WITH A MAXIMUM CONTINUOUS BRAKE HORSEPOWER OUTPUT RATING, AS SPECIFIED BY THE MANUFACTURER, GREATER THAN OR EQUAL TO 175 BHP SHALL NOT BE SUBJECT TO THE PARTICULATE MATTER EMISSIONS STANDARDS OF SUBSECTION (e) OF THIS SECTION PROVIDED THAT SUCH OWNER OR OPERATOR CERTIFIES THE FOLLOWING, IN WRITING, TO THE COMMISSIONER:

(A) THE STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE IS AN EMERGENCY ENGINE, AS DEFINED IN SUBSECTION (a)(2) OF SECTION 22a-174-22 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES; AND

(B) THE FOLLOWING CERTIFICATION:

"I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS THERETO, AND I CERTIFY THAT BASED ON REASONABLE INVESTIGATION, INCLUDING MY INQUIRY OF THOSE INDIVIDUALS RESPONSIBLE FOR OBTAINING THE INFORMATION, THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF. I UNDERSTAND THAT ANY FALSE STATEMENT MADE IN THE SUBMITTED INFORMATION MAY BE PUNISHABLE AS A CRIMINAL OFFENSE UNDER SECTION 22a-175 OF THE CONNECTICUT GENERAL STATUTES, UNDER SECTION 53a-157b OF THE CONNECTICUT GENERAL STATUTES AND IN ACCORDANCE WITH ANY APPLICABLE STATUTE."

(7) THE OWNER OR OPERATOR OF A STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE WITH A MAXIMUM CONTINUOUS BRAKE HORSEPOWER OUTPUT RATING, AS SPECIFIED BY THE MANUFACTURER, OF LESS THAN 175 BHP SHALL NOT BE SUBJECT TO THE REQUIREMENTS OF SUBSECTION (e) OF THIS SECTION.

(8) THE REQUIREMENTS OF SUBSECTIONS (e), (f) AND (g) OF THIS SECTION SHALL NOT APPLY TO THE OWNER OR OPERATOR OF A SOURCE SUBJECT TO MORE STRINGENT BACT REQUIREMENTS, PROVIDED THAT THE SOURCE IS OPERATED IN COMPLIANCE WITH A BACT DETERMINATION.

(9) A PERSON CONDUCTING OPEN BURNING PURSUANT TO SECTION 22a-174(f) OF THE CONNECTICUT GENERAL STATUTES OR REGULATIONS ADOPTED PURSUANT TO PUBLIC ACT NO. 00-1 SHALL NOT BE SUBJECT TO THE REQUIREMENTS OF THIS SECTION.

(10) IF THE OWNER OR OPERATOR OF A SOURCE POSSESSES DOCUMENTATION DEMONSTRATING THAT THE PRESENCE OF UNCOMBINED WATER, SUCH AS WATER VAPOR, IS THE ONLY REASON FOR THE FAILURE OF AN EMISSION TO COMPLY WITH THE REQUIREMENTS OF THIS SECTION, THEN THE PROVISIONS OF THIS SECTION SHALL NOT APPLY TO THAT EMISSION.

(11) THE OWNER OR OPERATOR OF A MUNICIPAL WASTE COMBUSTOR AS DEFINED IN SECTION 22a-174-38 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES SHALL BE EXEMPT FROM THE REQUIREMENTS OF THIS SECTION.

Sec. 2.

Section 22a-174-38 of the Regulations of Connecticut State Agencies is amended by adding new subdivision (13) to subsection (c) as follows:

(13) NOTWITHSTANDING SUBDIVISION (12) OF THIS SUBSECTION, THE OWNER OR OPERATOR OF A RECIPROCATING GRATE WASTE TIRE FIRED INCINERATOR/BOILER SHALL CORRECT ALL EMISSION LIMITS, EXCEPT FOR THOSE IDENTIFIED FOR OPACITY, TO 12% CO_2.

Sec. 3.

Section 22a-174-38 of the Regulations of Connecticut State Agencies is amended by revising subdivisions (6) and (7) of subsection (d) as follows:

(6) Any MWC owner or operator intending to use ERCs pursuant to this subsection shall:

(A) No later than the first day of each calendar month, calculate, in tons, ERCs per month for each MWC unit, the projected maximum number of ERCs required for that calendar month using the formulas provided in subparagraph (E) of subdivision (4) of this subsection;

(B) No later than the first day of each calendar month, acquire a sufficient number of ERCs approved by the commissioner to match the quantity needed as determined according to subparagraph (A) of this subdivision. The quantity needed may be satisfied with unused ERCs created or acquired in previous months, subject to the restrictions of subparagraph (D) of this subdivision. Credits to be used during the ozone season must have been generated during the ozone season;

(C) No later than the twentieth day of each month, calculate and record the actual quantity of ERCs used in the preceding calendar month;

(D) Maintain documentation demonstrating that ERCs used during the ozone season were generated during an ozone season. An ERC generator certification shall be sufficient for such demonstration;

(E) Prior to May 1, 2001, any ERCs used for meeting the emission limits contained in subdivision (8) of subsection (c) of this section shall HAVE BEEN created within [the two (2) year period preceding the date] THE TWO CALENDAR YEARS PRECEDING THE YEAR of such ERC use; [and]

(F) On and after May 1, 2001, any ERCs used to meet the emission limits contained herein shall [be] HAVE BEEN created on or after May 1, 1999[.]; AND

(G) FOR THE PURPOSES OF SUBPARAGRAPHS (E) AND (F) OF THIS SUBDIVISION, AN ERC IS CONSIDERED CREATED ON THE DATE THE NOx EMISSION REDUCTION OCCURS AT A PLANT OR SOURCE.

(7) No later than [January 30] MARCH 1 of each year, the MWC owner or operator shall provide to the commissioner a report containing the following information:

(A) A record for the previous calendar year of each use, sale or other transfer of any and all of the ERCs created in accordance with this subsection; and

(B) A record for the previous calendar year of actual NOx emissions from the facility and each MWC unit, the quantity of ERCs created and the quantity of ERCs used, on a monthly basis and an ozone season basis.

Sec. 4.

Section 22a-174-38 of the Regulations of Connecticut State Agencies is amended by revising subdivision (10) of subsection (k) as follows:

(10) The test reports and supporting calculations documenting the results of all annual performance tests conducted to determine compliance with the emission limits specified in this section for particulate matter, [opacity,] cadmium, lead, mercury, dioxin/furan emissions, hydrogen chloride, and fugitive ash shall be recorded. The maximum demonstrated municipal waste combustor unit load and maximum demonstrated particulate matter control device temperature (for each particulate

matter control device) shall be recorded for each performance test for dioxin/furan emissions. The relationship between carbon dioxide and oxygen concentrations shall be recorded if the relationship is reestablished during the annual performance test.

Sec. 5.

Section 22a-174-19 of the Regulations of Connecticut State Agencies is amended by revising subsection (f) as follows:

(f) Other process sources. Notwithstanding the provisions of section [22a-174-18(e)] 22a-174-18(f) OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES, process sources not covered in subsections (b) through (e) [inclusive] OF THIS SECTION shall not emit sulfur oxides (expressed as sulfur dioxide) in the stack effluent in concentrations which exceed 500 parts per million at standard temperature and pressure.

Sec. 6.

Section 22a-174-22 of the Regulations of Connecticut State Agencies is amended by revising subdivision (21) of subsection (a) as follows:

(21) "Waste combustor" means an incinerator as defined in subsection [22a-174-18(c)] 22a-174-18(a) of the Regulations of Connecticut State Agencies, a resources recovery facility as defined in section 22a-207 of the Connecticut General Statutes, or a sewage sludge incinerator. The term does not include a flare or an industrial fume incinerator.

STATEMENT OF PURPOSE:
Section 1 of this amendment revises R.C.S.A. section 22a-174-18 to: 1) specify the form and averaging time of the existing opacity standards for stationary sources; 2) add particulate matter standards appropriate to fuel-burning equipment using certain fossil fuels; 3) add particulate matter emissions standards and requirements for stationary reciprocating internal combustion engines; 4) add exemptions from the visible emissions standards for certain sources during certain periods of operation, including sources subject to federal New Source Performance Standards for opacity and smoke generating units used for training purposes by a branch of the U.S. military; 5) add an exemption from the section for municipal waste combustors to recognize of the promulgation of R.C.S.A. section 22a-174-38, which includes opacity and particulate matter standards for these sources; and 6) conform the overall format and language to current practices.

Section 2 of this amendment adds a provision to subsection (c) of R.C.S.A. section 22a-174-38 regarding the calculation of emission levels for reciprocating grate waste tire-fired incinerators.

Section 3 of this amendment clarifies the use of emission reduction credits in the NOx trading program established by subsection (d) of R.C.S.A. section 22a-174-38 and changes the reporting date for submission of the annual NOx trading report.

Section 4 of this amendment deletes opacity from the list of pollutants in R.C.S.A. section 22a-174-38(k)(10) for which owners or operators must keep records of annual performance tests. In

accordance with EPA guidelines for municipal waste combustors, only an initial performance test is required for opacity. Subsequent to the initial performance test, compliance with the opacity limit is measured using data from continuous emissions monitoring equipment.

Sections 5 and 6 of this amendment correct internal citations within R.C.S.A. sections 22a-174-19(f) and 22a-174-22(a)(21) consistent with the adoption of Section 1 of this amendment.

Attachment 3

Final Text of Amendment

Section 1.

Section 22a-174-18 of the Regulations of Connecticut State Agencies is amended, as follows:

Section 22a-174-18. Control of particulate matter and visible emissions.

[(a) Visible "emissions."

(a)(1) Visible "emission" restrictions for "stationary sources."

(i) No "person" shall cause or permit the "emission" of visible "air pollutants" of a shade or density equal to or darker than that designated as No. 1 on the "Ringelmann chart" or 20 percent "opacity."

(ii) A "person" may discharge "air pollutants" into the atmosphere from any "source" of "emission" for a period or periods aggregating not more than 5 minutes in any 60 minutes, provided that said "air pollutants" are of a shade or density not darker than No. 2 on the "Ringelmann chart" or 40 percent "opacity."

(iii) Open burning conducted under provisions of section 22a-174-17 shall not be subject to this subsection.

(a)(2) Visible "emission" restrictions for "mobile sources."

(i) No "person" shall cause or permit the "emission" of visible "air pollutants" from gasoline-powered "mobile sources" for longer than five (5) consecutive seconds.

(ii) No "person" shall cause or permit the "emission" of clearly visible "air pollutants" (comparable to a shade or density equal to or darker than No. 1 on the "Ringelmann chart" or 20 percent "opacity") from diesel powered motor vehicles for more than ten (10) consecutive seconds, during which time the maximum shade or density of "emissions" shall be no darker than No.2 on the "Ringelmann chart" or 40 percent "opacity."

(a)(3) Exceptions for uncombined water. Where the presence of uncombined water, such as water vapor, is the only reason for the failure of an "emission" to meet the requirements of this regulation then the provisions of this regulation shall not apply.

(a)(4) The following shall be exempt from the requirements of subsection (a)(2):

(i) Antique automobiles over 30 years old;

(ii) Vehicles used exclusively for racing; and

(iii) "Mobile sources" in the process of being repaired.

(a)(5) "Emissions" from stationary or idling "mobile sources." No "mobile source" engine shall be allowed to operate for more than three (3) consecutive minutes when the "mobile source" is not in motion except as follows:

(i) When a "mobile source" is forced to remain motionless because of traffic conditions or mechanical difficulties over which the "operator" has no control;

(ii) When it is necessary to operate heating, cooling or auxiliary equipment installed on the "mobile source" when such equipment is necessary to accomplish the intended use of the "mobile source";

(iii) To bring the "mobile source" to the manufacturer's recommended operating temperature;

(iv) When the outdoor temperature is below twenty (20) degrees Fahrenheit;

(v) When the "mobile source" is being repaired.

(a)(6) Subsections (a)(2) and (a)(5) shall not apply to aircraft, locomotives operating on rails, vessels for transportation on water, lawnmowers, snowblowers, and other small home appliances.]

(a) DEFINITIONS. FOR THE PURPOSES OF THIS SECTION, THE FOLLOWING DEFINITIONS SHALL APPLY:

(1) “CALENDAR QUARTER” MEANS A CONSECUTIVE THREE (3) MONTH PERIOD (NON-OVERLAPPING) BEGINNING ON JANUARY 1, APRIL 1, JULY 1 OR OCTOBER 1;

(2) “FLUE-FED INCINERATOR” MEANS AN INCINERATOR WITH A SINGLE FLUE THAT SERVES AS BOTH THE CHARGING CHUTE AND THE FLUE TO TRANSPORT COMBUSTION PRODUCTS TO THE ATMOSPHERE;

(3) “INCINERATOR” MEANS, NOTWITHSTANDING SECTION 22a-174-1 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES, ANY DEVICE, APPARATUS, EQUIPMENT OR STRUCTURE USED FOR DESTROYING, REDUCING OR SALVAGING BY FIRE ANY MATERIAL OR SUBSTANCE, INCLUDING BUT NOT LIMITED TO, REFUSE, RUBBISH, GARBAGE, TRADE WASTE, DEBRIS OR SCRAP, OR FACILITIES FOR CREMATING HUMAN OR ANIMAL REMAINS;

(4) “ONE-MINUTE BLOCK AVERAGE” MEANS, FOR MEASUREMENTS TAKEN AT A SOURCE USING OPACITY CEM EQUIPMENT, THE AVERAGE OF SIX (6) OR MORE DATA POINTS EQUALLY SPACED OVER ONE MINUTE; AND, FOR MEASUREMENTS TAKEN USING 40 CFR 60, APPENDIX A, REFERENCE METHOD 9, THE AVERAGE OF FOUR OR MORE DATA POINTS EQUALLY SPACED OVER A ONE MINUTE PERIOD;

(5) "SHUTDOWN" MEANS THE PERIOD OF TIME BEGINNING WHEN THE OWNER OR OPERATOR OF A STATIONARY SOURCE INITIATES THE PROCESS OF CEASING THE OPERATION OF SUCH SOURCE AND ENDING WHEN OPERATION THEREOF HAS COMPLETELY CEASED;

(6) "SIX-MINUTE BLOCK AVERAGE" MEANS, FOR MEASUREMENTS TAKEN AT A SOURCE USING OPACITY CEM EQUIPMENT, THE AVERAGE OF THIRTY-SIX (36) OR MORE DATA POINTS EQUALLY SPACED OVER A SIX (6) MINUTE PERIOD; AND, FOR MEASUREMENTS TAKEN USING 40 CFR 60, APPENDIX A, REFERENCE METHOD 9, THE AVERAGE OF TWENTY-FOUR OR MORE DATA POINTS EQUALLY SPACED OVER A SIX (6) MINUTE PERIOD;

(7) "STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE" MEANS ANY SPARK IGNITED OR COMPRESSION IGNITED ENGINE THAT IS ALSO A STATIONARY SOURCE AS DEFINED IN SECTION 22a-174-1 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES; AND

(8) "STARTUP" MEANS THE TIME BEGINNING WHEN THE OWNER OR OPERATOR OF A STATIONARY SOURCE INITIATES THE PROCESS OF SETTING SUCH SOURCE INTO OPERATION.

(b) VISIBLE EMISSION STANDARDS.

(1) STATIONARY SOURCES WITHOUT OPACITY CEM EQUIPMENT. EXCEPT AS PROVIDED IN SUBSECTION (j) OF THIS SECTION, AN OWNER OR OPERATOR OF ANY STATIONARY SOURCE WITHOUT OPACITY CEM EQUIPMENT FOR WHICH OPACITY IS MEASURED USING VISUAL OBSERVATION SHALL NOT EXCEED THE FOLLOWING VISIBLE EMISSIONS LIMITS:

(A) TWENTY PERCENT (20%) OPACITY DURING ANY SIX-MINUTE BLOCK AVERAGE AS MEASURED BY 40 CFR 60, APPENDIX A, REFERENCE METHOD 9; OR

(B) FORTY PERCENT (40%) OPACITY AS MEASURED BY 40 CFR 60, APPENDIX A, REFERENCE METHOD 9, REDUCED TO A ONE-MINUTE BLOCK AVERAGE.

(2) STATIONARY SOURCES WITH OPACITY CEM EQUIPMENT. EXCEPT AS PROVIDED IN SUBSECTION (j) OF THIS SECTION, AN OWNER OR OPERATOR OF A STATIONARY SOURCE FOR WHICH OPACITY IS MEASURED USING OPACITY CEM EQUIPMENT SHALL NOT EXCEED THE FOLLOWING VISIBLE EMISSIONS LIMITS:

(A) TWENTY PERCENT (20%) OPACITY DURING ANY SIX-MINUTE BLOCK AVERAGE; OR

(B) FORTY PERCENT (40%) OPACITY DURING ANY ONE-MINUTE BLOCK AVERAGE.

(3) MOBILE SOURCES. EXCEPT AS PROVIDED IN SUBSECTION (j) OF THIS SECTION, NO PERSON SHALL CAUSE OR ALLOW:

(A) ANY VISIBLE EMISSIONS FROM A GASOLINE POWERED MOBILE SOURCE FOR LONGER THAN FIVE (5) CONSECUTIVE SECONDS;

(B) VISIBLE EMISSIONS FROM A DIESEL POWERED MOBILE SOURCE OF A SHADE OR DENSITY EQUAL TO OR DARKER THAN TWENTY PERCENT (20%) OPACITY FOR MORE THAN TEN (10) CONSECUTIVE SECONDS, DURING WHICH TIME THE MAXIMUM SHADE OR DENSITY SHALL BE NO DARKER THAN FORTY PERCENT (40%) OPACITY; OR

(C) A MOBILE SOURCE TO OPERATE FOR MORE THAN THREE (3) CONSECUTIVE MINUTES WHEN SUCH MOBILE SOURCE IS NOT IN MOTION, EXCEPT AS FOLLOWS:

(i) WHEN A MOBILE SOURCE IS FORCED TO REMAIN MOTIONLESS BECAUSE OF TRAFFIC CONDITIONS OR MECHANICAL DIFFICULTIES OVER WHICH THE OPERATOR HAS NO CONTROL,

(ii) WHEN IT IS NECESSARY TO OPERATE DEFROSTING, HEATING OR COOLING EQUIPMENT TO ENSURE THE SAFETY OR HEALTH OF THE DRIVER OR PASSENGERS,

(iii) WHEN IT IS NECESSARY TO OPERATE AUXILIARY EQUIPMENT THAT IS LOCATED IN OR ON THE MOBILE SOURCE TO ACCOMPLISH THE INTENDED USE OF THE MOBILE SOURCE,

(iv) TO BRING THE MOBILE SOURCE TO THE MANUFACTURER'S RECOMMENDED OPERATING TEMPERATURE,

(v) WHEN THE OUTDOOR TEMPERATURE IS BELOW TWENTY DEGREES FAHRENHEIT (20 DEGREES F),

(vi) WHEN THE MOBILE SOURCE IS UNDERGOING MAINTENANCE THAT REQUIRES SUCH MOBILE SOURCE BE OPERATED FOR MORE THAN THREE (3) CONSECUTIVE MINUTES, OR

(vii) WHEN A MOBILE SOURCE IS IN QUEUE TO BE INSPECTED BY U.S. MILITARY PERSONNEL PRIOR TO GAINING ACCESS TO A U.S. MILITARY INSTALLATION.

[(b) "Fugitive dust."]

(c) CONTROL OF AIRBORNE PARTICULATE MATTER AND FUGITIVE PARTICULATE MATTER.

[(b)](1) No ["]person["] shall cause or [permit] ALLOW any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished without taking reasonable precautions to prevent ["]particulate matter["] from becoming airborne. Such reasonable precautions shall be in accordance with good industrial practice as determined by the ["Commissioner"] COMMISSIONER and shall include, but not be limited to[, the following]:

[(i)](A) [Use, where possible,] THE USE of water [or chemicals for control dust in] OR OTHER APPROPRIATE MATERIAL TO PREVENT AIRBORNE PARTICULATE MATTER GENERATED BY the demolition of [existing] buildings or OTHER structures;[,] construction operations; [the grading of roads or] the clearing OR GRADING of land; OR THE GRADING, CONSTRUCTION OR IMPROVEMENT OF ROADS;

[(ii)](B) [Application] THE APPLICATION of asphalt, [oil,] water, suitable [chemicals] MATERIALS or [coverage on materials stockpiles] COVERS TO MATERIAL STOCKPILES and other surfaces [which] THAT can give rise to airborne [dusts] PARTICULATE MATTER;

[(iii)](C) [Installation and] THE use of hoods, fans, [AND] fabric filters OR OTHER DEVICES to enclose and vent the handling of [dusty] materials[. Adequate containment methods shall be employed during sandblasting or other similar operations;] THAT CAN GIVE RISE TO AIRBORNE PARTICULATE MATTER;

[(iv)](D) [Covering, at all times when] THE COVERING, WHILE in motion, OF open-bodied trucks,[and trains] OPEN-BODIED TRAILERS AND RAILROAD CARS transporting materials [likely to give rise to airborne dusts;] CAPABLE OF GIVING RISE TO AIRBORNE PARTICULATE MATTER;

[(v)](E) The prompt removal of earth or other material [from paved streets onto which earth or other material has been deposited] DEPOSITED ONTO PAVED STREETS by trucking [or], earth moving equipment, erosion [by water,] or other means; AND

(F) THE USE OF CONTAINMENT METHODS FOR SANDBLASTING OR SIMILAR OPERATIONS.

[(b)(2) Agricultural activities are exempt from the provisions of subsection (b)(1). However, agricultural practices such as tilling of land and application of fertilizers shall be conducted in such manner as to minimize dust from becoming airborne.

(b)(3)](2) No ["]person["] shall cause or [permit the discharge of visible "emissions" beyond the lot line of the property on which the "emissions" originate when:] ALLOW THE EMISSION OF VISIBLE PARTICULATE MATTER BEYOND

THE LEGAL BOUNDARY OF THE PROPERTY ON WHICH SUCH EMISSION OCCURS THAT EITHER:

[(i)] (A) [The “emissions” remain visible and exist near ground level outside the property boundaries;] REMAINS NEAR GROUND LEVEL BEYOND SUCH PROPERTY BOUNDARY; or

[(ii)] (B) [The “emissions” remain visible and impinge on a building or structure so] DIMINISHES the health, safety or enjoyment of [life of the public may be diminished] PEOPLE USING A BUILDING OR STRUCTURE LOCATED BEYOND THE PROPERTY BOUNDARY.

[(b)(4)](3) No PERSON SHALL EMIT [“]particulate matter[” shall be emitted] into the [open] AMBIENT air in such a manner as to cause a nuisance.

[(c) Incineration.

(c)(1) Definitions. The following terms as used in subsections (c)(1) to (c)(6) inclusive shall have the following meanings:

(i) "Incinerator" means any device, apparatus, equipment or structure used for destroying, reducing or salvaging by fire any material or substance, including but not limited to, refuse, rubbish, garbage, trade waste, debris or scrap, or facilities for cremating human or animal remains. "Small incinerator" means an "incinerator" designed and used to burn waste materials of types 0, 1, 2, and 3 only, in all capacities not exceeding two thousand pounds per hour of waste material input. "Special incinerator" means an "incinerator" designed and used to burn pathological waste type 4 or trade waste types 5 and 6 of any burning capacity. Crematories are included in this category. "Large incinerator" means an "incinerator" owned or operated by any government or any "person," firm or corporation, designed and used to burn waste materials generated by the public of any and all types, 0 to 6 inclusive, with a burning capacity in excess of two thousand pounds per hour of waste material input.

(ii) "New incinerator" means an incinerator which is a "new source," as defined in section 22a-174-1(r).

(iii) "Existing incinerator" means any "incinerator" which is not a "new source," as defined in section 22a-174-1(r).

(iv) "Flue-fed incinerator" means an "incinerator" provided with a single flue which serves as both the charging chute and the flue to transport products of combustion to the atmosphere.

(v) "Liquid particulates" means particles which have volume but are not of rigid shape and which upon collection tend to coalesce and create uniform homogeneous films upon the surface of the collecting media.

(vi) "Solid particulates" means particles of rigid shape and definite volume.

(vii) "Smoke" means and includes small gas-borne particles, excluding water vapor, arising from a process of combustion in sufficient number to be observable.

(viii) "Air pollution control equipment" means any device which prevents or controls the "emission" of any air contaminant.

(ix) "Type O waste" means trash, a mixture of highly combustible waste such as paper, cardboard, cartons, wood boxes and combustible floor sweepings, from commercial and industrial activities. The mixture may contain up to ten percent by weight of plastic bags, coated paper, laminated paper, treated corrugated cardboard, oily rags and plastic or rubber scraps. This type of waste contains approximately ten percent moisture and five percent incombustible solids and has a heating value of approximately eighty-five hundred "BTU" per pound as fired.

(x) "Type 1 waste" means rubbish, a mixture of combustible waste such as paper, cardboard cartons, wood scrap, foliage and combustible floor sweepings from domestic, commercial and industrial activities. The mixture may contain up to twenty percent by weight of restaurant or cafeteria waste, but contains little or no treated paper, plastic or rubber wastes. This type of waste contains approximately twenty-five percent moisture and ten percent incombustible solids and has a heating value of approximately sixty-five hundred "BTU" per pound as fired.

(xi) "Type 2 waste" means refuse, consisting of an approximately even mixture of rubbish and garbage by weight. This type of waste is common to apartment and residential occupancy, consisting of up to fifty percent moisture and approximately seven percent incombustible solids, and has a heating value of approximately forty-three hundred "BTU" per pound as fired.

(xii) "Type 3 waste" means garbage consisting of animal and vegetable wastes from restaurants, cafeterias, hotels, hospitals, markets and like installations. This type of waste contains up to seventy percent moisture and up to five percent incombustible solids and has a heating value of approximately twenty-five hundred "BTU" per pound as fired.

(xiii) "Type 4 waste" means human and animal remains, consisting of carcasses, organs and solid organic wastes from hospitals, laboratories, abattoirs, animal pounds and similar "sources," consisting of up to eighty-five percent moisture and approximately five percent incombustible solids and having a heating value of approximately one thousand "BTU" per pound as fired.

(xiv) "Type 5 waste" means by-product waste, gaseous, liquid or semi-liquid, such as tar, paints, solvents, sludge, and fumes from industrial operations.

(xv) "Type 6 waste" means solid by-product waste, such as rubber, plastics, wood waste from industrial operations and all salvage operations.

(c)(2) Flue-fed "incinerators." No "person" shall construct, install, use or cause to be used any new "incinerator" of the flue-fed type.

(c)(3) "Emission standards."

(i) Particulates. No "person" shall construct, install, use or cause to be used any new "incinerator" which will result in "particulate matter" in the effluent in excess of 0.08 gr/S.C.F. (0.18 gm/cubic meters) corrected to 12 percent CO2 maximum 2-hour average. No "person" shall use or cause to be used any existing "incinerator" which will emit more than four-tenths pound of particulates per one thousand pounds of flue gases adjusted to fifty percent excess air.

(ii) All "incinerators" must comply with subsection(a)(1).

(iii) Unburned waste and ash. No "person" shall cause, suffer, allow or permit the "emission" of particulates of unburned waste or ash from any "incinerator" which are individually large enough to be discernible by the human eye.

(iv) Odors. No "person" shall construct, install, use or cause to be used any "incinerator" which will result in violations of section 22a-174-23.

(c)(4) Operations.

(i) Approved operating procedures and rated burning capacity of the "incinerator" shall be posted at a convenient place as near as practical to the point of operation.

(ii) No "person" shall use or cause to be used any "incinerator" unless all components connected, or attached to, or serving the "incinerator" which affect "air pollution" are functioning properly and are in use, in accordance with the "permit to construct" and the certificate or "permit to operate."

(c)(5)

(i) "Emission" tests shall be conducted at the maximum-rate burning capacity of the "incinerator."

(ii) The burning capacity of an "incinerator" shall be the manufacturer's or designer's guaranteed maximum rate or such other rate as may be determined by the "Commissioner" in accordance with good engineering practices. In cases of conflict, the determination made by the "Commissioner" shall govern.

(iii) For the purposes of this regulation, the total of the capacities of all furnaces within one system shall be considered as the "incinerator" capacity.

(c)(6) Exceptions. The provisions of subsections (c)(1) to (c)(5) inclusive shall not apply to "incinerators" installed or used in dwellings containing six or fewer family units.

(c)(7) None of these regulations shall be construed to permit the "emission" of hazardous materials defined and limited by the Commissioner.]

(d) EMISSION STANDARDS FOR INCINERATORS AND PROHIBITIONS ON FLUE-FED INCINERATORS.

(1) NO OWNER OR OPERATOR SHALL CAUSE OR ALLOW THE CONSTRUCTION, INSTALLATION OR OPERATION OF A FLUE-FED INCINERATOR.

(2) PARTICULATE MATTER EMISSION STANDARDS FOR INCINERATORS. NO OWNER OR OPERATOR SHALL CAUSE OR ALLOW THE OPERATION OF ANY INCINERATOR THAT WILL RESULT IN PARTICULATE MATTER EMISSIONS IN EXCESS OF THE PARTICULATE MATTER EMISSION STANDARDS SET FORTH IN SUBPARAGRAPH (A) OR (B) OF THIS SUBDIVISION:

(A) FOR INCINERATORS FOR WHICH CONSTRUCTION OR MODIFICATION COMMENCED ON OR AFTER JULY 1, 1979, 0.08 GRAINS PER STANDARD CUBIC FOOT CORRECTED TO TWELVE PERCENT (12%) CARBON DIOXIDE (CO_2) OVER A TWO (2) HOUR AVERAGE OR 0.18 GRAMS PER CUBIC METER CORRECTED TO TWELVE PERCENT (12%) CARBON DIOXIDE (CO_2) OVER A TWO (2) HOUR PERIOD; AND

(B) FOR INCINERATORS FOR WHICH CONSTRUCTION OR MODIFICATION COMMENCED PRIOR TO JULY 1, 1979, 0.4 POUNDS OF PARTICULATE PER THOUSAND POUNDS OF FLUE GASES ADJUSTED TO FIFTY PERCENT (50%) EXCESS AIR.

(3) VISIBLE AND FUGITIVE EMISSION STANDARDS FOR INCINERATORS. NO OWNER OR OPERATOR OF ANY INCINERATOR SHALL CAUSE OR ALLOW UNBURNED WASTE OR ASH PARTICULATE EMISSIONS THAT ARE INDIVIDUALLY DISCERNIBLE BY THE HUMAN EYE MEASURED USING 40 CFR 60, APPENDIX A, REFERENCE METHOD 9 AND 40 CFR 60, APPENDIX A, REFERENCE METHOD 22.

[(d) "Fuel-burning equipment."

(d)(1) No "person" shall cause or permit the "emission" from "fuel-burning equipment" of "particulate matter" in excess of the limitations listed in table 18-D-1 below.

Table 18-D-1

Pounds of Particulate Matter per Million "BTU" of Heat Input	Type of Fuel	Type of "Source"
0.10	All	Permit required under section 22a-174-3 (except subsection (3)(g)(6))

0.14	"Residual Oil	Required to register under section 22a-174-2 or to receive a permit under 22a-174-3(g)(6)
0.20	All except "residual oil"	All others

(d)(2) For purposes of this section, the heat input value used shall be the actual firing rate of the "fuel-burning equipment."

(d)(3) Fuel-burning "sources" which, as of the effective date of these regulations, have particulate control equipment in place must maintain such control equipment in proper operation.]

(e) PARTICULATE MATTER EMISSION STANDARDS FOR FUEL-BURNING EQUIPMENT.

(1) THE OWNER OR OPERATOR OF FUEL-BURNING EQUIPMENT SUBJECT TO SECTION 22a-174-3a OR FORMER SECTION 22a-174-3 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES SHALL EMIT NO MORE THAN 0.10 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT OR THE PARTICULATE MATTER STANDARD OF A PERMIT APPLICABLE TO SUCH EQUIPMENT, WHICHEVER IS MORE STRINGENT.

(2) THE OWNER OR OPERATOR OF FUEL-BURNING EQUIPMENT SUBJECT TO FORMER SECTION 22a-174-2 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES SHALL EMIT NO MORE THAN THE FOLLOWING PARTICULATE MATTER LEVELS:

(A) 0.14 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT IF THE FUEL BURNED IS RESIDUAL OIL (NO. 4 OR NO. 6 OIL);

(B) 0.12 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT IF THE FUEL BURNED IS DISTILLATE OIL (NO. 2 OIL);

(C) 0.10 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT IF THE FUEL BURNED IS NATURAL GAS; OR

(D) 0.20 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT FOR ANY OTHER FUEL BURNED.

(3) NOTWITHSTANDING SUBDIVISIONS (1) AND (2) OF THIS SUBSECTION AND EXCEPT AS PROVIDED IN SUBSECTION (j) OF THIS SECTION, THE OWNER OR OPERATOR OF A STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE WITH A MAXIMUM CONTINUOUS BRAKE HORSEPOWER OUTPUT

RATING, AS SPECIFIED BY THE MANUFACTURER, GREATER THAN OR EQUAL TO 175 BRAKE HORSEPOWER (BHP), SHALL EMIT NO MORE THAN:

(A) 0.10 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT OR COMBUST ONLY FUEL WITH A SULFUR CONTENT LESS THAN OR EQUAL TO 0.05% BY WEIGHT, IF THE STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE WAS MANUFACTURED PRIOR TO OR IN MODEL YEAR 1996; OR

(B) 0.10 POUNDS OF PARTICULATE MATTER PER MILLION BTU OF HEAT INPUT IF THE STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE WAS MANUFACTURED AFTER MODEL YEAR 1996.

[(e) Process industries -- general.

(e)(1) No "person" shall cause or permit the "emission" of "particulate matter" in any one hour from any "source" in excess of the amount shown in Table 3-1 below for the process weight rate allocated to such "source," with the exception of "sources" specified in subsection (f).

Table 3-1

Process Weight Rate lbs./hr.	"Emission" Rate lbs./hr.	Process Weight Rate lbs./hr.	"Emission" Rate lbs./hr.
50	0.36	60,000	29.60
100	0.55	80,000	31.19
500	1.53	120,000	33.28
1,000	2.25	160,000	34.85
5,000	6.34	200,000	36.11
10,000	9.73	400,000	40.35
20,000	14.99	1,000,000	46.72

(e)(2) Interpolation of the data in Table 3-1 for the process weight rates up to 60,000 lbs./hr. shall be accomplished by the use of the equation:

$$\log E = \log 3.59 + .62 \log P$$

P equal to or less than 30 tons/hr. and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lbs/hr. shall be accomplished by the use of the equation:

$$\log E = \log 17.31 + .16 \log P$$

P greater than 30 tons/hr.
Where: E = "emission" in pounds per hour.
P = Process weight rate in tons per hour.

(e)(3) For the purpose of this regulation, process weight per hour is the total weight of all materials introduced into any specific process that may cause any "emission" of "particulate matter." Solid fuels charged will be considered as part of the process weight, but liquid and gaseous fuels and combustion air will not. For a cyclical or batch operation, the process weight per hour will be derived by dividing the total process weight by the number of hours in one complete operation from the beginning of any given process to the completion thereof, excluding any time during which the equipment is idle. For a continuous operation, the process weight per hour will be derived by dividing the process weight for a typical period of time by the length of that period of time.

(e)(4) Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this regulation, the interpretation that results in the minimum value for "allowable emission" shall apply.

(e)(5) For purposes of the regulation, the total process weight from all similar process units at a plant or "premises" shall be used for determining the maximum "allowable emission" or "particulate matter" that passes through a "stack" or "stacks."

(e)(6) For the purposes of this regulation, when any material undergoes a series of operations which are capable of emitting "particulate matter" and which employ any combination of machines, equipment, or other devices used for processing the material either continuously or in batches, the total process weight for the series of operations shall be the weight of materials introduced to the series as a whole. Any material which is the product of any operation in the series shall not be counted as part of the process weight for any other operation in the series.]

(f) PROCESS INDUSTRIES -- GENERAL.

(1) FOR THE PURPOSES OF THIS SUBSECTION, THE PROVISIONS OF SUBPARAGRAPHS (A) THROUGH (D) SHALL APPLY:

(A) “PROCESS WEIGHT” MEANS THE TOTAL WEIGHT, IN POUNDS, OF ALL MATERIALS INTRODUCED INTO ANY SPECIFIC PROCESS THAT MAY CAUSE THE EMISSION OF PARTICULATE MATTER, INCLUDING SOLID FUELS USED IN SUCH PROCESS FOR PURPOSES OTHER THAN COMBUSTION AND EXCLUDING COMBUSTION AIR, AND LIQUID FUELS, SOLID FUELS AND GASEOUS FUELS BURNED;

(B) “PROCESS WEIGHT RATE” MEANS THE PROCESS WEIGHT FOR ANY SPECIFIC PROCESS MEASURED OVER A ONE (1) HOUR TIME PERIOD;

(C) THE PROCESS WEIGHT RATE OF A CYCLICAL OR BATCH OPERATION IS DERIVED BY DIVIDING THE PROCESS WEIGHT BY THE NUMBER OF HOURS IN ONE COMPLETE OPERATION OF THE PROCESS, EXCLUDING ANY TIME DURING WHICH THE EQUIPMENT IS IDLE; AND

(D) THE PROCESS WEIGHT RATE OF A CONTINUOUS OPERATION IS DERIVED BY DIVIDING THE PROCESS WEIGHT FOR A TIME PERIOD OF OPERATION BY THE LENGTH OF THAT PERIOD OF TIME.

(2) EXCEPT AS PROVIDED IN SUBSECTION (g) OF THIS SECTION, NO OWNER OR OPERATOR OF A PROCESS INDUSTRY SOURCE SHALL CAUSE OR ALLOW THE EMISSION OF PARTICULATE MATTER TO THE AMBIENT AIR IN ANY ONE HOUR FROM SUCH SOURCE IN EXCESS OF THE EMISSION RATE CALCULATED AS REQUIRED BY SUBDIVISIONS (3) AND (4) OF THIS SUBSECTION.

(3) TO MATHEMATICALLY INTERPOLATE FROM TABLE 18-1 PROCESS WEIGHT RATES UP TO AND INCLUDING SIXTY THOUSAND POUNDS PER HOUR (60,000 LBS/HR), THE FOLLOWING EQUATION SHALL BE USED:

$$LOG\ E = LOG\ 3.59 + 0.62 \times \left(LOG \frac{P}{2000} \right)$$

WHERE: P = PROCESS WEIGHT RATE IN POUNDS PER HOUR
E = MAXIMUM ALLOWABLE EMISSION RATE IN POUNDS PER HOUR
LOG = THE NATURAL LOGARITHM OF THE INDICATED VALUE

(4) TO MATHEMATICALLY INTERPOLATE AND EXTRAPOLATE FROM TABLE 18-1 PROCESS WEIGHT RATES IN EXCESS OF SIXTY THOUSAND POUNDS PER HOUR (60,000 LBS/HR), THE FOLLOWING EQUATION SHALL BE USED:

$$LOG\ E = LOG\ 17.31 + 0.16 \times \left(LOG \frac{P}{2000} \right)$$

WHERE: P = PROCESS WEIGHT RATE IN POUNDS PER HOUR
E = MAXIMUM ALLOWABLE EMISSION RATE IN POUNDS PER HOUR
LOG = THE NATURAL LOGARITHM OF THE INDICATED VALUE

(5) TO DETERMINE COMPLIANCE WITH THE REQUIREMENTS OF THIS SUBSECTION, AN INTERPRETATION RESULTING IN THE LOWEST ALLOWABLE EMISSION RATE SHALL APPLY IF THE NATURE OF ANY PROCESS OR OPERATION, OR THE DESIGN OF ANY PROCESS UNIT, ALLOWS MULTIPLE INTERPRETATIONS.

(6) TO DETERMINE THE MAXIMUM ALLOWABLE EMISSION RATE IN ACCORDANCE WITH THIS SUBSECTION FOR EMISSIONS THAT PASS THROUGH A STACK OR STACKS AT A PREMISES CONTAINING SEVERAL

SIMILAR PROCESS UNITS, THE TOTAL PROCESS WEIGHT SHALL INCLUDE ALL SUCH SIMILAR PROCESS UNITS.

(7) TO DETERMINE THE MAXIMUM ALLOWABLE EMISSION IN ACCORDANCE WITH THIS SUBSECTION FOR A PREMISES UTILIZING A SERIES OF OPERATIONS THAT EMPLOY COMBINATIONS OF MACHINES OR OTHER DEVICES TO PROCESS MATERIAL, EITHER CONTINUOUSLY OR IN BATCHES, THE TOTAL PROCESS WEIGHT FOR SUCH PREMISES SHALL BE THE WEIGHT OF ALL MATERIALS THAT MAY CAUSE PARTICULATE MATTER EMISSIONS AND ARE INTRODUCED INTO THE SERIES OF OPERATIONS, EXCLUDING ALL MATERIAL THAT IS THE DESIRED END PRODUCT OF ANY SUCH SERIES OF OPERATIONS.

TABLE 18-1. INTERPOLATION/EXTRAPOLATION TABLE FOR DETERMINING PARTICULATE MATTER EMISSION RATES AND PROCESS WEIGHT RATES FOR PROCESS INDUSTRIES -- GENERAL.

PROCESS WEIGHT RATE (POUNDS PER HOUR)	EMISSION RATE (POUNDS PER HOUR)
50	0.36
100	0.55
500	1.53
1,000	2.25
5,000	6.34
10,000	9.73
20,000	14.99
60,000	29.60
80,000	31.19
120,000	33.28
160,000	34.85
200,000	36.11
400,000	40.35
1,000,000	46.72

[(f) Process industries -- specific.

(f)(1) "Emission standards" (from cupolas). No "person shall cause or allow the operation of any iron foundry cupola unless such cupola is equipped with gas-cleaning devices and so operated as to remove ninety percent (90%) by weight of all "particulate matter" in the cupola discharge gases, or to release not more than one and seven-tenths (1.7) of a pound of "particulate matter" per ton of iron produced, whichever is more stringent. Gases, vapors and gas-entrained effluents from such cupolas shall be incinerated at a minimum temperature of 1300 degrees Fahrenheit for a period of not less than three-tenths of a second.

(f)(2) "Emission standards" (hot mix asphalt plants). No "person" shall cause or allow the "emission" of "particulate matter" from hot mix asphalt plants in excess of one tenth of a pound per ton of asphalt produced. In addition, the process must conform to subsection (b) of this regulation.

(f)(3) "Emission standards" (foundry sand). No "person" shall cause or allow the operation of a foundry sand process unless such process conforms to subsection (b) of this regulation and is equipped with dust control facilities and so operated as to remove ninety percent (90%) of the "particulate matter" from the foundry sand process, or to emit not more than seventy-five hundredths (0.75) of a pound of "particulate matter" per ton of material cast.

(f)(4) "Emission standards" (concrete batching). No "person" shall cause or allow the operation of a concrete batching process unless such process conforms to subsection (b) of this regulation and is equipped with "fugitive dust" control facilities with a collection efficiency of 90 percent or 0.02 pounds per cubic yard of concrete, whichever results in less "emission."]

(g) PROCESS INDUSTRIES -- SPECIFIC.

(1) IRON FOUNDRY CUPOLA. FOR THE PURPOSES OF THIS SUBDIVISION, "IRON FOUNDRY CUPOLA" MEANS A FURNACE USED IN THE IRON FOUNDRY INDUSTRY THAT USES COKE, A DERIVATIVE OF COAL, AS FUEL. NO OWNER OR OPERATOR SHALL CAUSE OR ALLOW THE OPERATION OF ANY IRON FOUNDRY CUPOLA UNLESS:

(A) PARTICULATE MATTER CONTROL MEASURES AND/OR CONTROL EQUIPMENT REMOVE AT LEAST NINETY PERCENT (90%) BY WEIGHT OF ALL PARTICULATE MATTER IN THE CUPOLA DISCHARGE GASES, OR PARTICULATE MATTER EMISSIONS ARE LESS THAN OR EQUAL TO 1.7 POUNDS OF PARTICULATE MATTER PER TON OF IRON PRODUCED, WHICHEVER PRACTICE OR COMBINATION OF PRACTICES RESULTS IN THE LOWEST PARTICULATE MATTER EMISSIONS; AND

(B) GASES, VAPORS AND GAS-ENTRAINED EFFLUENTS FROM SUCH CUPOLAS ARE INCINERATED AT A MINIMUM TEMPERATURE OF ONE THOUSAND THREE HUNDRED (1300) DEGREES FAHRENHEIT FOR A PERIOD OF NOT LESS THAN THREE-TENTHS (0.3) OF A SECOND.

(2) HOT MIX ASPHALT PLANT. NO OWNER OR OPERATOR SHALL CAUSE OR ALLOW THE OPERATION OF ANY HOT MIX ASPHALT PLANT UNLESS:

(A) PARTICULATE MATTER EMISSIONS ARE LESS THAN 0.10 POUNDS OF PARTICULATE MATTER PER TON OF ASPHALT PRODUCED; AND

(B) THE OPERATION CONFORMS TO THE REQUIREMENTS SET FORTH IN SUBSECTION (c) OF THIS SECTION.

(3) FOUNDRY SAND PROCESS. NO OWNER OR OPERATOR SHALL CAUSE OR ALLOW THE OPERATION OF A FOUNDRY SAND PROCESS UNLESS:

(A) PARTICULATE MATTER CONTROL MEASURES AND/OR CONTROL EQUIPMENT REMOVE AT LEAST NINETY PERCENT (90%) OF ALL

AIRBORNE PARTICULATE MATTER FROM SUCH PROCESS, OR PARTICULATE MATTER EMISSIONS ARE LESS THAN 0.75 POUNDS OF PARTICULATE MATTER PER TON OF MATERIAL CAST, WHICHEVER PRACTICE OR COMBINATION OF PRACTICES RESULTS IN THE LOWEST PARTICULATE MATTER EMISSIONS; AND

(B) THE OPERATION CONFORMS TO THE REQUIREMENTS SET FORTH IN SUBSECTION (c) OF THIS SECTION.

(4) CONCRETE BATCHING PROCESS. NO OWNER OR OPERATOR SHALL CAUSE OR ALLOW THE OPERATION OF A CONCRETE BATCHING PROCESS UNLESS:

(A) PARTICULATE MATTER CONTROL MEASURES AND/OR CONTROL EQUIPMENT REMOVE AT LEAST NINETY PERCENT (90%) OF ALL AIRBORNE PARTICULATE MATTER OR 0.02 POUNDS OF PARTICULATE MATTER PER CUBIC YARD OF CONCRETE, WHICHEVER PRACTICE OR COMBINATION OF PRACTICES RESULTS IN THE LOWEST PARTICULATE MATTER EMISSIONS; AND

(B) THE OPERATION CONFORMS TO THE REQUIREMENTS SET FORTH IN SUBSECTION (c) OF THIS SECTION.

(h) CONTROL TECHNOLOGY DETERMINATIONS.

TO IMPLEMENT A CONTROL TECHOLOGY DETERMINATION MADE BY THE COMMISSIONER, THE COMMISSIONER MAY MODIFY OR REVISE A PERMIT OR ISSUE AN ORDER TO THE OWNER OR OPERATOR OF A STATIONARY SOURCE FOR WHICH CONSTRUCTION OR MAJOR MODIFICATION COMMENCED AFTER JUNE 1, 1972 THAT REQUIRES MORE STRINGENT EMISSIONS LIMITATIONS THAN THOSE SET FORTH IN SUBSECTIONS (b)(1) AND (b)(2) OF THIS SECTION IF SUCH CONTROL TECHNOLOGY DETERMINATION DOES NOT RESULT IN A VIOLATION OF THE APPLICABLE PROVISIONS OF 40 CFR 52, 60, 61, 62 OR 63.

(i) HAZARDOUS AIR POLLUTANTS.

NOTHING IN THIS SECTION SHALL BE CONSTRUED TO RELIEVE AN OWNER OR OPERATOR FROM COMPLYING WITH ALL EMISSIONS LIMITATIONS FOR HAZARDOUS AIR POLLUTANTS, HAZARDOUS MATERIALS OR OTHER HAZARDOUS SUBSTANCES.

(j) EXCEPTED ACTIVITIES.

(1) THE OWNER OR OPERATOR OF A STATIONARY SOURCE SHALL NOT BE SUBJECT TO THE VISIBLE EMISSIONS STANDARDS OF SUBDIVISION (b)(2) OF THIS SECTION FOR MEASUREMENTS OF OPACITY USING OPACITY CEM EQUIPMENT DURING A PERIOD OF STARTUP, SHUTDOWN OR MALFUNCTION; COMMISSIONER-APPROVED STACK TESTING; OR INTENTIONAL SOOTBLOWING, FUEL SWITCHING OR SUDDEN LOAD

CHANGING DONE IN ACCORDANCE WITH GOOD ENGINEERING PRACTICES PROVIDED THAT:

(A) THE OWNER OR OPERATOR IS REQUIRED BY PERMIT, ORDER OR REGULATION TO INSTALL, OPERATE AND MAINTAIN OPACITY CEM EQUIPMENT AT SUCH STATIONARY SOURCE, AND THE OWNER OR OPERATOR IS IN COMPLIANCE WITH SUCH PERMIT, ORDER OR REGULATION WITH REGARD TO SUCH OPACITY CEM EQUIPMENT. IF A STATIONARY SOURCE IS NOT SUBJECT TO A PERMIT, ORDER OR REGULATION REQUIRING OPERATION AND MAINTENANCE OF OPACITY CEM EQUIPMENT, AN OWNER OR OPERATOR MAY CERTIFY ON A FORM ACCEPTABLE TO THE COMMISSIONER THAT:

(i) THE OWNER OR OPERATOR OF SUCH STATIONARY SOURCE HAS INSTALLED OPACITY CEM EQUIPMENT THAT MEETS THE APPLICABLE CRITERIA OF 40 CFR 60, APPENDICES B AND F, AND

(ii) THE OWNER OR OPERATOR SHALL OPERATE AND MAINTAIN SUCH INSTALLED OPACITY CEM EQUIPMENT IN COMPLIANCE WITH THE REQUIREMENTS OF 40 CFR 60, APPENDICES B AND F;

(B) THE PERIOD OF EXCEPTION FROM THE VISIBLE EMISSIONS STANDARDS OF SUBDIVISION (b)(2) OF THIS SECTION DOES NOT EXCEED ONE-HALF OF ONE PERCENT (0.5%) OF THE TOTAL OPERATING HOURS OF SUCH STATIONARY SOURCE DURING ANY CALENDAR QUARTER; AND

(C) THE OWNER OR OPERATOR OF THE STATIONARY SOURCE DOES NOT CAUSE OR ALLOW VISIBLE EMISSIONS IN EXCESS OF SIXTY PERCENT (60%) OPACITY DURING ANY SIX-MINUTE BLOCK AVERAGE OF THE PERIOD OF EXCEPTION FROM THE VISIBLE EMISSIONS STANDARDS OF SUBSECTION (b)(2) OF THIS SECTION.

(2) THE OWNER OR OPERATOR OF AN EMISSIONS UNIT THAT IS SUBJECT TO A VISIBLE EMISSIONS STANDARD PURSUANT TO A NEW SOURCE PERFORMANCE STANDARD SET FORTH IN 40 CFR 60 SHALL NOT BE SUBJECT TO THE VISIBLE EMISSIONS STANDARDS OF SUBSECTIONS (b)(1) AND (b)(2) OF THIS SECTION.

(3) EXCEPT FOR THE USE OF OPEN-BODIED TRUCKS AND TRAILERS SUBJECT TO THE REQUIREMENTS OF SUBSECTION (c)(1)(D) OF THIS SECTION, A PERSON ENGAGED IN AGRICULTURAL OPERATIONS SHALL BE EXEMPT FROM THE REQUIREMENTS OF SUBSECTION (c)(1) OF THIS SECTION PROVIDED SUCH OPERATIONS FOLLOW GENERALLY ACCEPTED AGRICULTURAL PRACTICES AND ARE IN COMPLIANCE WITH SECTION 19a-341 OF THE CONNECTICUT GENERAL STATUTES.

(4) THE OWNER OR OPERATOR OF ANY OF THE FOLLOWING SOURCES SHALL BE EXEMPT FROM THE REQUIREMENTS OF SUBSECTION (b)(4) OF THIS SECTION:

(A) AN ANTIQUE MOBILE SOURCE OVER THIRTY YEARS OLD;

(B) A MOBILE SOURCE USED EXCLUSIVELY FOR RACING;

(C) A MOBILE SOURCE WHILE IT IS UNDERGOING A MECHANICAL REPAIR OR TESTING THAT AFFECTS THE EMISSION OF VISIBLE AIR POLLUTANTS FROM SUCH SOURCE;

(D) AN AIRCRAFT;

(E) A LOCOMOTIVE OPERATING ON RAILS;

(F) A VESSEL OPERATING ON WATER; AND

(G) COMMONLY USED RESIDENTIAL LAWN, GARDEN AND SNOW REMOVAL EQUIPMENT.

(5) THE OPERATION OF EQUIPMENT TO GENERATE SMOKE OR FOG BY ANY BRANCH OF THE UNITED STATES MILITARY OR ANY OTHER FEDERAL OR STATE AGENCY SHALL BE EXEMPT FROM THE REQUIREMENTS OF SUBSECTIONS (b) AND (e) OF THIS SECTION PROVIDED SUCH OPERATION IS LIMITED TO TRAINING EXERCISES OR THE PREPARATION THEREOF.

(6) THE OWNER OR OPERATOR OF ANY STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE THAT IS AN EMERGENCY ENGINE, AS DEFINED IN SUBSECTION (a)(2) OF SECTION 22a-174-22 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES AND HAS A MAXIMUM CONTINUOUS BRAKE HORSEPOWER OUTPUT RATING, AS SPECIFIED BY THE MANUFACTURER, GREATER THAN OR EQUAL TO 175 BHP SHALL NOT BE SUBJECT TO THE PARTICULATE MATTER EMISSIONS STANDARDS OF SUBSECTION (e) OF THIS SECTION.

(7) THE OWNER OR OPERATOR OF A STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE WITH A MAXIMUM CONTINUOUS BRAKE HORSEPOWER OUTPUT RATING, AS SPECIFIED BY THE MANUFACTURER, OF LESS THAN 175 BHP SHALL NOT BE SUBJECT TO THE REQUIREMENTS OF SUBSECTION (e) OF THIS SECTION.

(8) THE REQUIREMENTS OF SUBSECTIONS (e), (f) AND (g) OF THIS SECTION SHALL NOT APPLY TO THE OWNER OR OPERATOR OF A SOURCE SUBJECT TO MORE STRINGENT BACT REQUIREMENTS, PROVIDED THAT THE SOURCE IS OPERATED IN COMPLIANCE WITH A BACT DETERMINATION.

(9) A PERSON CONDUCTING OPEN BURNING PURSUANT TO SECTION 22a-174(f) OF THE CONNECTICUT GENERAL STATUTES OR REGULATIONS ADOPTED

THEREUNDER SHALL NOT BE SUBJECT TO THE REQUIREMENTS OF THIS SECTION.

(10) IF THE OWNER OR OPERATOR OF A SOURCE POSSESSES DOCUMENTATION DEMONSTRATING THAT THE PRESENCE OF UNCOMBINED WATER, SUCH AS WATER VAPOR, IS THE ONLY REASON FOR THE FAILURE OF AN EMISSION TO COMPLY WITH THE REQUIREMENTS OF THIS SECTION, THEN THE PROVISIONS OF THIS SECTION SHALL NOT APPLY TO THAT EMISSION.

(11) THE OWNER OR OPERATOR OF A MUNICIPAL WASTE COMBUSTOR AS DEFINED IN SECTION 22a-174-38 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES SHALL BE EXEMPT FROM THE REQUIREMENTS OF THIS SECTION.

Sec. 2.

Section 22a-174-38 of the Regulations of Connecticut State Agencies is amended by adding new subdivision (13) to subsection (c) as follows:

(13) NOTWITHSTANDING SUBDIVISION (12) OF THIS SUBSECTION, THE OWNER OR OPERATOR OF A RECIPROCATING GRATE WASTE TIRE FIRED INCINERATOR/BOILER SHALL CORRECT ALL EMISSION LIMITS, EXCEPT FOR THOSE IDENTIFIED FOR OPACITY, TO 12% CO_2.

Sec. 3.

Section 22a-174-38 of the Regulations of Connecticut State Agencies is amended by revising subdivisions (6) and (7) of subsection (d) as follows:

(6) Any MWC owner or operator intending to use ERCs pursuant to this subsection shall:

(A) No later than the first day of each calendar month, calculate, in tons, ERCs per month for each MWC unit, the projected maximum number of ERCs required for that calendar month using the formulas provided in subparagraph (E) of subdivision (4) of this subsection;

(B) No later than the first day of each calendar month, acquire a sufficient number of ERCs approved by the commissioner to match the quantity needed as determined according to subparagraph (A) of this subdivision. The quantity needed may be satisfied with unused ERCs created or acquired in previous months, subject to the restrictions of subparagraph (D) of this subdivision. Credits to be used during the ozone season must have been generated during the ozone season;

(C) No later than the twentieth day of each month, calculate and record the actual quantity of ERCs used in the preceding calendar month;

(D) Maintain documentation demonstrating that ERCs used during the ozone season were generated during an ozone season. An ERC generator certification shall be sufficient for such demonstration;

(E) Prior to May 1, 2001, any ERCs used for meeting the emission limits contained in subdivision (8) of subsection (c) of this section shall HAVE BEEN created within [the two (2) year period preceding the date] THE TWO CALENDAR YEARS PRECEDING THE YEAR of such ERC use; [and]

(F) On and after May 1, 2001, any ERCs used to meet the emission limits contained herein shall [be] HAVE BEEN created on or after May 1, 1999[.]; AND

(G) FOR THE PURPOSES OF SUBPARAGRAPHS (E) AND (F) OF THIS SUBDIVISION, AN ERC IS CONSIDERED CREATED IN THE SAME CALENDAR YEAR THE NOx EMISSION REDUCTION OCCURS AT A PLANT OR SOURCE.

(7) No later than [January 30] MARCH 1 of each year, the MWC owner or operator shall provide to the commissioner a report containing the following information:

(A) A record for the previous calendar year of each use, sale or other transfer of any and all of the ERCs created in accordance with this subsection; and

(B) A record for the previous calendar year of actual NOx emissions from the facility and each MWC unit, the quantity of ERCs created and the quantity of ERCs used, on a monthly basis and an ozone season basis.

Sec. 4.

Section 22a-174-38 of the Regulations of Connecticut State Agencies is amended by revising subdivision (10) of subsection (k) as follows:

(10) The test reports and supporting calculations documenting the results of all annual performance tests conducted to determine compliance with the emission limits specified in this section for particulate matter, [opacity,] cadmium, lead, mercury, dioxin/furan emissions, hydrogen chloride, and fugitive ash shall be recorded. The maximum demonstrated municipal waste combustor unit load and maximum demonstrated particulate matter control device temperature (for each particulate matter control device) shall be recorded for each performance test for dioxin/furan emissions. The relationship between carbon dioxide and oxygen concentrations shall be recorded if the relationship is reestablished during the annual performance test.

Sec. 5.

Section 22a-174-19 of the Regulations of Connecticut State Agencies is amended by revising subsection (f) as follows:

(f) Other process sources. Notwithstanding the provisions of section [22a-174-18(e)] 22a-174-18(f) OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES, process sources not covered in subsections (b) through (e) [inclusive] OF THIS SECTION shall not emit sulfur oxides (expressed as sulfur dioxide) in the stack effluent in concentrations which exceed 500 parts per million at standard temperature and pressure.

Sec. 6.

Section 22a-174-22 of the Regulations of Connecticut State Agencies is amended by revising subdivision (21) of subsection (a) as follows:

(21) "Waste combustor" means an incinerator as defined in subsection [22a-174-18(c)] 22a-174-18(a) of the Regulations of Connecticut State Agencies, a resources recovery facility as defined in section 22a-207 of the Connecticut General Statutes, or a sewage sludge incinerator. The term does not include a flare or an industrial fume incinerator.

STATEMENT OF PURPOSE:
Section 1 of this amendment revises R.C.S.A. section 22a-174-18 to: 1) specify the form and averaging time of the existing opacity standards for stationary sources; 2) add particulate matter standards appropriate to fuel-burning equipment using certain fossil fuels; 3) add particulate matter emissions standards and requirements for stationary reciprocating internal combustion engines; 4) add exemptions from the visible emissions standards for certain sources during certain periods of operation, including sources subject to federal New Source Performance Standards for opacity and smoke generating units used for training purposes by a branch of the U.S. military; 5) add an exemption from the section for municipal waste combustors to recognize of the promulgation of R.C.S.A. section 22a-174-38, which includes opacity and particulate matter standards for these sources; and 6) conform the overall format and language to current practices.

Section 2 of this amendment adds a provision to subsection (c) of R.C.S.A. section 22a-174-38 regarding the calculation of emission levels for reciprocating grate waste tire-fired incinerators.

Section 3 of this amendment clarifies the use of emission reduction credits in the NOx trading program established by subsection (d) of R.C.S.A. section 22a-174-38 and changes the reporting date for submission of the annual NOx trading report.

Section 4 of this amendment deletes opacity from the list of pollutants in R.C.S.A. section 22a-174-38(k)(10) for which owners or operators must keep records of annual performance tests. In accordance with EPA guidelines for municipal waste combustors, only an initial performance test is required for opacity. Subsequent to the initial performance test, compliance with the opacity limit is measured using data from continuous emissions monitoring equipment.

Sections 5 and 6 of this amendment correct internal citations within R.C.S.A. sections 22a-174-19(f) and 22a-174-22(a)(21) consistent with the adoption of Section 1 of this amendment.