P-39 Rev. 3/77

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

STATE OF CONNECTICUT
REGULATION
OF

NAME OF AGENCY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Concerning

SUBJECT MATTER OF REGULATION
ABATEMENT OF AIR POLLUTION

SECTION 19-508-19

Section 19-508-19 of the Regulations of Connecticut State Agencies is amended as follows:

Sec. 19-508-19. Control of sulfur compound emissions.

(a) Fuel combustion. (a)(1) Definitions. As used in subsections (a) through (f) inclusive: [(i) "Fuel" means a substance containing combustibles used for producing heat, light, power or energy; (ii) "combustible" means the heat-producing constituents of a fuel; (iii) "combustion" means the rapid chemical combination of oxygen with the combustible element of a fuel resulting in the production of heat; (iv) "sulfur dioxide (SO_2) means a colorless gas at standard conditions which has the molecular formula SO_2; (v) "sulfur oxides (SO_x)" means any compound made up only of sulfur and oxygen. For the purpose of this regulation, concentrations of sulfur oxides (SO_x)" will be calculated as sulfur dioxide (SO_2); (vi) "stack" or "chimney" means a flue, conduit or opening permitting particulate or gaseous emission into the open air, or constructed or arranged for such purpose; (vii) "fuel merchant" means any person who offers for sale or sells, transfers, or provides in retail or wholesale trade, fuel, including agents, brokers, wholesalers, distributors, or producers who sell commercial or non-commercial fuel; (viii) "fuel user" means any person who stores or utilizes commercial or non-commercal fuel for the purpose of creating by combustion heat, light, power, or energy.]

"COMBUSTIBLE" MEANS THE HEAT-PRODUCING CONSTITUENTS OF A FUEL.

"COMBUSTION" MEANS THE RAPID CHEMICAL COMBINATION OF OXYGEN WITH THE COMBUSTIBLE ELEMENT OF A FUEL RESULTING IN THE PRODUCTION OF HEAT.

"FUEL" MEANS A SUBSTANCE CONTAINING COMBUSTIBLES USED FOR PRODUCING HEAT, LIGHT, POWER OR ENERGY.

"FUEL MERCHANT" MEANS ANY PERSON WHO OFFERS FOR SALE OR SELLS, TRANSFERS, OR PROVIDES IN RETAIL OR WHOLESALE TRADE, FUEL, INCLUDING AGENTS, BROKERS, WHOLESALERS, DISTRIBUTORS, OR PRODUCERS WHO SELL COMMERCIAL OR NON-COMMERCIAL FUEL.

"FUEL USER" MEANS ANY PERSON WHO STORES OR UTILIZES COMMERCIAL OR NON-COMMERCIAL FUEL FOR THE PURPOSE OF CREATING BY COMBUSTION HEAT, LIGHT, POWER, OR ENERGY.

"GROSS HEAT INPUT" MEANS THE TOTAL ENERGY REQUIREMENT FOR A PREMISE FOR TWELVE (12) CONSECUTIVE MONTHS.

"HEAT INPUT" MEANS THE ACTUAL FIRING RATE OF THE FUEL BURNING EQUIPMENT.

"PREMISE" MEANS THE GROUPING OF ALL AIR POLLUTANT EMITTING ACTIVITIES OR SOURCES AT ANY ONE LOCATION AND OWNED OR UNDER THE CONTROL OF THE SAME PERSON OR PERSONS.

"STACK" OR "CHIMNEY" MEANS A FLUE, CONDUIT OR OPENING PERMITTING PARTICULATE OR GASEOUS EMISSION INTO THE OPEN AIR, OR CONSTRUCTED OR ARRANGED FOR SUCH PURPOSE.

"SULFUR DIOXIDE (SO_2)" MEANS A COLORLESS GAS AT STANDARD CONDITIONS WHICH HAS THE MOLECULAR FORMULA SO_2.

"SULFUR OXIDES (SOx)" MEANS ANY COMPOUND MADE UP ONLY OF SULFUR AND OXYGEN WHICH FOR THE PURPOSE OF THIS REGULATION WILL BE CALCULATED AS SULFUR DIOXIDE (SO_2).

(a)(2) FUEL USERS

(a)(2)(i) [No fuel merchant, except as provided in subsections (a)(3) and (a)(4), shall store, offer for sale, sell, make available, deliver for use or exchange in trade for use in Connecticut, and no]NO person, EXCEPT AS PROVIDED IN SUBPARAGRAPHS (a)(2)(ii), (a)(3)(i) AND (a)(3)(ii), shall use or burn fuel which contains sulfur in excess of A MAXIMUM OF one percent (1.0%) by weight (Dry Basis). [After September 1, 1972, no fuel merchant shall store, offer for sale, sell, make available, deliver for use or exchange in trade for use in Connecticut fuel which contains sulfur in excess of one-half of one percent (0.5%) by weight (Dry Basis) and after April 1, 1973, no person shall use or burn fuel which contains sulfur in excess of one-half of one percent ((0.5%) by weight (Dry Basis).] ADDITIONALLY, NO FUEL USER SHALL CAUSE OR PERMIT THE INSTALLATION OR OPERATION OF ANY FUEL BURNING EQUIPMENT WITH A HEAT INPUT OF 250,000 BTU PER HOUR OR MORE WHICH USES FUEL CONTAINING ANY SOLID FUEL WITHOUT FIRST OBTAINING THE COMMISSIONER'S APPROVAL BY THE ISSUANCE OF A STATIONARY SOURCE OPERATING PERMIT FOR THIS PURPOSE, UNLESS THE FUEL USER DEMONSTRATES TO THE COMMISSIONER'S SATISFACTION THAT THE EMISSIONS OF SULFUR COMPOUNDS (EXPRESSED AS SULFUR DIOXIDE) FROM SUCH EQUIPMENT ARE 1.1 POUNDS PER MILLION BTU OF HEAT INPUT OR LESS.

(ii) Under conditions of fuel shortage emergency, as determined by the Commissioner, higher percentages of sulfur may be permitted by express approval of the Commissioner for temporary periods.

(a)(3) USE OF FUEL CONTAINING OTHER THAN ONE PERCENT (1%) SULFUR.

(a)(3)(i) AIR POLLUTION CONTROL/ENERGY TRADE PROGRAM. Notwithstanding the provisions of subsection (a)(2), the Commissioner may approve: (i) combustion of a mixture of fuels, or (ii) combustion of a single fuel, which contain(s) [a higher sulfur content than that specified by subsection (a)(2), if the combustion of such fuel is combined with a stack-gas cleaning process or its equivalent as approved in writing by the Commissioner. No such stack-gas cleaning process, or its equivalent, shall be approved unless the total sulfur compound emissions (expressed as sulfur dioxide) from the stack, chimney flue, and other vents to the ambient air do not exceed 0.55 pounds per million BTU gross heat input, provided that any effluent from the approved stack-gas cleaning process or its equivalent which is discharged into state waters meets with the prior approval of the Commissioner. The Commissioner may require such information or data as is necessary to establish that total emissions will not exceed the above limitations] MORE THAN ONE PERCENT (1.0 PERCENT) SULFUR BY WEIGHT (DRY BASIS) PROVIDED THAT:

(A) THE EMISSIONS OF SULFUR COMPOUNDS (EXPRESSED AS SULFUR DIOXIDE) FROM A GIVEN PREMISE DO NOT EXCEED 0.55 POUNDS PER MILLION BTU OF GROSS HEAT INPUT;

(B) THE OWNER OR OPERATOR OF THE PREMISE APPLIES FOR AND OBTAINS, PRIOR TO THE BURNING OF SUCH FUEL, A STATIONARY SOURCE OPERATING PERMIT FOR THIS PURPOSE; AND

(C) THE EMISSIONS DO NOT PREVENT OR INTERFERE WITH EITHER THE ATTAINMENT OR MAINTENANCE OF ANY APPLICABLE AIR QUALITY STANDARD.

(a)(3)(ii) EMISSION LIMITATION. NOTWITHSTANDING THE PROVISIONS OF SUBDIVISION (a)(2) THE COMMISSIONER MAY APPROVE THE COMBUSTION OF A SINGLE FUEL OR A MIXTURE OF FUELS WHICH CONTAIN(S) MORE THAN ONE PERCENT (1%) SULFUR BY WEIGHT (DRY BASIS) FOR ANY FUEL BURNING EQUIPMENT PROVIDED THAT THE EMISSIONS OF SULFUR COMPOUNDS (EXPRESSED AS SULFUR DIOXIDE) FROM SUCH EQUIPMENT DO NOT EXCEED 1.1 POUNDS PER MILLION BTU OF HEAT INPUT.

(a)(3)(iii) AMBIENT IMPACT. NOTWITHSTANDING THE PROVISIONS OF SUBDIVISION (a)(2) OR SUBPARAGRAPHS (a)(3)(i) AND (ii) THE COMMISSIONER SHALL, BY PERMIT OR ORDER, LIMIT THE EMISSION OF SULFUR COMPOUNDS (EXPRESSED AS SULFUR DIOXIDE) FROM ANY FUEL BURNING EQUIPMENT ON A GIVEN PREMISE TO LESS THAN 1.1 POUNDS PER MILLION BTU OF HEAT INPUT FOR ANY SOURCE WHICH INTERFERES WITH THE ATTAINMENT OR MAINTENANCE OF ANY APPLICABLE AIR QUALITY STANDARD.

(a)(4) FUEL MERCHANTS

(a)4(i) NO FUEL MERCHANT, EXCEPT AS PROVIDED IN SUBPARAGRAPHS (a)(4)(ii) AND (iii) SHALL STORE, OFFER FOR SALE, SELL, MAKE AVAILABLE, DELIVER FOR USE OR EXCHANGE IN TRADE FOR USE IN CONNECTICUT FUEL WHICH CONTAINS IN EXCESS OF ONE PERCENT (1.0%) SULFUR BY WEIGHT (DRY BASIS).

(a)(4)(ii) In other than conditions of fuel shortage emergency described under subsection (a)(2)(ii), fuel merchants seeking to store, offer for sale, sell, deliver for use or exchange in trade, for use in Connecticut, and fuel users seeking to create by combustion heat, light, power, or energy from fuels containing sulfur in excess of the maximums set by subsection (a)(2) under the conditions specified in subsection (a)(3) shall obtain the prior approval of the Commissioner.

(a)(4)(iii) THE COMMISSIONER MAY ALLOW A FUEL MERCHANT TO STORE, SELL, OR DELIVER FUEL, WHICH CONTAINS MORE THAN ONE PERCENT (1%) SULFUR BY WEIGHT (DRY BASIS) TO ANY FUEL USER WHO HAS BEEN AUTHORIZED TO USE SUCH FUEL BY:

(A) A VARIANCE PURSUANT TO 19-508-13; OR

(B) A PERMIT PURSUANT TO 19-508-3; OR

(C) APPROVAL PURSUANT TO 19-508-19 (a)(2)(ii); OR

(D) APPROVAL PURSUANT TO 19-508-19 (a)(3); OR

(E) AUTHORIZATION AS A RESULT OF ANY OTHER ACTION TAKEN BY THE COMMISSIONER.

THE COMMISSIONER MAY TAKE SUCH ACTION UNDER THIS SUBPARAGRAPH WITHOUT REQUIRING ANY NOTICE OR HEARING.

(a)(5) [The provisions of subsection (a)(1) through (a)(7) inclusive shall not apply to fuels used by oceangoing vessels.

(a)(6)] The Commissioner may require submission of fuel analyses, results of stack sampling, or both, prepared at the expense of the merchant or user, to ensure compliance with the provisions of subsections (a)(1) through (a)(7) inclusive, and no person shall fail to submit such data when requested to do so by the Commissioner.

[(a)(7)] (a)(6) Persons selling fuels in Connecticut shall maintain records of sales of all fuel containing sulfur and shall make these records available for inspection by the Commissioner or his representative during normal business hours. This section shall not apply to any of the following fuels which have sulfur contents below two-tenths of one percent (0.2%) by weight (Dry Basis): distillate oil, motor vehicle fuel, aircraft fuel, or gaseous fuel.

(a)(7) THE PROVISIONS OF SUBSECTIONS (a)(1) THROUGH (a)(6) INCLUSIVE SHALL NOT APPLY TO FUELS USED BY OCEANGOING VESSELS.

(a)(8) No person shall cause or permit the flaring or combustion of any refinery process gas stream or any other process gas stream that contains sulfur compounds measured as hydrogen sulfide in concentrations greater than 10 grains per 100 standard cubic feet (23 gm/100 scm) of gas.

(a)(9)(i) [The provisions of subsections (a) (2)(i) above shall not apply to any coal burning space heater installed in any single family home on or before May 1, 1975. This exemption shall apply only to heaters burning anthracite coal with a sulfur content less than 0.75% by weight (dry basis).

(ii) The provisions of subsections (a)(2)(i) above shall not apply to any commercial establishment's coal burning equipment in operation on or before May 1, 1975. This exemption shall be limited to the burning of less than 75 tons per year of anthracite coal with a sulfur content less than 0.75% by weight (dry basis).

(iii)] The provisions of subsections (a)(2)(i) above shall not apply to any coal burning equipment used primarily for educational or historical demonstrations or exhibits PROVIDED THAT THE EMISSIONS FROM SUCH FUEL BURNING EQUIPMENT DO NOT INTERFERE WITH EITHER THE ATTAINMENT OR MAINTENANCE OF ANY APPLICABLE AIR QUALITY STANDARD. These sources shall include, but are not limited to, blacksmith's forges, steam locomotives, and steamboats, provided, however, that such sources do not use or burn fuel which contains sulfur in excess of one and one-half percent (1.5%) by weight (dry basis).

[(iv)](ii) As a prerequisite for exemption under the provisions of subsections (a)(9) [(ii) and (a)(9)(iii)] (i), owners shall notify the commissioner [on or before October 15, 1976] PRIOR TO COMMENCEMENT of said operation [in accordance with instructions and forms furnished by the commissioner].

[(v)](iii) The commissioner may revoke or modify an exemption under subsection (a)(9) if he determines that operation of the source will (1) prevent or interfere with the attainment or maintenance of any applicable air quality air standards, or (2) create a substantial health problem.

[(vi)](iv) All fuel merchants are authorized to sell fuel to any owner or operator granted an exemption pursuant to subsections (a)(9)[(i), (ii), and (iii)] above. In addition to the requirements of subsection (a)(7) above, all records shall include the sulfur content of the fuel.

(b) Sulfuric acid plants. No person shall cause or permit sulfur oxides emissions which exceed 6.5 pounds per ton (3.25 kg/ metric ton) of [100] ONE HUNDRED percent (100%) acid produced.

(c) Sulfur recovery plants. No person shall cause or permit the emission of sulfur oxides from a sulfur recovery plant to exceed 0.01 pounds (kg[.]) per pound (kg[.]) of sulfur processed.

(d) Nonferrous smelters. No person shall cause or permit the emission of sulfur oxides from primary non-ferrous smelters to exceed that set forth according to the following equations.

Copper smelters: $Y = 0.2\ X$
Zinc smelters: $Y = 0.564\ X^{0.85}$
Lead smelters: $Y = 0.98\ X^{0.77}$

Where X is the total sulfur fed to the smelter in lb[.]/hr[.] and Y is the allowable sulfur dioxide emissions in lb[.]/hr.

(e) Sulfite pulp mills. No person shall cause or permit the total sulfite pulp mill emissions of sulfur oxides from blow pits, washer vents, storage tanks, digester relief, recovery system, etc., to exceed 9.0 pounds per air-dried ton (4.5 kg[.]/metric ton) of pulp produced.

(f) Other process sources. Notwithstanding the provisions of section 19-508-18 (e), process sources not covered in subsections (b) through (e) inclusive 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.

Statement of Purpose: To allow fuel users in Connecticut to save money by using fuel which contains 1% sulfur without causing a violation of the health-related air quality standards.

CERTIFICATION
R-39 REV. 1/77

Be it known that the foregoing:

[X] Regulations [ ] Emergency Regulations

[ ] Adopted [X] Amended as hereinabove stated [ ] Repealed

By the aforesaid agency pursuant to:

[X] Section 19-508 of the General Statutes.

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

[ ] Public Act No. _____ of the Public Acts.

After publication in the Connecticut Law Journal on June 30, 1981, of the notice of the proposal to:

[ ] Adopt [X] Amend [ ] Repeal such regulations

(If applicable): [X] And the holding of an advertised public hearing on 5th & 6th day of August 1981

WHEREFORE, the foregoing regulations are hereby:

[ ] Adopted [X] Amended as hereinabove stated [ ] Repealed

Effective:

[X] When filed with the Secretary of the State.

(OR)

[ ] The _____ day of _____ 19____.

Witness Whereof:	DATE 8/11/81	SIGNED *(Head of Board, Agency or Commission)* Stanley J. Pac	OFFICIAL TITLE, DULY AUTHORIZED Chmn.
Approved by the Attorney General as to legal sufficiency in accordance with Sec. 4-169, as amended, C.G.S.:		SIGNED [signature]	OFFICIAL TITLE, DULY AUTHORIZED Deputy Attorney General

AUG 13 1981

[X] Approved

[ ] Disapproved

[ ] Disapproved in part, *(Indicate Section Numbers disapproved only)*

[ ] Rejected without prejudice.

By the Legislative Regulation Review Committee in accordance with Sec. 4-170, as amended, of the General Statutes.	DATE 9/22/81	SIGNED *(Clerk of the Legislative Regulation Review Committee)* Elizabeth T. Brewer

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

DATE November 2, 1981	SIGNED *(Secretary of the State)* Barbara B. Kennelly	BY [signature]

INSTRUCTIONS

1. One copy of all regulations for adoption, amendment or repeal, except emergency regulations, must be presented to the Attorney General for his determination of legal sufficiency. Section 4-169 of the General Statutes.

2. Seventeen copies of all regulations for adoption, amendment or repeal, except emergency regulations, must be presented to the Standing Legislative Regulation Review Committee for its approval. Section 4-170 of the General Statutes.

3. Each regulation must be in the form intended for publication and must include the appropriate regulation section number and section heading. Section 4-172 of the General Statutes.

4. Indicate by "(NEW)" in heading if new regulation. Amended regulations must contain new language in capital letters and deleted language in brackets. Section 4-170 of the General Statutes.