DIVISION IV SOURCE EMISSION STANDARDS

SECTION 16-77 CONSTRUCTION AND OPERATING PERMITS

For the purpose of enforcement of the construction and operating permits section, Chapter 1200-3-9 of the Tennessee Air pollution Control Regulations is hereby adopted as a portion of this Code by references. Such regulations and all such additions, deletions, changes and amendments as may subsequently be made shall become a part of this Code of Ordinances and shall have the same effect as if set out in full herein.

(Ord. No. 1265, § 1, 4-25-72; Ord. No. 2671, § 1, 1-17-78; Code 1967, § 3-5)

S1200-3-9-.01 CONSTRUCTION PERMITS

(1) No person shall begin the construction of a new air contaminant source or the modification of an air contaminant source which may result in the discharge of air contaminants without first having applied for and received from the Technical Secretary a construction permit for the construction or modification of such air contaminant source.

(2) The application for a construction permit shall be made on forms available from the Technical Secretary not less than ninety (90) days prior to the estimated starting date of construction. Sources identified in paragraph 1200-3-9-.01-(4) shall make application for a construction permit not less than one hundred twenty (120) days prior to the estimated date of construction.

(4) **Prevention of Significant Air Quality Deterioration**

(a) General Provisions

1. No major stationary source or major modification, as defined in parts (b)1. and (b)2. of this paragraph, shall be constructed unless the requirements of this paragraph, as applicable, have been met.

2. The requirements of this paragraph shall only apply to a proposed major stationary source, or major modification with respect to any pollutant which is emitted in significant amounts, or would result in a significant net emissions increase of the pollutant respectively. Also, the requirements of this paragraph do not apply to proposed pollutant emission sources or modifications in a nonattainment area for any pollutant to be emitted by the proposed source or modification for which the area is classified nonattainment.

3. Any owner or operator who constructs or operates a source or modification not in accordance with the application submitted pursuant to this paragraph or with the terms of any approval to construct, or any owner or operator of a

source or modification subject to this paragraph who commences construction after the effective date of these regulations without applying for and receiving approval hereunder, shall be subject to appropriate enforcement action.

4. Approval to construct shall become invalid if construction is not commenced within 18 months after issuance of an approved permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within 18 months of the completion date specified on the construction permit application. The Tennessee Air Pollution Control Board may grant an extension to complete construction of the source provided adequate justification is presented. An extension shall not exceed 18 months in time. The provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within 18 months of the projected and approved commencement date.

5. Approval to construct shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions under this Division 1200-3 and any other requirements under local, State, or Federal law.

6. If a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of this paragraph shall apply to the source or modification as though construction had not yet commenced on the source or modification.

7. Permit Rescission

   (i) Any permit for a prevention of significant air quality deterioration (PSD) source or modification that was issued according to the rules and regulations contained in paragraph 1200-3-9-.01-(6) will remain in effect and binding until such time as the permittee files a completed application to obtain rescission. This application for rescission may be filed at any time by the permittee.

   (ii) The Technical Secretary shall approve any application for rescission if the application shows that this paragraph 1200-3-9-.01-(4), would not apply to the source or modification.

   (iii) If requested by the permittee, the Technical

Secretary may rescind only certain elements required in a PSD permit issued on or before the effective date of this paragraph, 1200-3-9-.01-(4).

(iv) Those sources subject to PSD review before August 7, 1977 shall not be allowed to apply for a PSD permit rescission if construction has "commenced" by August 7, 1977.

(v) If a source or modification whose permit is rescinded were later found to be causing or contributing to an increment violation, additional control might be necessary as determined by the Technical Secretary.

(vi) If the Technical Secretary rescinds a permit under this paragraph, the public shall be given adequate notice of the rescission. Publication of an announcement of rescission in a newspaper of general circulation in the affected region within 60 days of the rescission shall be considered adequate notice.

(b) Definitions. As used in this paragraph, all terms not defined herein shall have the meaning given them in Chapter 1200-3-2.

1. **"Major stationary source"** means:

(i) Any of the following stationary sources, which emit or have the potential to emit, 100 tons per year or more of any air pollutant regulated under this Division 1200-3.

(I) Fossil-fuel fired steam electric plants of more than 250 million BTU per hour heat input.

(II) Municipal incinerators capable of charging more than 250 tons of refuse per day.

(III) Fossil-fuel boilers (or combinations thereof) totaling more than 250 million BTU per hour heat input.

(IV) Petroleum storage and transfer facilities with a total storage capacity exceeding 300,000 barrels.

(V) Coal cleaning plants (with thermal dryers)

(VI) Kraft pulp mills

(VII) Portland cement plants

(VIII) Primary zinc smelters

(IX) Iron and steel mill plants

(X) Primary aluminum ore reduction plants

(XI) Primary copper smelters

(XII) Hydrofluoric acid plants

(XIII) Sulfuric acid plants

(XIV) Nitric acid plants

(XV) Petroleum refineries

(XVI) Lime plants

(XVII) Phosphate rock processing plants

(XVIII) Coke oven batteries

(XIX) Sulfur recovery plants

(XX) Carbon black plants (furnace process)

(XXI) Primary lead smelters

(XXII) Fuel conversion plants

(XXIII) Sintering plants

(XXIV) Secondary metal production plants

(XXV) Chemical process plants

(XXVI) Taconite ore processing plants

(XXVII) Glass fiber processing plants

(XXVIII) Charcoal production plants

(ii) Notwithstanding the stationary source size specified in subparagraph (b)-1.-(i) of this paragraph, any stationary source which emits or has the potential to emit, 250 tons per year or more of any air pollutant subject to regulation under this Division 1200-3.

(iii) Any physical change that would occur at a stationary source not otherwise qualifying under paragraph (b)-1. as a major stationary source if the change would constitute a major stationary source by itself.

2. **"Major modification"** means any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under this Division 1200-3.

(i) A physical change or change in the method of operation shall not include:

(I) Routine maintenance, repair, or replacement;

(II) Use of an alternative fuel or raw material by reason of any order under section 2(a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plan pursuant to an applicable federal statute;

(III) Use of an alternative fuel by reason of an order or rule under section 125 of the Clean Air Act;

(IV) Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste as determined by the Tennessee Division of Solid Waste Management.

(V) Use of an alternative fuel or raw material by a stationary source which the source was capable of accommodating before January 6, 1975, unless such change would be prohibited under a legally enforceable permit condition which was established after January 6, 1975, or under regulations of this Division 1200-3.

(VI) An increase in the hours of operation or in the production rate, unless such change would be prohibited under legally enforceable permit which was established after January 6, 1975, or under regulations of this Division 1200-3.

(VII) Any change in ownership at a stationary source.

3. **Major sources and modifications for ozone**

(i) A source that is major for volatile organic compounds shall be considered major for ozone.

(ii) Any net emissions increase that is significant for volatile organic compounds shall be considered significant for ozone.

4. **Net emission increases**

(i) "Net emissions increase" means the amount by which the sum of the following exceeds zero:

(I) Any increase in actual emissions from particular

physical change or change in the method of operation at a stationary source; and

(II) Any other increases and decreases in actual emissions at the source that are contemporaneous with the particular change and are otherwise creditable.

(ii) An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs between:

(I) The date five years before a completed application for the particular change is submitted and

(II) The date that the increase from the particular change occurs.

(iii) An increase or decrease in actual emissions is creditable only if the Technical Secretary has not relied on it in issuing a permit for the source under regulations approved pursuant to this rule, which permit is in effect when the increase in actual emissions from the particular change occurs.

(iv) An increase or decrease in actual emissions of sulfur dioxide or particulate matter which occurs before the applicable baseline date is creditable only if it is required to be considered in calculating the amount of maximum allowable incremental increases remaining available.

(v) An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.

(vi) A decrease in actual emissions is creditable only to the extent that:

(I) The old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of actual emissions;

(II) It is legally enforceable at and after the time that actual construction on the particular change begins; and

(III) It has approximately the same qualitative significance for ambient air quality considering the nature of the pollutants to be released from the particular change.

(vii) An increase that results from a physical change at a source occurs when the emissions unit on which construction

occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period as determined by the Technical Secretary, not to exceed 180 days.

5. **"Potential to emit"** means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is legally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

6. **"Stationary source"** means any building, structure, facility, or installation which emits or may emit any air pollutant subject to regulation under this Division 1200-3.

7. **"Building, structure, facility, or installation"** means all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control). Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same "Major Group" (i.e., described by the first two digits in the code which is specified in the Standard Industrial Classification Manual, 1972, as amended by the 1977 Supplement (U.S. Government Printing Office stock numbers 4101-0066 and 003-005-00176-0, respectively)).

8. **"Emissions unit"** means any part of a stationary source which emits or would have the potential to emit any pollutant subject to regulation under this Division 1200-3.

9. **"Construction"** means any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) which would result in a change in actual emissions.

10. **"Commence"** as applied to construction of a major stationary source or major modification means that the owner or operator has all necessary preconstruction approvals or permits and either has:

    (i) Begun, or caused to begin, a continuous program of actual on-site construction of the source, to be completed within the time frame as allowed in part 1200-3-9-.01-(4)-(a)-4.

    (ii) Entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial

loss to the owner or operator, to undertake a program of actual construction of the source to be completed within the time frame as allowed in part 1200-3-9-.01-(4)-(a)-4.

11. **"Necessary preconstruction approvals or permits"** means all permits or approvals required under air quality control laws and regulations.

12. **"Begin actual construction"** means, in general, initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying of underground pipework, and construction of permanent storage structures. With respect to a change in method of operation this term refers to those on-site activities, other than preparatory activities, which mark the initiation of the change.

13. **"Pollutant"** means those air contaminants which fall under the categories of criteria and non-criteria pollutants. Criteria pollutants are those for which an ambient air quality standard has been established. The criteria pollutants are found in Chapter 1200-3-3, Table 1. The non-criteria pollutants are as follows: fluorides, asbestos, beryllium, mercury, vinyl chloride, sulfuric acid mists, hydrogen sulfide (H_2S), total reduced sulfur (including H_2S), and reduced sulfur compounds (including H_2S).

14. **"Baseline concentration"** means that ambient concentration level which exists in the baseline area at the time of the applicable baseline date. A baseline concentration is determined for each pollutant for which a baseline date is established and shall include:

    (i) The actual emissions representative of sources in existence on the applicable baseline date, except as provided in paragraph (b)(14)(iii); and

    (ii) The allowable emissions of major stationary sources which commenced construction before January 6, 1975, but were not in operation by the applicable baseline date.

    (iii) The following will not be included in the baseline concentration and will affect the applicable maximum allowable increment increase(s):

        (I) Actual emissions increases and decreases from any major stationary source on which construction commenced after January 6, 1975; and

        (II) Actual emissions increases and decreases at any stationary source occurring after the baseline date.

15. **"Baseline date"** means the earliest date after August 7, 1977 that

a major stationary source or major modification submits a complete application to this Division 1200-3 or to the EPA administrator.

(i) The baseline date is established for each pollutant for which increments or other equivalent measures have been established if:

(I) The area in which the proposed source or modification would construct is not designated as a nonattainment area for the pollutant on the date of its complete application.

(II) In the case of a major stationary source, the pollutant would be emitted in significant amounts, or, in the case of a major modification, there would be a significant net emissions increase of the pollutant.

16. **"Baseline area"** means any intrastate area (and every part thereof) not designated as a nonattainment area in which the major source or major modification establishing the baseline date would construct or would have an air quality impact equal to or greater than 1 ug/m^3 (annual average) of the pollutant for which the baseline date is established.

(i) Area redesignations under this Division 1200-3 cannot intersect or be smaller than the area of impact of any major stationary source or major modification which establishes a baseline date or is subject to the regulations in this paragraph.

17. **"Allowable emissions"** means the emissions rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to legally enforceable limits which restrict the operating rate, or hours of operation,or both) and the most stringent of the following:

(i) The applicable standards under this Division 1200-3 or in the State Implementation Plan, including those with a future compliance date; or

(ii) The emissions rate specified as a legally enforceable permit condition established pursuant to this rule 1200-3-9-.01, including those with a future compliance date.

18. **"Legally enforceable"** means all limitations and conditions which are enforceable by the Technical Secretary and the EPA administrator.

19. **"Secondary emissions"** means emissions which occur as a result of the construction or operation of a major stationary source or major modification, but do not come from the major stationary

source or major modification itself. For the purpose of this rule, secondary emissions must be specific, well defined, quantifiable, and impact the same general area as the stationary source or modification which causes the secondary emissions. Secondary emissions include emissions from any offsite support facility which would not otherwise be constructed or increase its emissions as a result of the construction or operation of the major stationary source or major modification. Secondary emissions do not include any emissions which come directly from a mobile source, such as the emissions from the tailpipe of a motor vehicle, from a train, or from a vessel.

20. **"Innovative control technology"** means any system of air pollution control that has not been adequately demonstrated in practice, but would have a substantial likelihood of achieving greater continuous emissions reduction than any control system in current practice or of achieving at least comparable reductions at lower cost in terms of energy, economics, or non-air quality environmental impacts as determined by the Technical Secretary.

21. **"Fugitive emissions"** means those emissions which could not reasonably pass through a stack, chimney, vent, roof monitor, or other functionally equivalent opening as determined by the Technical Secretary.

22. **"Actual emissions"** means the actual rate of emissions of a pollutant from an emissions unit, as determined in accordance with subparts (i)-(iii) below.
    (i) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a two-year period which precedes the particular date and which is representative of normal source operation. The Technical Secretary may allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.

    (ii) The Technical Secretary may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit.

    (iii) For any emissions unit which has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on the date.

23. **"Complete"** means, in reference to an application for a permit, that the application contains all the information necessary for processing the application. Designating an application complete for purposes of permit processing does not preclude the Technical

Secretary from requesting or accepting any additional information.

24. **"Significant"** means, in reference to a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emissions that would equal or exceed any of the following rates:

(i) Pollutant and Emissions Rates

(I) Carbon Monoxide: 100 tons per year (tpy)

(II) Nitrogen oxides: 40 tpy

(III) Sulfur dioxide: 40 tpy

(IV) Particulate matter: 25 tpy

(V) Ozone: 40 tpy of volatile organic compounds

(VI) Lead: 0.6 tpy

(VII) Asbestos: 0.007 tpy

(VIII) Beryllium: 0.0004 tpy

(IX) Mercury: 0.1 tpy

(X) Vinyl chloride: 1 tpy

(XI) Fluorides: 3 tpy

(XII) Sulfuric acid mist: 7 tpy

(XIII) Hydrogen sulfide (H_2S): 10 tpy

(XIV) Total reduced sulfur (including H_2S): 10 tpy

(XV) Reduced sulfur compounds (including H_2S): 10 tpy

(ii) **"Significant"** means, in reference to a net emissions increase or the potential of a source to emit a pollutant subject to regulations under this Division 1200-3 and that subparagraph (b)-24. does not list, any emissions rate.

(iii) Notwithstanding subparagraph (b)-24.(i), **"significant"** means any emissions rate or any net emissions increase associated with a major stationary source or major modification, which would construct within 10 kilometers of a Class I area, and have an impact on such area equal to or greater than 1 ug/m^3 (24-hour average).

25. **"Federal Land Manager"** means, with respect to any lands in the United States, the Secretary of the department with authority

over such lands.

26. **"High terrain"** means any area having an elevation 900 feet or more above the base of the stack of the source.

27. **"Low terrain"** means any area other than high terrain.

(c) Major stationary sources, and major modifications of sources are subject to the provisions of this paragraph.

(d) Major stationary sources and major modifications are exempt from certain provisions of this paragraph in accordance with the following:

1. No major stationary source or major modification as defined in this paragraph shall be subject to the requirements of this paragraph (except as provided in part (4)-(a)-7. of this paragraph) if:

(i) The source or modification would be a major stationary source or major modification only if fugitive emissions, to the extent quantifiable, are considered in calculating the potential to emit of the stationary source or modification and such source does not belong to any of the categories listed under subparagraph (b)- 1.-(i), or any other stationary source category which, as of the effective date of this paragraph, is being regulated under Chapter 1200-3-11 or Chapter 1200-3-16.

(ii) The source or modification was subject to the new construction rules and regulations as in effect before the effective date of this paragraph, and the owner or operator:

(a) Obtained all final Federal, State, and local preconstruction approvals or permits necessary before the effective date of this paragraph.

(b) Commenced construction within 18 months of receipt of all necessary Federal, State, and local preconstruction approvals or permits; and

(c) Did not discontinue construction for a period of 18 months or more and completed construction within the time frame as allowed in part 1200-3-9-.01-(4)-(a)-4.

(iii) The source or modification is subject to the prevention of significant deterioration rules and regulations as in effect before the effective date of this paragraph, and the owner or operator:

(a) Submitted a completed application before the effective date of this paragraph.

(b) Commenced construction within 18 months of receipt of all necessary Federal, State, and local preconstruction approvals or permits; and

(c) Did not discontinue construction for a period of 18 months or more and completed construction within the time frame as allowed in part 1200-3-9-.01-(4)-(a)-4.

2. No major stationary source or major modification as defined in this paragraph shall be subject to the requirements of this paragraph with respect to a particular pollutant if the owner or operator demonstrates that, as to that pollutant, the source or modification is located in an area designated as nonattainment.

3. Source impact and air quality analysis as required in parts (e)-1., (e)-3., and (e)-7. of this paragraph shall not apply to a proposed major stationary source or major modification with respect to a particular pollutant, if the allowable emissions of that pollutant from a new source, or the net emissions increase of that pollutant from a modification, would be temporary, and impact no Class I area and no area where an applicable increment is known to be violated.

4. Source impact and air quality analysis as required in parts (e)-1., (e)-3., and (e)-7. of this paragraph as they relate to any maximum allowable increase for a Class II area do not apply to a major modification of a stationary source that was in existence on March 1, 1978, if the net increase in allowable emissions of each pollutant from the modification after the applications of best available control technology would be less than 50 tons per year.

5. Air quality analysis as required in this paragraph may be exempted with respect to preconstruction monitoring for a particular pollutant by the Technical Secretary if:

(i) The emissions increase of the pollutant from a new stationary source or the net emissions increase of the pollutant from a modification would cause, in any area, air quality impacts less than the following amounts:

(I) Carbon monoxide - 575 ug/m^3, 8-hour average;

(II) Nitrogen dioxide - 14 ug/m^3, 24-hour average;

(III) Total suspended particulates - 10 ug/m^3, 24-hour average;

(IV) Sulfur dioxide - 13 ug/m^3, 24-hour average;

(V) Ozone - no deminimus air quality level has been established.

(VI) Lead - 0.1 ug/m^3, 24-hour average;

(VII) Mercury - 0.25 ug/m^3, 24-hour average;

(VIII) Beryllium - 0.0005 ug/m^3, 24-hour average;

(IX) Fluorides - 0.25 ug/m^3, 24-hour average;

(X) Vinyl chloride - 15 ug/m^3, 24-hour average;

(XI) Total reduced sulfur - 10 ug/m^3, l-hour average;

(XII) Hydrogen sulfide - 0.04 ug/m^3, l-hour average;

(XIII) Reduced sulfur compounds - 10 ug/m^3, l-hour average; or:

(ii) The pollutants are not listed in subparagraph (d)-5.-(i); or

(iii) Representative existing ambient air quality data are available for any pollutant as emitted by a major stationary source, or major modification; or

(iv) The existing air pollutant levels are conservatively estimated to be small and a monitoring network may not reliably measure the predicted background concentrations.

6. A portable stationary source which has previously received construction approval under the requirements of this paragraph may relocate if:

(i) Emissions from the source would be temporary and would not exceed its allowable emissions; and

(ii) The emissions from the source would impact no Class I area and no area where an applicable increment is known to be violated; and

(iii) Notice shall be given to the Technical Secretary 30 days prior to the relocation, giving the new temporary location and the probable length of operation at the new location.

7. Exclusions from Increment Consumption

(i) Maximum allowable increases (ambient air increments) as specified in subparagraph 1200-3-9-.01-(4)-(f) shall not apply to concentrations as described below.

(I) Concentrations attributable to the increase in emissions from stationary sources which have converted from the use of petroleum products, natural gas, or both by reason of an order in effect under sections 2(a) and (b) of the Energy Supply and

Environmental Coordination Act of 1974 (or any superseding legislation) over the emissions from such sources before the effective date of such an order;

(II) Concentrations attributable to the increase in emissions from sources which have converted from using natural gas by reason of a natural gas curtailment plan in effect pursuant to an applicable Federal law over the emissions from such sources before the effective date of such plan;

(III) Concentrations of particulate matter attributable to the increase in emissions from construction or other temporary emissions-related activities of new or modified sources;

(IV) Concentrations attributable to the temporary increase in emissions of sulfur dioxide or particulate matter from stationary sources which are affected by plan revisions approved as meeting the criteria specified in sub-part 7.-(iii).

(ii) No exclusion of such concentrations shall apply more than five years after the effective date of the order to which item 7.-(i)-(I) refers or the plan to which item 7.-(i)- (II) refers, whichever is applicable. If both such order and plan are applicable, no such exclusion shall apply more than five years after the later of such effective dates.

(iii) For purposes of excluding concentrations pursuant to item 7.-(i)-(IV), the proposed plan revision shall:

(I) Specify the time over which the temporary emissions increase of sulfur dioxide or particulate matter would occur. Such time is not to exceed two years in duration.

(II) Specify that the time period for excluding certain contributions in accordance with item 7.-(iii)-(I) is not renewable.

(III) Allow no emission increase from a stationary source which would:

I. Impact a Class I area or an area where an applicable increment is known to be violated; or

II. Cause or contribute to the violation of a national ambient air quality standard;

(IV) Require limitations to be in effect at the end of the

time period specified in accordance with item 7.- (iii)-(I) which would ensure that the emissions levels from stationary sources affected by the plan revision would not exceed those levels occurring from such sources before the plan revision was approved.

(e) The owner or operator of the proposed major stationary source or major modification:

1. Shall demonstrate by performing source impact analysis that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reduction (including secondary emissions) would not cause or contribute to air pollution in violation of:

(i) Any Tennessee ambient air quality standard in the source impact area.

(ii) Any applicable maximum allowable increase over the baseline concentration in any area.

2. Shall submit all data necessary to make the analyses and determinations required under this paragraph.

(i) The data shall include:

(I) A description of the nature, location, design capacity, and typical operating schedule of the source or modification, including specifications and drawings needed for the review showing its design and plant layout.

(II) A detailed proposed schedule for construction of the source or modification.

(III) A detailed description as to what system of continuous emission reduction is planned for the source or modification, emission estimates and any other information necessary to determine that best available control technology would be applied where required by this paragraph.

(IV) Additional impact analysis

I. The impairment to visibility, soils, and vegetation that would occur as a result of the source or modification and the associated general commercial, residential, industrial, and other growth. Vegetation having no significant commercial or recreational value may be excluded from the analysis.

II. The air quality impact projected for the area

as a result of general commercial, residential, industrial, and other growth associated with the source or modification.

(ii) Upon request by the Technical Secretary, the owner or operator shall also provide information on:

I. The air quality impact of the source or modification, including meteorological and topographical data.

II. The air quality impacts, and the nature and extent of any or all general commercial, residential, industrial, and other growth which has occurred since the PSD baseline in the area the source or modification would affect. Such data in the possession of the Division shall be made available to the owner or operator.

3. Shall, after construction of the stationary source or modification, conduct such post-construction monitoring as the Technical Secretary determines is necessary to determine the effect emissions from the stationary source or modification may have, or are having, on air quality in any area.

4. Shall meet the quality assurance requirements as specified in 44 FR 27571, Part 58, Appendix B, May 10, 1979, during the operation of monitoring stations for purposes of satisfying parts (e)-3. and (e)-7. of this paragraph.

5. Shall insure that the stationary source or the major modification be in compliance with all applicable emission limitations of this Division 1200-3.

6. Shall pay the cost of all publications required under this paragraph.

7. Shall perform the preapplication air quality analysis as outlined below:

(i) Any application for a construction permit pursuant to the regulations of this paragraph shall contain an analysis of ambient air quality as required by the Technical Secretary in the area that the major stationary source or major modification would affect for each of the following pollutants:

(a) For the source, each pollutant that it would have the potential to emit in a significant amount;

(b) For the modification, each pollutant for which it would result in a significant net emissions increase.

(ii) For a pollutant for which a Tennessee Ambient Air Quality

Standard (Chapter 1200-3-3, Table l) exists, (other than non-methane hydrocarbons), the analysis shall contain continuous air quality monitoring data gathered for purposes of determining whether emissions of that pollutant would cause or contribute to a violation of the standard or any maximum allowable increase unless specifically exempted in subparagraph 1200-3-9-.01-(4)-(d).

(iii) In general, the continuous air monitoring data that is required shall have been gathered over a period of one year and shall represent the year preceding receipt of the application, except that, if the Technical Secretary determines that a complete and adequate analysis can be accomplished with monitoring data gathered over a period shorter than one year (but not to be less than four months), the data that is required shall have gathered over at least that shorter period.

(iv) (Reserved)

(v) With respect to any pollutant for which no Tennessee Ambient Air Quality Standard exists, the analysis shall contain such air quality monitoring data as the Technical Secretary determines is necessary to assess ambient air quality for that pollutant in any area that the emissions of the pollutant would affect.

(f) Ambient Air Increments. In areas designated as class I, II, or III, increases in pollutant concentration over the baseline concentration shall be limited to the following:

Maximum Allowable Increase
(Micrograms per cubic meter)

Class I

Pollutant	
Particulate matter:	
Annual geometric mean	5
24-hour maximum	10
Sulfur dioxide:	
Annual arithmetic mean	2
24-hour maximum	5
3-hour maximum	25

Class II

Particulate matter:	
Annual geometric mean	19
24-hour maximum	37
Sulfur dioxide:	
Annual arithmetic mean	20

24-hour maximum		91
3-hour maximum	512	

Class III

Particulate matter:		
Annual geometric mean		37
24-hour maximum		75
Sulfur dioxide:		
Annual arithmetic mean.		40
24-hour maximum	182	
3-hour maximum	700	

For any period other than an annual period, the applicable maximum allowable increase may be exceeded during one such period per year at any one location.

(g) Area classifications - For the purpose of this paragraph, the following classifications shall apply:

1. Class I Areas - Great Smoky Mountains National Park, Joyce Kilmer Slickrock National Wilderness Area, and the Cohutta Wilderness Area.

2. Class III Areas - None

3. Class II Areas - Remainder of the state

Areas in surrounding states are classified as specified in the EPA approved implementation plan for each adjoining state.

(h) Restrictions on area classifications.

1. All of the following areas which were in existence on August 7, 1977, shall be Class I areas and may not be redesignated:

(i) International parks,

(ii) National wilderness areas which exceed 5,000 acres in size.
(iii) National memorial parks which exceed 5,000 acres in size and

(iv) National parks which exceed 6,000 acres in size.

2. Areas which were redesignated as Class I before August 7, 1977, shall remain Class I, but may be redesignated as provided in this section.

3. Any other area, unless otherwise specified in the legislation creating such an area, is initially designated Class II, but may be redesignated as provided in this section.

4. The following areas may be redesignated only as Class I or II:

(i) An area which as of August 7, 1977, exceeded 10,000 acres in size and was a national monument, a national primitive area, a national preserve, a national recreational area, a national wild and scenic river, a national wildlife refuge, a national lakeshore or seashore; and

(ii) A national park or national wilderness area established after August 7, 1977, which exceeds 10,000 acres in size.

(i) Ambient air ceilings

1. No concentration of a pollutant shall exceed the concentration permitted under the Tennessee secondary ambient air quality standard (Chapter 1200-3-3, Table l), or the concentration permitted under the Tennessee primary ambient air quality standard (Chapter 1200-3-3, Table l), whichever concentration is lowest for the pollutant for a period of exposure.

2. Except as permitted by Section 123 of the Clean Air Act Amendments of 1977, dispersion techniques which exceed good engineering practice, and which were implemented after December 31, 1970, will not be considered when determining the emission limitations required for control of any pollutant.

(j) Control Technology Review

1. A major stationary source or major modification shall meet each applicable emissions limitation under this Division 1200-3 and the State Implementation Plan.

2. A new major stationary source shall apply best available control technology for any pollutant that it would have the potential to emit in significant amounts.

3. A major modification shall apply best available control technology for any pollutant for which it would result in a significant net emissions increase at the source. This requirement applies to each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of a physical change or change in the method of operation in the unit.

4. For phased construction projects, the determination of best available control technology shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the applicable stationary source may be required to demonstrate the adequacy of any previous determination of best available control technology for the source.

(k) Air Quality Models.

All estimates of ambient concentrations required under this paragraph shall be based on the applicable air quality models and data bases acceptable to the Technical Secretary. If determined to be necessary, the Technical Secretary may specify other requirements.

(l) Public Participation

1. Within 30 days after receipt of an application to construct, or any addition to such application, the Technical Secretary shall advise the applicant of any deficiency in the application or in the information submitted. In the event of such a deficiency, the date of receipt of the application shall be, for the purpose of this section, the date on which the Technical Secretary received all required information.

2. The Technical Secretary shall make a final determination on the application no later than 6 months after receipt of a complete application. If there is a need for a longer period of time for review, it shall be agreed upon by mutual consent. In no case may this review period be longer than l year. The review process involves performing the following actions:

(i) Make a preliminary determination whether construction should be approved, approved with conditions, or disapproved.

(ii) Make available in at least one location in each air quality control region in which the proposed source or modification would be constructed a copy of all materials the applicant submitted, a copy of the preliminary determination and a copy or summary of other materials, if any, considered in making the preliminary determination.

(iii) Notify the public, by advertisement in a newspaper of general circulation in each air quality control region in which the proposed source or modification would be constructed, of the application, the preliminary determination, the degree of increment consumption that is expected from the source or modification, and the opportunity for comment at a public hearing as well as written public comment.

(iv) Send a copy of the notice of public comment to the applicant and to officials and agencies having cognizance over the location where the proposed construction would occur as follows: State or local air pollution control agencies, the chief executives of the city and county where the source or modification would be located, any comprehensive regional land use planning agency, the EPA Administrator, and any State or Federal Land Manager whose lands may be significantly (1 ug/m^3, 24 hour average)

affected by emissions from the source or modification.

(v) Provide opportunity for a public hearing for interested persons to appear and submit written or oral comments on the air quality impact of the source or modification, the control technology required, and other appropriate considerations.

(vi) Consider all written comments submitted within a time specified in the notice of public comment and all comments received at any public hearing(s) in making a final decision on the approvability of the application. No later than 10 days after the close of the public comment period, the applicant may submit a written response to any comments submitted by the public or request an extension for this purpose. The Technical Secretary shall consider the applicant's response in making a final decision. The Technical Secretary shall make all comments available for public inspection in the same locations where the Technical Secretary make available preconstruction information relating to the proposed source or modification.

(vii) Make a final determination whether construction should be approved, approved with conditions, or disapproved pursuant to this paragraph.

(viii) Notify the applicant in writing of the final determination and make such notification available for public inspection at the same location where the Technical Secretary made available preconstruction information and public comments relating to the source or modification.

(ix) All public comments and written comments prepared by the Technical Secretary will be maintained in the public depositories for one year from the date of issuance of the final determination.

(m) Violations of Air Quality Increments

The Technical Secretary shall not issue a construction permit to a source or facility to construct in an area where the increment is known to be violated or the air quality review predicts a violation of the increment or the ambient air quality standards except in accordance with the following:

1. All new or modified facilities shall utilize good engineering practice as determined by the Technical Secretary in designing stacks. In no event shall that part of a stack which exceeds good engineering practice stack height be taken into account for the purpose of determining the degree of emission limitation required for the control of any pollutant for which there is an ambient air quality standard established in Chapter 1200-3-3, Table 1.

2. A major source or modification which would normally be required to meet BACT shall be required to meet the Lowest Achievable Emission Rate (LAER) for that type of source as determined by the Technical Secretary at the time of the permit application. The term "lowest achievable emission rate" means for any source, that rate of emissions which reflects

   (i) the most stringent emission limitation which is achieved in practice by such class or category of source.

   (ii) In no event shall a new or modified source emit any pollutant in excess of the amount allowable under the applicable rules of Chapter 1200-3-16.

3. If required in paragraph 1200-3-9-.01(5), the source shall obtain emission offsets, legally enforceable at or before the time of PSD permit issuance, sufficient to predict that the increment or air quality standard will no longer be violated. The offsets shall be accomplished on or before the time of the new source operation and demonstrated through a source test or through another method acceptable to the Technical Secretary.

4. This rule does not exempt the source from meeting the requirements of rule 1200-3-9-.01-(5).

(n) Sources Impacting Class I Areas - Additional Requirements

1. Notice to Federal Land Managers and the EPA Administrator

   The Technical Secretary shall promptly provide notice of receipt of any permit application for a proposed major stationary source or major modification, the emissions from which would significantly (l ug/m^3, 24 hour average) affect a Class I area to the EPA Administrator, the Federal Land Manager, and the Federal official charged with direct responsibility for management of any lands within any such area. The Technical Secretary shall transmit to the EPA Administrator a copy of each permit application relating to a major stationary source or major modification which would significantly affect a Class I area. The Technical Secretary shall also provide the EPA Administrator, the Federal Land Manager and such Federal officials with a copy of the preliminary determination and shall make available to them any materials used in making that determination promptly after the Technical Secretary makes it. In addition, notification of public hearings, final determinations, and permits issued shall be provided.

2. Denial - Impact on Air Related Values

   The Federal Land Manager of any such lands may demonstrate to the Technical Secretary that the emissions from a proposed source or modification would have an adverse impact on the air

quality-related values (including visibility) of those lands, notwithstanding that the change in air quality resulting from emissions from such source or modification would not cause or contribute to concentrations which would exceed the maximum allowable increases for a Class I area. If the Technical Secretary concurs with such demonstration, then he shall not issue the permit.

3. Class I Variances

The owner or operator of a proposed source or modification may demonstrate to the Federal Land Manager that the emissions from such source or modification would have no adverse impact on the air quality related values of any such lands (including visibility), notwithstanding that the change in air quality resulting from emissions from such source or modification would cause or contribute to concentrations which would exceed the maximum allowable increases for a Class I area. If the Federal Land Manager concurs with such demonstration and he so certifies, the Technical Secretary, provided that the applicable requirements of this paragraph are otherwise met, may issue the permit with such emission limitations as may be necessary as approved by the Tennessee Air Pollution Control Board to assure that emissions of sulfur dioxide and particulate matter would not exceed the following maximum allowable increases over baseline concentration for such pollutants:

	Maximum allowable increase (micrograms per cubic meter)
Particulate matter:	
Annual geometric mean	19
24 hour maximum	37
Sulfur dioxide	
Annual arithmetic mean	20
24-hr. maximum	91
3-hr. maximum	325

(o) Innovative Control Technology

1. The owner or operator of a proposed major stationary source or major modification may request that the Technical Secretary approve a system of innovative control technology.

3. The Technical Secretary shall withdraw any approval to employ a system of innovative control technology made under this subparagraph, if:

(i) The proposed system fails by the specified date to achieve the required continuous emissions reduction rate; or

(ii) The proposed system fails before the specified date so as to contribute to ambient air quality violations, or considering the nature of the pollutant, unacceptable concentrations, or

(iii) The Technical Secretary decides at any time that the proposed system is unlikely to achieve the required level of control, or is contributing to ambient air quality violations.

4. If a source or modification fails to meet the required level of continuous emission reduction within the specified time period or the approval is withdrawn in accordance with part (o)-3., the Technical Secretary may allow the source or modification up to an additional 3 years to meet the requirement for the application of best available control technology through use of a demonstrated system of control.

(5) Growth Policy

(a) Attainment and Unclassified Areas

The technical Secretary shall not grant a permit or waiver for the construction or modification of any air contaminant source in an attainment or unclassified area if such construction or modification will interfere with the maintenance of an air quality standard or will violate any provisions of the Tennessee Air Quality Act.

(b) Non-Attainment Areas

The Technical Secretary shall not grant a permit for construction or modification of any air contaminant source in a non-attainment area nor to any source that significantly impacts on a nonattainment area if such construction or modification will interfere with reasonable further progress in attainment of the specific air quality standard(s) or will violate any provisions of these regulations except in accordance with the following:

1. All new or modified sources shall utilize good engineering practice as determined by the Technical Secretary in designing stacks, and the Technical Secretary will consider only stack height that represents good engineering practice in determining whether emission control measures are sufficient.

2. A minor new source shall utilize Best Available Control Technology (BACT) as specified by the Technical Secretary.

3. A major new source shall meet the Lowest Achievable Emission Rate (LAER) for that type of source as

determined by the Technical Secretary at that time of the permit application. The term "lowest achievable emission rate" means for any source, that rate of emissions which reflects

(i) the most stringent emission limitation which is achieved in practice by such class or category of source.

(ii) In no event shall a new or modified source emit any pollutant in excess of the amount allowable under the applicable rules of Chapter 1200-3-16.

4. A major new source shall also show that it will not interfere with reasonable further progress in attaining the ambient air quality standards by one of the following methods:

(i) Banked Credits

(I) By agreeing to control the nonattainment emissions to a rate lower than the nonattainment emissions specified as Reasonable Available Control Technology (RACT) by the Technical Secretary, the owner or operator of an air contaminant source has reserved the right to utilize the incremental reduction between RACT and the Banked Credit Agreed Rate (BCAR) to provide for future growth in the nonattainment area.

(II) The Banked Credit Agreed Rate is an emission rate more restrictive than RACT which is mutually agreed to by the Technical Secretary and an air contaminant source for the purpose of establishing a Banked Credit. This emission level is in no way related to BACT or LAER. Only sources in operation in 1977 or having an approved construction permit on March 21, 1979, which are located in or significantly impact a nonattainment area eligible to establish a Bank Credit Agreed Rate.

(III) The following limitations shall apply to the issuance of a permit for construction or modification for sources using "Banked Credit Agreed Rate".

I. All Banked Credits in a given

nonattainment area shall become void upon official reclassification of that area as an attainment area.

II. An increase in pounds per hour shall be offset by a "Banked Credit" of that amount. The Banked Credit Account will be reduced by that amount.

III. An air quality modeling review shall show that the "Banked Credit" used and the new and/or modified source result in predicted cleaner air for the nonattainment area than air quality at the RACT emission level. No predicted new violations of the ambient air quality standards will be permitted.

IV. A "Banked Credit" shall not be used until the "Banked Credit Agreed Rate" level of control is attained by the source involved and demonstrated through a source test or through another method acceptable to the Technical Secretary.

V. The "Banked Credit Agreed Rate" shall be contained in the State Implementation Plan as the legally enforceable standard for the air contaminant source. If the source electing to use "Banked Credits" must reduce emissions to achieve the "Banked Credit Agreed Rate" level approved by the Tennessee Air Pollution Control Board, a compliance schedule shall be included in the State Implementation Plan revision.

(ii) Emission Offsets

(I) For major sources, a larger than one- to-one offset of emissions of the nonattainment pollutant, based on both allowable and actual emissions shall be employed. This offset must result in a net improvement in predicted air quality for the pollutant in the area under the influence of emissions from the new or modified major sources and that reasonable further

progress shall not be hindered.

(II) All or any portions of the offsets shall be accomplished on or before the time of new source operation and demonstrated through a source test or through another method acceptable to the Technical Secretary.

(III) The reductions shall come from sources in the emission inventory used in the approved control strategy for the nonattainment area state implementation plan revision.

(IV) The amount of the proposed reduction shall be sufficient to offset both the emission increases directly associated with the proposed source construction and/or modification and those emissions attributed to permitted minor sources that have come into the area since the last reasonable further progress milestone was met.

(iii) Construction or modification of Major Sources that Have No Emission Offsets or Banked Credits.

The Technical Secretary shall issue a construction permit to proposed new or modified sources provided the sources' emissions will not prevent reasonable further progress in the nonattainment area or will not prevent the ambient air quality standards from being met. Completed applications from sources qualifying for this provision will be processed based on the date of receipt of the application by the Technical Secretary in his Nashville office.

(iv) Combination of the provisions of subparts (i), (ii) and (iii) of this part.

5. Prior to the issuance of a permit to a major carbon monoxide (CO) or volatile organic compound (VOC) source in Shelby and Davidson Counties, or a major volatile organic compound (VOC) source in Hamilton County, an analysis of alternate sites, sizes, production process, and environmental control techniques for the proposed source shall be made. A permit shall only be issued if the benefits of the proposed source significantly outweigh the environmental and social costs imposed on the public as a result of the sources' location, construction, or modification in these counties. The Technical Secretary shall require the submittal of such information as he deems necessary for this analysis.

6. A source is identified as a major source for each pollutant

as indicated below:

(i) A major source for SO^2 and Volatile Organic Compounds is a source with potential emissions of more than 100 tons per year and allowable emissions (based on BACT) greater than any of the following:

40 tons per year
1000 lbs per day
100 lbs per hour

(ii) A major source for carbon monoxide is a source potential emissions of greater than 1000 tons per year and allowable emissions (based on BACT) greater than any of the following:

5 tons per year
1000 lbs per day
100 lbs per hr.

(iii) A major source for particulate matter is any source with potential emissions of more than 100 tons per year and/or allowable emissions of greater than 5 tons per year, 1000 lbs per day, of 100 lbs. per hr (based on BACT).

Piecemeal construction is cumulative.

When an air contaminant source's new and/or modified allowable emissions equals or exceed the above levels it becomes a major source.

Potential emissions as used above means the capability at maximum capacity to emit a pollutant in the absence of air pollution control equipment. "Air pollution control equipment" includes control equipment which is not, aside from air pollution control laws and regulations, vital to production of the normal product of the source or to its normal operation. Annual potential shall be based on the maximum annual rated capacity of the source, unless the source is subject to enforceable permit conditions on the type or amount of materials combusted or processed may be used in determining the potential emission rate of a source.

7. 1200-3-9-.01-(5)-(b) applies only to the following counties for Volatile Organic Compounds:

Davidson
Hamilton
Shelby

8. An increase in emissions from a new or modified air contaminant (all sources at a given plant location) source is deemed to significantly impact on air quality when it contributes to air quality in the following amounts or more:

Pollutant	Annual	24-hour	3-hour	8-hour	1-hour
Sulfur Dioxide	1 ug/m^3	5 ug/m^3	25 ug/m^3		
Particulate matter	1 ug/m^3	5 ug/m^3			
Carbon Monoxide				0.5 mg/m^3	2 mg/m^3

9. A minor source is any source which is not a major source as defined in 1200-3-9-.01-(5)-(b)-6.

10. The Technical Secretary shall not issue a permit to any major source in or significantly impacting a nonattainment area unless all other sources owned or operated by the applicant anywhere in the state are in compliance or on an approved compliance schedule.

11. Regardless of the specific emission standards contained in this rule, all sources identified in rule 1200-3-9-.01-(4) if more stringent.

12. 1200-3-9-.01-(5)-(b) does not apply to the following nonattainment areas identified in 1200-3-19-.03:

(i) Bristol Particulate Nonattainment Area (Reference 1200-3-19-.03(1)-(a).

(ii) Jacksboro Particulate Nonattainment Area (Reference 1200-3-19-.03(1)-(e).

[END OF PARAGRAPH (5), GROWTH POLICY]

(6) Construction permits issued under this rule are based on the control of air contaminants only and do not in any way affect the applicant's obligation to obtain necessary permits from other governmental agencies.

(7) The applicant for a construction permit (or its equivalent by Board order) shall pay the cost of publication of any notices required by state or federal law or regulations to effectuate the rights applied for.

(8) Prevention of Significant Air Quality Deterioration Regulations in Effect Before the Effective Date of Paragraph 1200-3-9-.01-(4).

(a) General Provisions

1. Only major stationary sources or major modifications which have been permitted or whose completed application for a permit was received prior to the effective date of paragraph 1200-3-9-.01(4) are subject to the requirements in this paragraph except as provided in part 1200-3-9-.01-(4)-(a)-7. (permit recision).

2. No major stationary source or major modification, as defined in parts (b)1. and (b)2. of this paragraph, shall be constructed unless the requirements of this paragraph, as applicable, have been met.

3. The requirements of this paragraph shall apply to a proposed source or modification only with respect to those pollutants for which it would be a major stationary source or major modification.

4. Any owner or operator who constructs or operates a source or modification not in accordance with the application submitted pursuant to this paragraph or with the terms of any approval to construct, or any owner or operator of a source or modification subject to this paragraph who commences construction after June 21, 1979 without applying for and receiving approval hereunder, shall be subject to appropriate enforcement action.

5. Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Technical Secretary may extend the 18-month period upon a satisfactory showing that an extension is justified. The provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within 18 months of the projected and approved commencement date.

6. Approval to construction shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the State Implementation plan and other requirements under Local, State or Federal law.

(b) Definitions. As used in this paragraph, all terms not defined herein shall have the meaning given them in Chapter 1200-3-2.

1. **"Major stationary source"** means:

(i) Any of the following stationary sources, which emit or have the potential to emit, 100 tons per year or more of any air pollutant regulated under this Division 1200-3.

(I) Fossil-fuel fired steam electric plants of more than 250 million BTU per hour heat input.

(II) Municipal incinerators capable of charging more than 250 tons of refuse per day.

(III) Fossil-fuel boilers (or combinations thereof) totaling more than 250 million BTU per hour heat input.

(IV) Petroleum storage and transfer facilities with a total storage capacity exceeding 300,000 barrels.

(V) Coal cleaning plants (with thermal dryers)

(VI) Kraft pulp mills

(VII) Portland cement plants

(VIII) Primary zinc plants

(IX) Iron and steel mill plants

(X) Primary aluminum ore reduction plants

(XI) Primary copper smelters

(XII) Hydrofluoric acid plants

(XIII) Sulfuric acid plants

(XIV) Nitric acid plants

(XV) Petroleum refineries

(XVI) Lime plants

(XVII) Phosphate rock processing plants

(XVIII) Coke oven batteries

(XIX) Sulfur recovery plants

(XX) Carbon black plants (furnace process)

(XXI) Primary lead smelters

(XXII) Fuel conversion plants

(XXIII) Sintering plants

(XXIV) Secondary metal production plants

(XXV) Chemical process plants

(XXVI) Taconite ore processing plants

(XXVII) Glass fiber processing plants

(XXVIII) Charcoal production plants

(ii) Any source which emits or has the potential to emit 250 tons per year or more of any air pollutant regulated under this Division 1200-3.

2. **"Major modification"** means any physical change in, change in the method of operation of, or addition to a stationary source which increases the potential emission rate of any air pollutant regulated under this Division 1200-3 (including any not previously emitted and taking into account all accumulated increases in potential emissions occurring at the source since August 7, 1977, or since the time of the last construction approval issued for the source pursuant to this paragraph, whichever time is more recent, regardless of any emission reductions achieved elsewhere in the source) by either 100 tons per year or more for any source category identified in subpart (b)-1.-(i) of this paragraph, or by 250 tons per year or more for any stationary source.

(i) A physical change shall not include routine maintenance, repair and replacement.

(ii) A change in the method of operation, unless previously limited by enforceable permit conditions, shall not include:

(I) An increase in the production rate, if such increase does not exceed the operating design capacity of the source specified on the latest operating or construction permit;

(II) An increase in the hours of operation;

(iii) A change in the method of operation shall not include:

(I) Use of an alternative fuel or raw material by reason of an order in effect under Sections 2(a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation), or by reason of a natural gas curtailment plan in effect pursuant to the Federal Power Act;

(II) Use of an alternative fuel or raw material, if prior to January 6, 1975, the source was capable of

accommodating such fuel or material.

(III) Use of an alternative fuel by reason of an order or rule under Section 125 of the Clean Air Act;

(IV) Change in ownership of the source.

3. **"Potential to emit"** means the capability at maximum capacity to emit a pollutant in the absence of air pollution control equipment. **"Air pollution control equipment"** includes control equipment which is not, aside from air pollution control laws and regulations, vital to production of the normal product of the source or to its normal operation. Annual potential shall be based on the maximum annual rated capacity of the source or facility, unless the source or facility is subject to enforceable permit conditions which limit the annual hours of operation. Enforceable permit conditions on the type or amount of materials combusted or processed may be used in determining the potential emission rate of a source or facility.

4. **"Source"** means any structure, building, facility, equipment, installation, or operation (or combination thereof) which is located on one or more contiguous or adjacent properties and which is owned or operated by the same person (or by persons under common control).

5. **"Facility"** means an identifiable piece of process equipment. A source is composed of one or more pollutant-emitting facilities.

6. **"Fugitive dust"** means particulate matter composed of soil which is uncontaminated by pollutants resulting from industrial activity. Fugitive dust may include emissions from haul roads, wind erosion of exposed soil surfaces and soil storage piles and other activities in which soil is either moved, stored, transported, or redistributed.

7. **"Baseline concentration"** means that ambient concentration level reflecting actual air quality as of August 7, 1977, minus any contribution from major stationary sources and major modifications on which construction commenced and all necessary preconstruction approvals and/or permits were obtained on or after January 6, 1975. The baseline concentration shall include contributions from:

(i) The actual emission of other sources in existence on August 7, 1977, and

(ii) The allowable emissions of major stationary sources and major modifications which commenced construction and obtained all necessary preconstruction approvals and/or permits before January 6, 1975, but were not in operation by August 7, 1977.

8. **"Federal Land Manager"** means, with respect to any lands in the United States, the Secretary of the department with authority over such lands.

9. **"High terrain"** means of [of?] any area having an elevation 900 feet or more above the base of the stack of a source.

10. **"Low terrain"** means any area other than high terrain.

11. **"Reconstruction"** will be presumed to have taken place where the fixed capital cost of the new components exceed 50 percent of the fixed capital cost of a comparable entirely new facility or source. A reconstructed source will be treated as a new source for purposes of this paragraph, except that use of an alternative fuel or raw material by reason of an order in effect under section 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation), by reason of a natural gas curtailment plan in effect pursuant to the Federal Power Act, or by reason of an order of rule under section 125 of the Clean Air Act, shall not be considered construction.

12. **"Fixed capital cost"** means the capital needed to provide all of the depreciable components.

13. **"Allowable emissions"** means the emission rate calculated using the maximum rated capacity of the source (unless the source is subject to enforceable permit conditions which limit the operating rate, or hours of operation, or both) and the most stringent of the following:

    (i) Applicable standards as set forth in this Division 1200-3, or

    (ii) The emission rate specified as a permit condition.

(c) Major stationary sources, major modification of sources, and reconstruction of sources are subject to the provisions of this paragraph.

(d) Major stationary sources and major modifications are exempt from the provisions of this paragraph if one or more of the following conditions are met:

1. The major source or major modification received all state, local, and Federal approval to construct prior to March 1, 1978, commenced construction before March 19, 1979, did not discontinue construction for a period of 18 months, and completed construction within a reasonable time.

2. A portable facility which has previously received construction approval under the requirements of this paragraph may relocate if:

(i) Emissions from the facility would not exceed allowable emissions,

(ii) Emissions from the facility would not significantly impact a Class I area or an area where an applicable increment is known to be violated,

(iii) and, notice of is given to the Technical Secretary 30 days prior to the relocation, giving the new location and the probable length of operation at the new location.

(e) Requirements of Source Owner or Operator.

1. Submit all data necessary to make the analyses and determinations required under this paragraph.

(i) The data shall include:

(I) A description of the nature, location, design capacity, and typical operating schedule of the source or modification, including specifications and drawings needed for the review showing its design and plant layout.

(II) A detailed schedule for construction of the source or modification.

(III) A detailed description as to what system of continuous emission reduction is planned for the source or modification, emission estimates, and any other information necessary to determine that best available control technology would be applied where required by this paragraph.

(IV) The impairment to visibility, soils, and vegetation that would occur as a result of the source or modification and the associated general commercial, residential, industrial, and other growth. Vegetation having no significant commercial or recreational value may be excluded from the analysis.

(V) The air quality impact projected for the area as a result of general commercial, residential, industrial, and other growth associated with the source or modification.

(VI) As necessary, an analysis of the preceding years monitoring data for any pollutant emitted by the source or modification, or if approved, a portion or portions of that or a previous representative year, adequate to determine that the source or modification would not cause or contribute to a violation of an

ambient air quality standard, except non-methane hydrocarbons, covered by Chapter 1200-3-3, Table I.

(ii) Upon request by the Technical Secretary, the owner or operator shall also provide information on:

(I) The air quality impact of the source or modification, including meteorological and topographical data.

(II) The air quality impacts, and the nature and extent of any or all general commercial, residential, industrial, and other growth which has occurred since August 7, 1977, in the area the source or modification would affect. Such data in the possession of the Division shall be made available to the owner or operator.

(III) Air quality monitoring, after the source or modification is constructed, to establish the effect which emissions from the source or modification of a pollutant for which a standard under Chapter 1200-3-3, Table I exists (except non-methane hydrocarbons) may have, or is having, on air quality in any area which such emissions would affect.

2. Except as provided in 1200-3-9-.01-(4)-(k), shall demonstrated that no ambient air quality standards (Chapter 1200-3-3, Table I) or the applicable maximum allowable increase over the baseline will be violated as a result of the source or modification and all other applicable emissions increases or decreases.

3. Insure that the major stationary source or the major modification shall meet all applicable emission limitations of this Division 1200-3.

4. The applicant for the construction of a source or modification covered by this paragraph shall pay the cost of all publications required under this paragraph.

(f) Ambient Air Increments. In areas designated as class I, II, or III, increases in pollutant concentration over the baseline concentration shall be limited to the following:

Maximum Allowable Increase
(Micrograms per cubic meter)

Class I

Pollutant	
Particulate matter:	
Annual geometric mean	5
24-hour maximum	10

Sulfur dioxide:

Annual arithmetic mean	2
24-hour maximum	5
3-hour maximum	25

Class II

Particulate matter:

Annual geometric mean	19
24-hour maximum	37

Sulfur dioxide:

Annual arithmetic [mean]	20
24-hour maximum	91
3-hour maximum	512

Class III

Particulate matter:

Annual geometric mean	37
24-hour maximum	75

Sulfur dioxide:

Annual arithmetic mean	40
24-hour maximum	.182
3-hour maximum	.700

For any period other than an annual period, the applicable maximum allowable increase may be exceeded during one such period per year at any one location.

(g) Area classifications - For the purpose of this paragraph, the following classifications shall apply:

1. Class I Areas - Great Smoky Mountains National Park, Joyce Kilmer Slickrock National Wilderness Area, and the Cohutta Wilderness Area.

2. Class III Areas - None

3. Class II Areas - Remainder of the state

Areas in surrounding states are classified as specified in the EPA approved implementation plan for each adjoining state.

(h) Restrictions on area classifications.

1. The Great Smoky Mountains National Park, the Joyce Kilmer Slickrock National Wilderness Area, and the Cohutta Wilderness Area may be designed only as Class I.

2. A national park or national wilderness area established after August 7, 1977, which exceeds 10,000 acres in size, [sic, comma not in text] only as Class I or Class II area.

(i) Ambient air ceilings

1. No concentrations of a pollutant shall exceed the concentration permitted under the Tennessee secondary ambient air quality standard (Chapter 1200-3-3, Table I), or

2. The concentrations permitted under the Tennessee primary ambient air quality standard (Chapter 1200-3-3, Table I), whichever concentration is lowest for the pollutant for a period of exposure.

3. Except as permitted by Section 123 of the Clean Air Act Amendments of 1977, dispersion techniques which exceed good engineering practice, and which were implemented after December 31, 1970, will not be considered when determining the emission limitations required for control of any pollutant.

(j) Exclusions from increment consumption.

1. The following concentrations shall be excluded in determining compliance with a maximum allowable increase:

(i) Concentrations attributable to the increase in emissions from facilities which have converted from the use of petroleum products, natural gas, or both, by reason of an order in effect under Sections 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) over the emissions from such sources before the effective date of such order;

(ii) Concentrations attributable to the increase in emissions from sources which have converted from using natural gas by reason of a natural gas curtailment plan in effect pursuant to the Federal Power Act over the emissions from such sources before the effective date of such plan;

(iii) Concentrations of particulate matter attributable to the increase in emissions from construction or other temporary activities.

2. No exclusion under sub-parts (j)1.(i) or (ii) of this paragraph shall apply more than five years after the effective date of the order to which sub- part (j)1.(i) refers or the plan to which sub- part(j)1.(ii) refers, whichever is applicable. If both such order and plan are applicable, no such exclusion shall apply more than five years after the later of such effective dates.

3. Concentrations which the owner or operator has shown to be fugitive dust.

(k) Control Technology Review.

1. A new major stationary source or major modification shall apply best available control technology for each applicable pollutant, unless the increase in allowable emissions of that pollutant from

the source or modification would be less than 50 tons per year, 1,000 pounds per day, or 100 pounds per hour, whichever is most restrictive.

(i) The preceding hourly and daily rates shall apply only with respect to a pollutant for which an increment, or state ambient air quality standard, for a period of less than 24 hours or for a 24 hour period, as appropriate, has been established.

(ii) In determining whether and to what extent a modification would increase allowable emissions, there shall be taken into account no emission reductions achieved elsewhere at the facility at which the modification would occur.

2. In the case of modification, the requirement for best available control technology shall apply only to each new or modified facility which would increase the allowable emissions of an applicable pollutant.

3. Where a facility within a source would be modified but not reconstructed, the requirements for best available control technology, notwithstanding part (k)-1. of this paragraph, shall not apply to such facility if no net increase in emissions of an applicable pollutant would occur at the source, taking into account all emission increases and decreases at the source which would accompany the modification, and if no adverse air quality impact would occur.

4. For phased construction projects the determination of best available control technology shall be reviewed, and modified as appropriate, at the latest reasonable time prior to commencement of construction of each independent phase of the proposed source or modification.

(l) Exemptions from impact analyses

1. The requirements of items (e)-1.-(i)-IV, V, VI, sub-parts (e)-1.-(ii) and part (e)-2. of this paragraph shall not apply to a major stationary source or major modification with respect to a particular pollutant, if -

(i) The increase in allowable emissions of that pollutant from the source or modification would significantly impact no Class I area and no area where an applicable increment is known to be violated; and

(ii) The increase in allowable emissions of that pollutant from the source or modification would be less than 50 tons per year, 1000 pounds per day, or 100 pounds per hour, whichever is more restrictive; or

(iii) The emissions of the pollutant are of a temporary nature

including but not limited to those from a pilot plant, a portable facility construction, or exploration; or

(iv) A source is modified, but no increase in the net amount of emissions for any pollutant regulated under Chapter 1200-3-3, Table 1 and no adverse air quality impact would occur.

(v) As to that pollutant, the source or modification is subject to Rule 1200-3-9-.01-(5) and the source or modification would significantly impact no area attaining the state ambient air quality standards.

2. The hourly and daily rates set in sub-part(1)1.(ii) of this paragraph shall apply only with respect to a pollutant for which an increment, or ambient air quality standard, for a period of less than 24 hours or for a 24 hour period, as appropriate, has been established under Chapter 1200-3-3, Table l.

3. In determining for the purpose of sub-part (1)1.(ii) of this paragraph whether and to what extent the modification would increase allowable emissions, there shall be taken into account no emission reduction achieved elsewhere at the source at which the modification would occur.

4. In determining for the purpose of sub-part(l)1.(iv) of this paragraph whether and to what extent there would be an increase in the net amount of emissions for any pollutant subject to Chapter 1200-3-3, Table l from the source which is modified, there shall be taken into account all emission increases and decreases occurring at the source since August 7, 1977.

5. The requirements of items (e)-1.-(i)-IV, V, VI, sub-part (e)1.(ii) and part(e)2. of this paragraph shall not apply to a major modification with respect to emissions from it which the owner or operator has shown to be fugitive dust.

(m) Air Quality Models.

All estimates of ambient concentrations required under this paragraph shall be based on the applicable air quality models, data bases, and other requirements specified by the Technical Secretary.

(n) Public Participation

1. Within 30 days after receipt of an application to construct, or any addition to such application, the Technical Secretary shall advise the applicant of any deficiency in the application or in the information submitted. In the event of such a deficiency, the date of receipt of the application shall be, for the purpose of this section, the date on which the Technical Secretary received all required information.

2. The Technical Secretary shall make a final determination on the application no later than one year after receipt of a complete application. This involves performing the following actions:

(i) Make a preliminary determination whether construction should be approved, approved with conditions, or disapproved.

(ii) Make available in at least one location in each region in which the proposed source or modification would be constructed a copy of all materials the applicant submitted, a copy of the preliminary determination and a copy or summary of other materials, if any, considered in making the preliminary determination.

(iii) Notify the public, by advertisement in a newspaper of general circulation in each region in which the proposed source or modification would be constructed, of the application, the preliminary determination, the degree of increment consumption that is expected from the source or modification, and the opportunity for comment at a public hearing as well as written public comment.

(iv) Send a copy of the notice of public comment to the applicant and to officials and agencies having cognizance over the location where the proposed construction would occur as follows: local air pollution control agencies, the chief executives of the city and county where the source or modification would be located, any comprehensive regional land use planning agency, the EPA Administrator, and any State or Federal Land Manager whose lands may be significantly affected by emissions from the source or modification.

(v) Provide opportunity for a public hearing for interested persons to appear and submit written or oral comments on the air quality impact of the source or modification, the control technology required, and other appropriate considerations.

(vi) Consider all written comments submitted within a time specified in the notice of public comment and all comments received at any public hearing(s) in making a final decision on the approvability of the application. No later than 10 days after the close of the public comment period, the applicant may submit a written response to any comments submitted by the public or request an extension for this purpose. The Technical Secretary shall consider the applicant's response in making a final decision. The Technical Secretary shall make all comments available for public inspection in the same locations where the Technical Secretary made available preconstruction information relating to the proposed source or modification.

(vii) Make a final determination whether construction should be approved, approved with conditions, or disapproved pursuant to this paragraph.

(viii) Notify the applicant in writing of the final determination and make such notification available for public inspection at the same location where the Technical Secretary made available preconstruction information and public comments relating to the source or modification.

(ix) All public comments and written comments prepared by the Technical Secretary will be maintained in the public depositories for one year from the date of issuance of the final determination.

(o) Violations of Air Quality Increments

The Technical Secretary shall not issue an construction permit to a source or facility to construct in an area where the increment is known to be violated or the air quality review predicts a violation of the increment or the ambient air quality standards except in accordance with the following:

1. All new or modified facilities shall utilize good engineering practice as determined by the Technical Secretary in designing stacks. In no event shall that part of a stack which exceeds good engineering practice stack height be taken into account for the purpose of determining the degree of emission limitation required for the control of any pollutant for which there is an ambient air quality standard established in Chapter 1200-3-3, Table 1.

2. Sources and modifications with allowable emissions increases of less than 50 tons per year, 1000 pounds per day or 100 pounds per hour, whichever is most restrictive, shall utilize Best Available Control Technology (BACT).

3. A major source or modification which would normally be required to meet BACT shall be required to meet the Lowest Achievable Emission Rate (LAER) for that type of source as determined by the Technical Secretary at the time of the permit application. The term "lowest achievable emission rate" means for any source, that rate of emissions which reflects

(i) the most stringent emission limitation which is achieved in practice by such class or category of source.

(ii) In no event shall a new or modified source emit any pollutant in excess of the amount allowable under the applicable rules of Chapter 1200-3-16.

4. If necessary, the source shall obtain emission offsets sufficient

to predict that the increment or air quality standard will no longer be violated. The offsets shall be accomplished on or before the time of the new source operation and demonstrated through a source test or through another method acceptable to the Technical Secretary.

5. This rule does not exempt the source from meeting the requirements of rule 1200-3-9-.01-(5).

(p) Class I Area Impact - In addition to the other requirements of this paragraph, the following requirements shall apply to any major stationary source or major modification proposed which would significantly affect a Class I area:

1. Upon receipt of an acceptable construction permit application which would significantly affect a Class I area, the following actions shall be taken:

(i) Permit application to construct a major source or major modification which would comply with the Class I increment requirement established under Chapter 1200-3-9-.01, subparagraph (4)(f).

(I) Promptly, after receipt of the permit application, the Technical Secretary shall notify the EPA Administrator, the Federal Land Manager, and the Federal official directly responsible for the management of any lands which would be impacted by the proposed source.

(II) Promptly after making a preliminary decision on the permit application, the Technical Secretary shall send a copy of the decision to the EPA Administrator and the Federal Land Manager.

(III) The Technical Secretary will make available to the Federal Land Manager and the EPA Administrator all materials used in making the preliminary decision.

(IV) Upon receipt of the recommendation of the Federal Land Manager, the Technical Secretary shall proceed with processing the permit application in the following manner:

I. Federal Land Manager recommends that the permit be issued. The Technical Secretary shall either issue or deny the permit.

II. Federal Land Manager recommends the permit not be issued. The Technical Secretary shall take one of the following actions:

A. Deny permit.

B. Recommend permit be issued - the permit application is then submitted through the EPA Administrator to the President for review and final decision. The President shall either deny or issue the permit.

(ii) Permit application to construct a major source or major modification which would not comply with the Class I increment requirements established by Chapter 1200-3-9-.01, subparagraph (f).

(I) Promptly, after receipt of the permit application, the Technical Secretary shall notify the EPA Administrator, the Federal Land Manager, and the Federal official directly responsible for management of any lands which would be impacted by the proposed source.

(II) Promptly after making a preliminary decision on the permit application, the Technical Secretary shall send a copy of the decision to the EPA Administrator and the Federal Land Manager.

(III) The Technical Secretary will make available to the Federal Land Manager and the EPA Administrator all materials used in making the preliminary decision.

(IV) Upon receipt of the recommendations of the Federal Land Manager, the Technical Secretary shall proceed with processing the permit application in the following manner:

I. Federal Land Manager recommends that the permit be issued. The Technical Secretary shall either issue or deny the permit.

If the permit is issued subject to Chapter 1200-3-9-.01, sub-item (4)(p)1.(ii)(IV)I., the particulate and sulfur dioxide maximum allowable increases over baseline concentrations shall be as follows:

	Maximum Allowable Increase (Micrograms per cubic meter)
Particulate matter	
Annual geometric mean	19
24-hour maximum	37
Sulfur dioxide:	
Annual arithmetic mean	20
24-hr. maximum	91

3-hr. maximum 325

II. Federal Land Manager recommends that the permit not be issued. The Technical Secretary shall take one of the following actions:

A. Deny permit.

B. Recommend to the Governor that the permit be issued. The Governor shall direct the Technical Secretary to take one of the following actions:

(A) Deny permit.

(B) Recommend to the President, through the EPA Administrator, that the permit be issued. The President shall either deny or issue the permit. If the permit is issued, the following limits on particulate and sulfur dioxide shall apply:

	Maximum allowable increase (micrograms per cubic meter)
Particulate matter	
Annual geometric mean	19
24-hr. maximum	37

Sulfur dioxide: The source or modification shall comply with such emission limitations as may be necessary to assure that emissions of sulfur dioxide would not (during any day on which the otherwise applicable maximum allowable increases are exceeded) cause or contribute to concentrations which would exceed the following maximum allowable increases over the baseline concentration and to

assure that such emissions would not cause or contribute to concentrations which exceed the otherwise applicable maximum allowable increases for periods of more than 18 days, not necessarily consecutive, during any annual period.

Maximum Allowable Increase
(Micrograms per cubic meter)

Period of Exposure	Terrain Areas	
	Low	High
24-hr maximum	36	62
3-hr maximum	130	221

Authority: T.C.A. Section 68-25-105. Administrative History. Original Rule certified June 4, 1974. Amended effective February 9,1977. Amended April 12, 1978. Amended June 16, 1978. Amended March 21, 1979. Amended June 21, 1979. Amended November 16, 1979. Revised effective July 31, 1981. Amended effective October 1, 1981. Amended effective January 22, 1982. Amended effective March 2, 1983.

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(4) The operating permit shall only be issued on evidence satisfactory to the Technical Secretary that the operation of said air contaminant source is in compliance with any standards or rules and regulations promulgated by the Board and that the operation of said air contaminant source will not interfere with the attainment or maintenance of any air quality standard. Such evidence may include a requirement that the applicant conduct such tests as are necessary in the opinion of the Technical Secretary to determine the kind and/or amount of air contaminants emitted from the source. Standard operating permits shall be valid for a period of one (l) year or for such time as deemed appropriate by the Technical Secretary. A permit issued for less than one year shall be designated as a temporary permit.

(5) Any person in possession of an operating permit shall maintain said operating permit readily available for inspection by the Technical Secretary or his designated representative on the operating premises.

(11) MAJOR STATIONARY SOURCE OPERATING PERMITS

(a) Statement of Purpose and General Intent. The requirements of paragraph 1200-3-9-.02(11) are promulgated in order to fulfill the requirements of Title B of the Federal Clean Air Act(42 U.S.C. 7661a-7661e) and the federal regulations promulgated thereunder at 40 CFR Part 70. (FR Vol. 57, No. 140, Tuesday, July 21, 1992 p.32295-32312). The federal law and regulations require unique approaches pertaining to federal involvement in the permitting activities specified in this paragraph. the federal government, acting by and through the United States Environmental Protection Agency (EPA), is a key party in the review, issuance, and revisions of permits issued under the provisions of this paragraph. It is the intent of the Board to comply with these federal requirements to the full extent allowed under the laws of the State of Tennessee. In the event that the federal law or regulations should require something that the Board has not yet promulgated as a rule, the permit applicant and the Technical Secretary may mutually agree to be governed by whatever emission limitations and/or procedural requirements that the federal rules require and that shall become a binding condition of the applicant's permit to operate. In addition, sources that are subject to this paragraph 1200-3-9-.02(11) may opt out of being subject to the provisions of paragraph 1200-3-9-.02(11) by limiting their potential to emit such that they are below the applicability threshold. In order to exercise this option, the source must agree to be bound by a permit which specifies the more restrictive limit and to be subject to detailed monitoring, reporting and recordkeeping requirements that prove the source is abiding by its more restrictive emission and/or production limits. The permit shall have a term not to exceed 10 years and shall be subjected to the opportunity for comment and hearing by EPA, affected states and the public consistent with the provisions of this paragraph. The permit shall contain a statement of basis comparing the source's potential to emit with the synthetic limit to emit and the procedures to be followed that will insure that the more restrictive limit is not exceeded. If the

source later decides to increase its potential to emit, the new source review permit procedures of rule 1200-3-9-.01 shall apply.

December 3, 1997
We recognize that there is gap in the numbering of this section, and we are currently investigating why this is the case. We believe that it is the result of portions of the operating permit program do not belong in the Federally approved SIP. KLB

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended effective February 9, 1977. Amended effective March 21, 1979.

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S1200-3-9-.03 -- GENERAL PROVISIONS

(1) Irrespective of the provisions of the preceding paragraphs of this Chapter, the owner or operator of any air contaminant source shall be responsible for complying with emission regulations as contained in Chapters 1200-3-5, -6, -7, -8, -11, -14, -15, and -16 of these regulations at the earliest practicable time and for this purpose the Board shall have the authority and responsibility to require compliance with these regulations at an earlier date than indicated where such earlier compliance may reasonably be accomplished.

(2) No person shall use any plan, activity, device or contrivance which the Technical Secretary determines will, without resulting in an actual reduction of air contaminants, conceal or appear to minimize the effects of an emission which would otherwise constitute a violation of these Regulations.

(3) No person shall discharge from any source whatsoever such quantities of air contaminant, uncombined water, or other materials which cause or have a tendency to cause a traffic hazard or an interference with normal means of public transportation.

(4) Any person affected by any of these regulations shall file emissions data with the Technical Secretary on forms available from the Secretary. If any changes are made that invalidate this data, the owner or operator shall file within thirty (30) days new forms with the appropriate revisions to the data.

(5) Any source operating under a variance or Board Order (whether effective under T.C.A. Section 53-3414 or 53-3415) shall prominently and conspicuously display a copy of said variance or Board Order on the operating premises.

(7) The Technical Secretary may suspend or revoke any construction or operating permit or waiver if the permit (waiver) holder fails to comply with the provisions, stipulations, or compliance schedules specified in the permit (waiver); all provisions of these regulations; and all provisions of the Tennessee Air Quality Act. Upon permit suspension or revocation, if the permit holder fails to take remedial action, he shall become immediately subject to enforcement actions prescribed by law.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended effective February 9, 1977.

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S1200-3-9-.04 -- EXEMPTIONS

(1) No person shall be required to obtain or file a request for a State permit due to ownership, operation, construction, or modification of the following air contaminant sources unless specifically required to do so by the Board:

(a) Mobile sources such as: automobiles, trucks, buses, locomotives, planes, boats and ships. This exemption does not apply to other than the emissions from the internal combustion engines used exclusively to propel such vehicles;

(b) Fuel burning equipment of less than 500,000 Btu per hour capacity. This exemption shall not apply where the total capacity of such equipment operated by one person exceeds 2.00 million Btu per hour;

(c) A single stack of an air contaminant source that emits no gaseous or hazardous air contaminants, and which does not have the potential for emitting more than 0.500 pounds per hour of non-hazardous particulates, provided that the total potential particulate emissions from the air contaminant source amounts to less than two (2) pounds per hour. This exemption does not apply to incinerators;

(d) Equipment used on farms for soil preparation, tending or harvesting of crops, or for preparation of feed to be used on the farm where prepared;

(e) Operations exempted under Chapter 1200-3-4 (Open Burning) of these Regulations.

(f) Sources within the counties of Shelby, Davidson, Hamilton and Knox until such time as the Board shall determine that air pollution is not being controlled in such county to such a degree at least as stringent as the substantive provisions of the Tennessee Air Quality Act and regulations adopted pursuant thereto. This exemption does not apply to any air contaminant source in those counties if the local regulation or ordinance is less stringent than the applicable state regulation.

(g) Retail gasoline and diesel fuel handling facilities;

(h) Diesel fuel and fuel oil storage tanks with a capacity of forty thousand (40,000) gallons or less.

(i) Gasoline storage tanks with a capacity of ten thousand (10,000) gallons or less.

(2) Notwithstanding the exemptions granted in paragraph 1 above, no person shall discharge, from any source whatsoever, such quantities of air contaminants or other materials which cause or have a tendency to cause

injury, detriment, annoyance, or adverse effect to the public.

Authority: T.C.A. Section 53-3412. Administrative History. Original rule certified June 7, 1974. Amended effective February 9, 1977.

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S1200-3-9-.05 APPEAL OF PERMIT APPLICATION DENIALS AND PERMIT CONDITIONS

(1) In any case where the Technical Secretary or the Department denies a permit application, this denial is appealable to the Board if a petition of appeal is received by the Technical Secretary within thirty (30) days of receipt of the denial letter by the owner or operator.

(2) The letter of denial of the application shall include the basis for denial and notify the party of their right to appeal and of the right to legal counsel.

(3) The reasons the petitioner feels the permit should have been granted must be filed as part of the petition. Additionally a party may request prehearing discovery, as provided in TCA, Sections 4-516-517, by filing and detailing the request with the petition.

(4) Within thirty (30) days a receipt of the petition for appeal of a permit denial, the Technical Secretary shall notify the petitioner of the time and place for the hearing.

(5) In any case where a condition is placed on a permit, the imposition of that permit condition may be appealed by filing with the Technical Secretary within thirty (30) days after the mailing date of the permit a petition for reconsideration of permit conditions. The Technical Secretary shall schedule an administrative hearing to be held within forty-five days of receipt of the petition to be conducted in the same manner as hearings under 53-3414(H) with the resulting determination or order being appealable in the same manner. The petition for reconsideration of permit conditions shall specify which conditions and portions of conditions are objected to and specifying in detail the objections.

(6) All applicable provisions of Chapter 1200-3-17 on contested cases shall apply to the hearing before the Board on such appeals.

(7) The denial of a permit application by the Technical Secretary stands, unless the majority of a quorum of the Board votes to overturn the denial after the hearing.

(8) A permit condition specified by the Technical Secretary after the hearing provided for in paragraph (5) stands unless on appeal the Board votes to modify or delete the condition by a majority of a quorum of the Board.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified November 16, 1979

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SECTION 16-78 PROCESS EMISSION STANDARDS

For the purpose of enforcement of the process emission standards, Chapter 1200-3-7 of the Tennessee Air Pollution Control Regulations is hereby adopted as a portion of this code by reference. Such regulations and all such deletions, changes and amendments as may subsequently be made shall become a part of this Code of Ordinances and shall have the same effect as if set out in full herein.

(Ord. No. 1265, § 1, 4-25-72; Ord. No. 2921, § 1(8), 10-9-79; Code 1967, § 3-20)

CHAPTER 1200-3-7
PROCESS EMISSION STANDARDS

S1200-3-7-.01 GENERAL PROCESS PARTICULATE EMISSION STANDARDS

(1) No person shall cause, suffer, allow or permit particulate emissions in excess of the standards in this Chapter.

(2) In any county where one or more sources are emitting particulates at rates in conformity with applicable maximum allowable emission rates and the ambient air quality standard for particulate matter is being exceeded, the Board shall be responsible for setting an appropriate emission standard for each source contributing to the particulate matter in the ambient air of the county, at such value as the Board may consider necessary to achieve the desired air quality. The Tennessee Air Pollution Control Board has found that the ambient air quality standards for particulate matter are being violated in portions of those counties identified in Chapter 1200-3-19 of these regulations. The Board has set emission standards for existing sources located in these areas that are in addition to the standards contained in this Chapter or any less stringent local regulations. Applicable standards for process emission sources located in or significantly impacting the nonattainment areas are to be found in Chapter 1200-3-19 of these regulations.

(3) The owner or operator of an existing process emission source proposing to make a modification of this source or to rebuild or to replace it shall only take such action if it will result in the source meeting the maximum allowable particulate emission standard for a new process emission source.

(4) Limiting the Effect of the Definition of Modification. For the purpose of determining the applicable particulate matter emission standards in this chapter, a change in fuel from natural gas, propane, butane and/or fuel oil to any of these herein named fuels required alterations to existing fuel burning equipment to accommodate these fuels, shall not be considered a modification.

(5) Upon mutual agreement of the owner or operator of any air contaminant source and the Technical Secretary, an emission limit more restrictive than that otherwise specified in this Chapter may be established. This emission limit shall be stated as a special condition for any permit or order issued concerning the source. Violation of this agreed to, more stringent emission standard is grounds for revocation of the issued permit and/or other enforcement measures provided for in the Tennessee Air Quality Act.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended effective June 16, 1978. Amended effective March 2, 1979.

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S1200-3-7-.02 CHOICE OF PARTICULATE EMISSION STANDARDS-EXISTING PROCESS

(1) For any process emission source operating within the State of Tennessee, which was in operation or under construction prior to August 9, 1969, the allowable emission standard shall be obtained from either the diffusion equations presented in 1200-3-7-.02(3) below or the process weight table presented in 1200-3-7-.02(4) below. The owner or operator of such a process emission source shall make known, in writing, to the Technical Secretary by July 1, 1972, his choice of emission standard. If no choice is so indicated, the Technical Secretary shall designate the emission standard of 1200-3-7-.02(4) below as the applicable standard. The emission standard chosen, either by the owner or operator or by the Technical Secretary, must be attained on or before August 9, 1973.

(2) For any process emission source operating within the State of Tennessee, construction of which began on or after August 9, 1969, and before the effective date of these regulations, the allowable emission standard shall be the diffusion equations presented in 1200-3-7-.02(3) below This standard must have been attained at the time such process emission source first commences operation. The owner or operator of such al source shall make known in writing to the Technical Secretary by July 1, 1972, whether he wishes to continue under the diffusion equations standard or the switch to the process weight table standard presented in 1200-3-7-.02(4). If no choice is so indicated, the Technical Secretary shall designate the emission standard of 1200-3-7-.02(4) below as the applicable standard. If the process weight table standard is chosen by such owner or operator or by the Technical Secretary, then such owner or operator shall have until August 9, 1973 to convert fully to the process weight table standard. It is expressly stipulated that in the interim period such a process emission source shall continue to observe the diffusion equations standard originally applicable.

(3) For those owners or operators of process emission sources who elect to have their process emission regulated by diffusion equations, the maximum allowable particulate emissions from such sources shall be determined by the procedures defined in (a), (b) and (c) below.

(a) Stack gas exit temperature less than 100°F (See Note)

$$Q = \frac{3.02 \times 10^{-4} V_s h_s 2 \quad (d_s)^{0.71}}{h_s}$$

(b) Stack gas exit temperature of 125°F or greater (see note)

1. Stacks less than 500 feet in height

$$Q = 0.2 h_s (QT \times 0.02 \times (T_s - 60))^{0.25}$$

2. Stacks 500 feet in height and greater

$$Q = 0.3h_s(QT \times 0.02 \times (T_s - 60))^{0.25}$$

(c) 1. For stack gas exit temperatures from 100°F to 124°F calculate allowable emissions as in (a) and either (b) 1., or (b) 2., depending upon stack height (using T_s of 125°F) , and make linear interpolation based upon actual stack gas exit temperature.

2. The terms of the preceding equation shall have the following meaning and units:

(i) d_s - inside diameter or equivalent diameter of stack tip in feet

(ii) h_s - stack height in feet (Vertical distance above grade directly below tip of stack) equal to the weight in existence or approved pursuant to (State) review as of January 3, 1972 except as follows:

(I) In cases where the actual height is less than that stated above, the actual height shall be used.

(II) In cases where the actual height is greater than that stated above, and the stack height increase was constructed (grading and pouring of concrete was done) prior to February 8, 1974, the actual height shall be used up to two and one half times the height of the facility it serves.

(iii) Q - maximum allowable emission rate n pounds per hour

(iv) Q_T - volume rate of stack gas flow in cubic feet per second calculated to 60°F.

(v) T_s - temperature of stack gases at stack tip in °F

(vi) V_s - velocity of stack gases at stack tip in feet per second.

(vii) NOTE: In determining applicability of equations in this paragraph based upon the exit gas temperature, the actual exit gas temperature must equal or exceed the stated temperature during ninety (90) percent or more of the operating time.

(4) For those owners or operators of process emission sources who elect to

have their process emissions regulated by the Process Weight Table, the maximum allowable particulate emission source shall be determined by Table 1.

(5) Whichever standard is chosen, all sources at the same facility must be regulated by that standard.

(6) The owner or operator of a facility having elected to be regulated under the diffusion equations in paragraph (3) of this rule may apply to the Technical Secretary for having said facilities regulated under the process weight table specified in paragraph k(4) of this rule. Once said application is approved the facility cannot return to being regulated by the diffusion equations.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended April 12, 1978.

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S1200-3-7-.03 NEW PROCESSES

(1) The allowable emission level of particulate matter from any process emission source beginning operation on or after April 3, 1972, shall be determined by Table 2.

(3) Regardless of the specific emission standards contained in this Chapter a new or modified process emission source locating in or significantly impacting upon a nonattainment area shall comply with the provisions of rule 1200-3-9-.01 (5) prior to receiving a construction permit.

(4) Regardless of the specific emission standards contained in this Chapter, all sources identified in rule 1200-3-9-.01-4 of these regulations shall comply with the standards set pursuant to rule 1200-3-9.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended effective February 9, 1977. Amended effective March 21, 1979. Amended effective June 21, 1979.

[FEDERAL APPROVAL STATUS FOLLOWS TABLES.]

TABLE I
EXISTING PROCESS EMISSION SOURCES
ALLOWABLE RATE OF EMISSION BASED ON
PROCESS WEIGHT RATE[a]

Process Weight Rate Lb/Hr	Rate of Process Weight Tons/Hr	Rate of Emission Lb/Hr	Rate Lb/Hr	Tons/Hr	Emission Lb/hr
100	0.05	0.551	16,000	8.00	16.5
200	0.10	0.877	18,000	9.00	17.9
400	0.20	1.40	20,000	10.00	19.2
600	0.30	1.83	30,000	15.	25.2
800	0.40				

		2.22
		40,000
		20.
		30.5
1,000		0.50
		2.58
		50,000
		25.
		35.4
1,500		0.75
		3.38
		60,000
		30.
		40.0
2,000		1.00
		4.10
		70,000
		35.
		41.3
2,500		1.25
		4.76
		80,000
		40.
		42.5
3,000		1.50
		5.38
		90,000
		45.
		43.6
3,500		1.75
		5.96
		100,0
		00 50.
		44.6
4,000		2.00
		6.52
		120,0
		00 60.
		46.3
5,000		2.50
		7.58

						140,0
					00	70.
						47.8
6,000					3.00	
						8.56
						160,0
					00	80.
						49.0
7,000			3.50		9.49	
				200,000		100.
			51.2			
8,000					4.00	
					10.4	
					1,000,000	
						500.
						69.0
9,000					4.50	
					11.2	
					2,000,000	
					1,000.	
						77.6
10,000					5.00	
					12.0	
					6,000,000	
					3,000.	
						92.7
12,000		6.00	13.6			

[a] Interpolation of the data in this table for process weight rates up to 6,000 lb/hr shall be accomplished by using the equation $E = 4.10\ ^{p0.67}$ and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation:

$E = 55.0P^{0.11}-40$, where E = rate of emission in lb/hr

and P = process weight rate in tons/hr

TABLE 2
NEW PROCESS EMISSION SOURCES
ALLOWABLE RATE OF EMISSION BASED ON
PROCESS WEIGHT RATE[A]

Process Weight Rate		Rate of Emission	Process Weight Rate		Rate of Emission
Lb/Hr	Tons/Hr	Lb/Hr	Lb/Hr	Tons/Hr	Lb/Hr
50	0.025	0.36	16,000	8.00	13.0
100	0.05	0.55	18,000	9.00	14.0
200	0.10	0.86	20,000	10.	15.0
400	0.20	1.32			
600	0.30	1.70	30,000	15.	19.2
800	0.40	2.03	40,000	20.	23.0
1,000	0.50	2.34	50,000	25.	26.4
1,500	0.75	3.00	60,000	30.	29.6
2,000	1.00	3.59	70,000	35.	30.6
2,500	1.25	4.12	80,000	40.	31.2
3,000	1.50	4.62	90,000	45.	31.8
3,500	1.75	5.08	100,000	50.	32.4
4,000	2.00	5.52	120,000	60.	33.3
5,000	2.50	6.34	140,000	70.	34.2
6,000	3.00	7.09	160,000	80.	34.9
7,000	3.50	7.81	200,000	100.	36.1
8,000	4.00	8.5	1,000,000	500.	46.7
9,000	4.50	9.1			
10,000	5.00	9.7			
12,000	6.00	10.9			

[a] Interpolation of the data in Table 2 for the process weight rates up to 60,000 lbs/hr shall be accomplished by the use of the equation:

$$E = 3.59\ P^{0.62} \quad P \leq 30 \text{ tons/hr}$$

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:

$$E = 17.31\ P^{0.16} \quad P \geq 30 \text{ tons/hr}$$

Where: E = Emissions in pounds per hour
P = Process weight rate in tons per hour

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S1200-3-7-.04 LIMITING ALLOWABLE EMISSIONS

(1) Irrespective of the maximum allowable emission as determined by any of the preceding equations or Process Weight Tables in this Chapter, the concentration of particulate process emissions shall not be required to be less than 0.02 grain per cubic foot of stack gases corrected to 70°F and 1 atmosphere unless a lesser concentration is found by the Board to be necessary.

(2) Irrespective of the maximum allowable emission as determined by any of the preceding equations or Process Weight Tables in this Chapter, the maximum allowable concentration of particulate process emissions shall be 0.25 grains per cubic foot of stack gases corrected to 70°F and 1 atmosphere. This shall be achieved by all air contaminant sources on or before August 9, 1973. Air contaminant sources constructed after August 9, 1969, shall meet the above emission standard when they commence operation.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended effective March 21, 1979.

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S1200-3-7-.05 SPECIFIC PROCESS EMISSION STANDARDS

The emission limits set forth in Rules 1200-3-7-.02, .03, and .04 will apply unless a specific process emission standard for a specifically designated type of process emission source is contained in a subsequent rule of this chapter.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974.

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S1200-3-7-.06 STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

The Board shall from time to time, after public hearing, designate additional standard(s) of performance for new stationary sources as promulgated by the Environmental Protection Agency and published in the Federal Register.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974.

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S1200-3-7-.07 GENERAL PROVISIONS AND APPLICABILITY FOR PROCESS GASEOUS EMISSION STANDARDS.

(1) No person shall cause, suffer, allow or permit gaseous emissions in excess of the standards in this Chapter.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended effective January 22, 1982.

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S1200-3-7-.08 SPECIFIC PROCESS EMISSION STANDARDS

(1) Existing Ferrous Jobbing Cupolas.

No later than August 9, 1973, the maximum particulate emission rate from existing ferrous jobbing cupolas shall be as given in Table 3.

TABLE 3

ALLOWABLE RATE OF PARTICULATE EMISSION BASED
ON PROCESS WEIGHT RATE
EXISTING FERROUS JOBBING CUPOLAS

Process Weight (lb/hr)	Maximum Weight Discharge (lb/hr)
1,000	3.05
2,000	4.70
3,000	6.35
4,000	8.00
5,000	9.58
6,000	11.30
7,000	12.90
8,000	14.30
9,000	15.50
10,000	16.65
12,000	18.70
16,000	21.60
18,000	23.40
20,000	25.10

The emission rate for a process weight intermediate to those shown in the Table shall be determined by linear interpolation.

(2) Emissions From Nitric Acid Plants

(a) Existing Nitric Acid Plants

After July 1, 1975, no person shall cause, suffer, allow or permit the emission into the air on nitrogen oxide from any nitric acid plant under construction or n operation prior to April 3, 1972, which are:

1. in excess of 5.5 lbs. per ton of acid produced, maximum 2 hour average, expressed as NO_2; or

2. 400 ppm (0.04% by volume dry basis) of nitrogen oxides, measured as NO_2, whichever is the more restrictive.

(3) (Repealed).

(4) New and existing Kraft Mills

The owner or operator of a kraft mill on which construction begins after January 1, 1973, shall meet the standards listed in subparagraphs (a), (b), and (c) of this paragraph at the time the operation of such mill commences. After August 9, 1973, no person shall cause, suffer, allow or permit particulate emissions from a kraft mill under construction or operation prior to the effective date of these regulations in excess of the standard chosen in Rules 1200-3-7-.02(1) or 1200-3- 7-.02 (2) provided, however, that after July 1, 1977, said emissions are as follows:

(a) Particulate matter from all recovery stacks shall not exceed three pounds per ton of equivalent air-dried kraft pulp.

(b) Particulate matter from all lime kilns shall not exceed one pound per ton of equivalent air dried kraft pulp.

(c) Particulate matter from all smelt tanks shall not exceed one-half pound per ton of equivalent air dried draft pulp.

(5) Existing Asphalt Plants.

After August 9, 1973, no person shall cause, suffer, allow or permit the discharge of particulate emissions from any asphalt plant under construction or in operation prior to April 3, 1972, in excess of the standard selected in accordance with the provisions of Rule 1200-3-7-.02(1) or 1200-3-7-.02(2). It is expressly provided that no later than July 1, 1975, these emissions shall not be in excess of the standards set forth in Table I of Chapter 1200-3-7, entitled "Existing Process Emission Sources: Allowable Rate of Emission Based on Process Weight Rate." It is further stipulated that after that date, the rate of emission for existing asphalt plants with a process weight rate in excess of 200,000 pounds (100 tons) per hour shall not exceed 51.2 pounds per hour.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended effective June 16, 1974. Amended September

22, 1980.

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S1200-3-7-.10 GRAIN LOADING LIMIT FOR CERTAIN EXISTING SOURCES

(1) A certificate of validation shall be issued by the Technical Secretary to air contaminant sources meeting the conditions of Paragraphs (2) and (3) below. The applicable standard for a source with a certificate of validation is 1.0 grains per dry standard cubic foot of stack gases corrected to 70°F and 1 atmosphere in lieu of Rule 1200-3-7-.04-(2).

(2) The owner or operator of the air contaminant source must demonstrate to the satisfaction of the Technical Secretary that the following conditions exist:

(a) The air contaminant source was commenced before April 3, 1972; and no modification has been made to the source since that date.

(b) The air contaminant source meets all applicable emission standards outside or Paragraph 1200-3-7-.04-(2). Demonstration of this compliance with other regulations will require as a

minimum an acceptable stack test report for particulate matter mass emissions (lbs/hr.) and verification of meeting the requirements of Chapter 1200-3-5.

(c) The particulate matter ambient air quality standards are being met in the vicinity of the air contaminant source, and no deterioration in air quality will result from the granting of a certificate of validation. The Technical Secretary may require this achievement of air quality to be demonstrated.

(d) A fee of $500 has been paid to the Department of Public Health to cover the cost of review of the request for the certificate of validation.

(e) The owner or operator shall submit an engineering report demonstrating that the investment cost of attaining 0.25 grains per dry standard cubic foot (gr/dscf) will exceed $50,000 per pound of particulate matter emissions prevented from entering the atmosphere per hour; or demonstrate attainment of 0.25 gr/dscf is technically unfeasible. The investment cost per pound hour shall be calculated by the following formula.

$$\text{Investment Cost} = \frac{\text{Capitol Cost}}{\text{lbs/hr}}$$

$$\text{Capitol Cost} = \frac{\text{(Present Grain Loading - .25)} \text{ (SCFH)}}{\frac{\text{DCSF}}{\text{DSCF}}} \times \frac{\text{DSCF}}{7000}$$

Where:

DSCHFH = dry standard cubic ft. per hour

capitol cost = expenditures covering the procurement and erection of air pollution control or necessary process modifications.

(f) The particulate matter emissions emitted from the process emission source do not exceed 100 lbs/hr.

(3) The owner or operation of the air contaminant source must, in addition:

(a) Post on the operating premises the certificate of validation.
(b) Keep the air pollution control equipment in good operating

condition and utilize said equipment at all times.

(4) Upon receipt of information by the Technical Secretary that any of the requirements of Paragraph 2 have been violated and any requirement of Paragraph 3 has been violated three times in any two year period, the Technical Secretary shall call an administrative hearing pursuant to T.C.A. 53-3414(H) to inquire into the alleged violations. After hearing sufficient proof and making findings of fact, the Technical Secretary shall revoke the certificate of validation previously granted to the offending air contaminant source. After the certificate of validation has been revoked, the offending source shall comply with Rule 1200-3-7-.04(2) as expeditiously as possible in a compliance schedule contained in an administrative order.

(5) After granting of a construction permit for the modification of an air contaminant source for which a certificate of validation has been issued, the certificate of validation shall become void on the date of expiration of the construction permit and Rule 1200-3-7-.04(2) shall apply.

Authority: T.C.A. Section 53-3412. Administrative History. Original rule effective March 21. 1979.

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S1200-3-7-.11 CARBON MONOXIDE, ELECTRIC ARC FURNACES

Electric arc furnaces used in producing iron or steel and located in Knox County shall emit no more than 18.0 pounds of carbon monoxide per ton of metal produced, one hour average.

Authority: T.C.A. Section 53-3412. Administrative History. Original rule effective October 25, 1979.

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1200-3-7-.12 CARBON MONOXIDE, CATALYTIC CRACKING UNITS

After July 1, 1980, all catalytic cracking units at petroleum refineries located in Shelby County must not discharge to the atmosphere carbon monoxide in excess of 0.050 per cent by volume.

Authority: T.C.A. Section 53-3412. Administrative History. Original rule effective January 22, 1982.

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SECTION 16-79 NONPROCESS EMISSION STANDARDS

For the purpose of enforcement of the nonprocess emission standards, Chapter 1200-3-6 of the Tennessee Air Pollution Control Regulations is hereby adopted as a portion of this Code by reference. Such regulations and all such additions, deletions, changes and amendments as may subsequently be made shall become a part of this Code of Ordinances and have the same effect as if set out in full herein.

(Ord. No. 1265, § 1. 4-25- 72; Ord. No. 2921, § 1(9), 10-9-79; Code 1967, § 3-21)

CHAPTER 1200-3-6
NON-PROCESS EMISSION STANDARDS

S1200-3-6-.01 GENERAL NON-PROCESS EMISSIONS

(1) No person shall cause, suffer, allow or permit emissions in excess of the standards in this Chapter.

(2) In any county where one or more sources are emitting particulates at rates in conformity with applicable maximum allowable emission rates and the ambient air quality standard for particulate matter is being exceeded, the Board shall be responsible for setting an appropriate emission standard for each source contributing to the particulate matter in the ambient air of the county, at such value as the Board may consider necessary to achieve the desired air quality.

The Tennessee Air Pollution Control Board has found that the ambient air quality standards for particulate matter are being violated in portions of those counties identified in Chapter 1200-3-19 of these regulations. The Board has set emission standards for certain existing sources located in these areas that are in addition to the standards in this Chapter or any less stringent local emission standards. Applicable non-process emission standards for sources located in or significantly impacting the non-attainment areas are to be found in Chapter 1200-3-19 of these regulations.

(3) The owner or operator of an existing fuel burning installation proposing to make a modification of this source or to rebuild or replace it shall only take such action if it will result in the source meeting the maximum allowable emission standards for a new fuel burning installation.

(4) As used in this Chapter, existing installations or equipment shall mean such as were under construction or in operation prior to April 3, 1972.

(5) For the purpose of determining the applicable emission standards in this chapter, a change in fuel from natural gas, propane, butane and/or

fuel oil to any of these herein named fuels and any required alterations to existing fuel burning equipment to accommodate these fuels shall not be considered a modification. This shall not apply to sources identified in rule 1200-3-9-.01-(4). However, the allowable emissions for the source will not change unless Best Available Control Technology is required.

(6) Regardless of the specific emission standards contained in this Chapter a new or modified non-process source locating in or significantly impacting upon a nonattainment area shall comply with the provisions of rule 1200-3-9-.01 (5) prior to receiving a construction permit.

(7) Upon mutual agreement of the owner or operator of any air contaminant source and the Technical Secretary, an emission limit more restrictive than that otherwise specified in this Chapter may be established. The emission limit shall be stated as a special condition for any permit or order issued concerning the source. Violation of this agreed to, more stringent emission standard is grounds for revocation of the issued permit and/or other enforcement measures provided for in the Tennessee Air Quality Act.

(8) Regardless of the specific emission standards contained in this chapter, all non-process sources identified in rule 1200-3-9-.01-(4) of these regulations shall comply with the standards set pursuant to rule 1200-3-9.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended effective date February 9, 1978. Amended June 16, 1978. Amended effective March 21, 1979. Amended June 21, 1979.

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S1200-3-6-.02 NON-PROCESS PARTICULATE EMISSION STANDARDS

(1) Existing Fuel Burning Equipment

The maximum hour allowable particulate emissions for a fuel burning installation commenced before April 3, 1972, shall be determined from the following equations:

$E = 0.600$ for $Q \leq 10.0 \times 10^6$ Btu/hr

$E = 0.600 \, 10/Q^{0.2594}$ for 10.0×10^6 Btu/hr $< Q \leq 10.0 \times 10^9$ Btu/hr

$E = 0.100$ for $Q > 10.0 \times 10^9$ Btu/hr, where

E = allowable particulate emissions in lb. per million Btu.
Q = total installation heat input in million Btu per hour.

(2) New Fuel Burning Equipment

(a) The maximum allowable particulate emissions for a fuel burning installation commenced on or after April 3, 1972, shall be determined from the equation:

$E = 0.600$ for $Q \leq 10.0 \times 10^6$ Btu/hr

$E = 0.600 \, 10/Q^{0.5566}$ for 10.0×10^6 Btu/hr $< Q < 250 \times 10^6$ Btu/hr

$E = 0.100$ for $Q \geq 250 \times 10^6$ Btu/hr

where, E and Q are as defined in paragraph (1) above.

(b) Where only part of the fuel burning equipment in a fuel burning installation is constructed or modified on or after April 3, 1972, the maximum allowable particulate emissions is determined by the following equation:

$Et = Qx \times Ex + Qy \times Ey$

Where,

Et = Allowable particulate emission in lb/hr,

Qx = total heat input for existing equipment in million Btu/hr,

Ex = allowable emissions for installation of size Qx as determined by paragraph (1) above in lb per million Btu,

Qy = total heat input for new equipment in million Btu/hr.

Ey = allowable emissions for installation of size Qy as determined by subparagraph (a) above in lb. per million Btu.

(3) Incinerators

(a) The maximum allowable particulate emissions from incinerators is 0.200 per cent of the charging rate for incinerators with a 2000 pound per hour charging rate or less and 0.100 per cent of the charging rate for incinerators with a charging rate greater than 2000 pounds per hour.

(b) Incinerators having 2.50 cubic feet of furnace volume or less solely for the disposal of infective dressings and other similar material shall not be required to meet the emission standards of this chapter.

(4) Deleted. (Effective September 8, 1980).

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended effective February 9, 1977. Amended effective March 21, 1979. Amended effective September 8, 1980.

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S1200-3-6-.03 GENERAL NON-PROCESS GASEOUS EMISSIONS

(1) No person shall cause, suffer, allow or permit gaseous emissions in excess of the standards in this Chapter.

(2) Any person constructing or otherwise establishing an air contaminant source emitting gaseous air contaminants after April 3, 1972, shall install and utilize the best equipment and technology currently available for controlling such gaseous emission.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended June 21, 1979.

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S1200-3-6-.04 (DELETED) Effective June 29, 1979

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S1200-3-6-.05 WOOD FIRED FUEL BURNING EQUIPMENT

(1) Any wood fired fuel burning equipment commenced before March 1, 1978, must comply with the following emission standards shown below:

(a) 0.330 grains of particulate matter per standard dry cubic foot of exhaust gases, corrected to 12% carbon dioxide for fuel burning equipment up to and including 50 million Btu per hour heat input.

(b) 0.300 grains of particulate matter per standard dry cubic foot of exhaust gases, corrected to 12% carbon dioxide for fuel burning equipment of 100 million Btu per hour heat input or in excess thereof.

(c) The allowable emissions for wood-fired fuel burning equipment between 50 million and 100 million Btu per hour heat input is that determined by linear interpolation between the values in subparagraphs (a) and (b).

(d) 0.56 grains of particulate matter per dry standard cubic foot of exhaust gases, corrected to 12% carbon dioxide for fuel burning equipment up to and including 50 million Btu per hour heat input for counties identified in paragraph (8) (d) of this rule. [ADDED JUNE 13, 1979.]

(e) The allowable for wood fired fuel burning equipment between 50 million and 100 million Btu per hour heat input is that determined by linear interpolation between the values in subparagraphs (d) and (b) for counties identified in paragraph (8) (d) of this rule.

(2) Any wood fired fuel burning equipment commenced on or after March 1, 1978, must comply with the emission standards shown below:

(a) 0.330 grains of particulate matter per standard dry cubic foot of exhaust gases, corrected to 12% carbon dioxide for fuel burning equipment up to, and including 25 million Btu per hour heat input.

(b) 0.200 grains of particulate matter per standard dry cubic foot of exhaust gases, corrected to 12% carbon dioxide for fuel burning equipment of 100 million Btu per hour heat input or n excess thereof.

(c) The allowable emissions for wood-fired fuel burning equipment between 25 million and 100 million Btu per hour heat input is that determined by linear interpolation between the value in subparagraphs (a) and (b).

(3) Wood as used in this rule means:

(a) Bark.

(b) Sawdust or other woody plant tissues (lignified xylem) mechanically reduced in size, but not chemically changed.

(c) Any combination of the materials in (a) and (b).

(4) Any fuel burning installation with wood fired fuel burning equipment such that said wood fired fuel burning equipment has 100 million Btu heat input per hour or in excess thereof, shall install, calibrate, maintain and operate a photoelectric or any other type opacity monitor and recorder that has been approved by the Technical Secretary and is of the type referred to in rule 1200-3-5-.05. This paragraph does not apply where the moisture content of the exhaust is so high that condensation occurs in the stack.

(5) This rule only applies to that fuel burning equipment designed to burn wood and when the burning of wood provides at least 30% of the heat input of the unit. At other times the unit will revert to being regulated by Rule 1200-3-6-.02. This rule 1200-3-6-.05 does not apply to units burning coal or liquid fuels other than fuel oils.

(6) Where fuel burning equipment units in the same fuel burning installation are subject to this rule and are regulated by two different grain loading limits, an average weighted directly on the flow rates will determine the allowable emission limit.

(7) When a wood fired fuel burning equipment is on a common stack with other air contaminant sources, then the wood fired units shall be considered independent of the other air contaminant sources.

(8) The applicability of this rule shall be as follows:

(a) Paragraph (2) of this rule shall apply to all wood fired fuel burning equipment commenced on or after March 1, 1978 except for those units in Davidson, Hamilton, Knox, and Shelby counties.

(b) Paragraph (1) subparts (a) and (c) shall apply to all wood fired fuel burning equipment commenced before March 1, 1978 in Madison, Bedford, Hamblen and Coffee counties.

(c) Paragraph (1) subpart (b) shall apply to wood fired fuel burning equipment commenced before March 1, 1978 except for units in Davidson, Hamilton, Knox, and Shelby counties.

(d) Paragraphs (1) (d) and (e) shall apply to all wood fired fuel burning equipment commenced before March 1, 1978 in Bradley, Claiborne, Cocke, Cumberland, Dickson, Fentress, Franklin, Gibson, Giles, Grainer, Greene, Henry, Jefferson, Lawrence, Loudon, Macon, Marion, Marshall, McMinn, Montgomery, Polk, Putnam, Rhea, Rutherford, Scott, Sevier, Sumner, Warren, Wayne, Weakley, White, Williamson, and Wilson.

(9) Except as mentioned in paragraph (8) of this rule, all existing

wood-fired fuel burning equipment of 50 million Btu per hour heat input or less shall be regulated by Rule 1200-3-6-.02.

Authority: T.C.A. 53-3412. Administrative History. Effective June 16, 1978. Amended effective March 21, 1979. Amended June 21, 1979. Amended June 29, 1979. Amended December 6, 1979

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Section 16-80 Volatile Organic Compounds

For the purpose of enforcement of the volatile organic compounds, Chapter 1200-3-18 of the Tennessee Air Pollution Control Regulations is hereby adopted as a portion of this Code by reference. Such regulation and all such additions, deletions, changes and amendments as may subsequently be made shall become a part of this Code of Ordinances and shall have the same effect as if set out in full herein.

Ord. No. 1265, § 1, 4-25-72; Ord. No. 2921, § 1 (10), 10-9-79; Code 1967, § 3-22)

CHAPTER 1200-3-18
VOLATILE ORGANIC COMPOUNDS

S1200-3-18-.01 PURPOSE

(1) It is the purpose of this Chapter to establish emission standards for new and existing sources of volatile organic compounds located within the State of Tennessee. The emission standards established within this Chapter will apply to different sources depending upon the potential emissions and the location of the source in an urban or rural county.

(2) Upon mutual agreement of any air contaminant source and the Technical Secretary, an emission limit more restrictive than that otherwise specified in this Chapter may be established. Also, upon mutual agreement of any air contaminant source and the Technical Secretary, operating hours, process flow rates, or any other operating parameter may be established as a binding limit which the source must adhere to. Any items mutually agreed to shall be stated as a special condition for any permit or order concerning the source. Violation of this mutual agreement shall result in revocation of the issued permit.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979. Amended effective December 14, 1981.

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S1200-3-18-.02 DEFINITIONS

(1) Unless specifically defined in this Chapter, the definitions from 1200-3-2 will apply:

(a) **"Urban county"** refers to the counties of Davidson, Hamilton, and Shelby.

(b) **"Rural county"** refers to any county not previously classified as an urban county.

(c) **"Approved"** means approved by the Technical Secretary, Tennessee Air Pollution Control Board.

(d) **"Capture system"** means the equipment (including hoods, ducts, fans, etc.) used to contain, capture, or transport a pollutant to a control device.

(e) **"Coating applicator"** means an apparatus used to apply a surface coating.

(f) **"Coating line"** means one or more apparatus or operations which include a coating applicator, flash-off area, and oven wherein a surface coating is applied, dried, and/or cured.

(g) **"Commenced"** means that an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time a continuous program of construction or modification.

(h) **"Construction"** means commencement of on site fabrication, erection, or installation of a new or modified source or facility.

(i) **"Control device"** means any method, process, or equipment which removes or reduces VOC emissions to the ambient air.

(j) **"Continuous vapor control system"** means a vapor control system that treats vapors displaced from tanks during filling on a demand basis without intermediate accumulation.

(k) **"Day"** means a 24-hour period beginning at midnight.

(l) **"Emission"** means the release or discharge, whether directly or indirectly, of VOC's into the ambient air from any source.

(m) **"Existing source"** is any process(es) in existence or having a state or local agency's construction permit prior to the "Original rule certified date" for the specified paragraph.

(n) **"Facility"** means any building, structure, installation, activity, or combination thereof which contains one or more stationary source of air contaminants.

(o) **"Flashoff area"** means the space between the application area and the oven.

(p) **"Incinerator"** means a combustion apparatus designed for high temperature operation in which solid, semisolid, liquid, or gaseous combustible wastes are ignited and burned efficiently and from which the solid and gaseous residues contain little or no combustible material.

(q) **"Intermittent vapor control system"** means a vapor control system that employs an intermediate vapor holder to accumulate vapors displaced from tanks during filling. The control device treats the accumulated vapors only during automatically controlled cycles.

(r) **"Knife coating"** means the application of a coating material to a substrate by means of drawing the substrate beneath a knife that spreads the coating evenly over the full width of the substrate.

(s) **"Loading rack"** means an aggregation or combination of gasoline loading equipment arranged so that all loading outlets in the combination can be connected to a tank truck or trailer parked in a specified loading space.

(t) **"New source"** is all other process(es) not defined in definition (m) as an existing source.

(u) **"Organic material"** means a chemical compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

(v) **"Oven"** means a chamber within which heat is used to bake, cure, polymerize, and/or dry a surface coating.

(w) **"Owner or operator"** means any person who owns, leases, controls, operates or supervises a facility, existing source, new source, or control device.

(x) **"Petroleum liquid"** means crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery.

(y) **"Prime coat"** means the first film of coating applied in a multi-coat operation.

(z) **"Reid vapor pressure"** means the absolute vapor pressure of volatile crude oil and volatile petroleum liquids except liquefied petroleum gases as determined by American Society for Testing and Materials, Part 17, 1973, D-323-72 (Reapproved 1977).

(aa) **"Roll coating"** means the application of a coating material to a substrate by means of hard rubber or steel rolls.

(bb) **"Rotogravure coating"** means the application of a coating material to a substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is picked up in these recessed areas and is transferred to the substance.

(cc) **"Solvent"** means organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents.

(dd) **"Standard conditions"** means a temperature of 20°C (68°F) and pressure of 760 millimeters of mercury (29.92 inches of mercury).

(ee) **"Topcoat"** means the final film of coating applied in a multiple coat operation.

(ff) **"True vapor pressure"** means the equilibrium partial pressure exerted by a petroleum liquid as determined in accordance with methods described in American Petroleum Institute Bulletin 2517, "Evaporation Loss from Floating Roof Tanks," 1962.

(gg) **"Vapor collection system"** means a vapor transport system which uses direct displacement by the liquid loaded to force vapors from the tank into a vapor control system.

(hh) "Vapor control system" means a system approved by the Technical Secretary that prevents release to the atmosphere of organic compounds in the vapors displaced from a tank during the transfer of gasoline. Approval by the Technical Secretary is based on the system's ability to reduce VOC vapors by at least 90% by weight.

(ii) **"Volatile organic compound"** (also denoted as VOC) means any compound of carbon that has a vapor pressure greater than 0.1 millimeters of mercury at standard conditions excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. The following compounds will not be considered volatile organic compounds: methane, ethane, 1,1,1-trichloroethane (methyl chloroform), trichlorotrifluoroethane, trichlorofluoromethane, dichlorodifluoromethane, chlorodifluoromethane, trifluoromethane,

dichlorotetrafluoroethane, chloropentafluoroethane, and methylene chloride. In no case shall this definition be construed to be more restrictive than the results obtained from the use of the applicable test method for a source as specified in Rule 1200-3-18-.44, -.45, and -.46 and other referenced methods.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979. Amended effective October 13, 1981. Amended effective January 22, 1982. Amended effective February 18, 1983. Amended effective March 2, 1983.

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S1200-3-18-.03 STANDARDS FOR NEW SOURCES

(1) For the purpose of this rule, the following definitions apply:

(a) "Lowest Achievable Emission Rate (also denoted as LAER)" means for any source, that rate of emissions which reflects:

1. The most stringent emission limitation which is achieved in practice by such class or category of source.

2. In no event shall a new or modified source emit any pollutant in excess of the amount allowable under applicable rules of Chapter 1200-3-16.

This limit will be determined by the Technical Secretary at the time of the permit application.

(b) "Potential emissions" means the maximum capacity of a stationary source to emit under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is legally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

(2) New or modified sources identified as having potential emissions of 100 tons per year or greater shall utilize LAER irrespective of where they locate within Tennessee. All other new or modified sources locating in Davidson, Shelby or Hamilton Counties shall utilize BACT. New or modified sources having potential emissions less than 100 tons per year locating within the rest of the state shall utilize reasonable and proper controls as determined by the Technical Secretary. Regardless of the specific emission standards derived from these determinations, a new and/or modified source in an urban nonattainment county must comply with the provisions of Chapter 1200-3-9-.01(5).

(3) If new or modified sources at a facility occurring since February 16, 1979 or since the time of the last construction approval issued requiring LAER under this rule total to more than 100 tons per year potential emissions, all the new and modified sources during the period shall utilize LAER. The stage of construction and the ability of the source to install additional control equipment shall be considered in determining LAER.

(4) A new source is not subject to paragraphs 1200-3-18-.05 thru .42. These paragraphs only regulate existing sources.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979. Amended effective October 13, 1981. Amended effective

January 22, 1982. Amended March 2, 1983.

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S1200-3-18-.04 ALTERNATE EMISSION STANDARD

(1) Facilities with process emission source(s) regulated by this Chapter 1200-3-18 with a certificate of alternate control shall not emit volatile organic compounds in excess of the limits on said certificate. This standard is in lieu of the emission standards contained in other rules of this chapter. Only sources with an emission standard in Chapter 1200-3-18 are eligible for inclusion in the certificate.

(2) The owner or operator of any facility having process emission sources regulated by other rules in this Chapter can apply to the Technical Secretary for a certificate of alternate control for a facility and he must grant the request if the following conditions are met:

(a) The facility is reducing or will be after a specified date taking actions to reduce emissions of volatile organic compounds at least as much as is required under the other rules of this chapter even though specific process emission source(s) in the facility may not be meeting the standards specified in the other rules of this Chapter. The reduction in emissions required above shall be based on the manufacturing process as it existed on the rule certified date for the rule for which the source is subject. The purpose of this provision is to allow credit toward compliance by use of process changes which reduce the total VOC emissions to the atmosphere.

(b) If a specified future date is involved, this date must be acceptable to and approved by the Technical Secretary and be specified in a schedule of compliance as a condition on the certificate. This schedule must conform with the requirements of paragraphs (3) and (4) of Rule 1200-3-18-.42 for individual compliance schedules.

(c) A means satisfactory to the Technical Secretary must be present so that he and/or his representative can determine that this alternative emission control method is being implemented and complied with.

(d) A fee of $500 has been paid to the Department at the time application is made to cover the cost of review of the request for the certificate of alternate control.

(e) All process emission sources commenced on or after the effective date of a rule or rules in Chapter 1200-3-16 and the requirements for nonattainment areas and the prevention of significant deterioration in Chapters 1200-3-19 and 1200-3-9 limiting emissions of volatile organic compounds are meeting the limits specified in those rules.

(f) No credit can be given for reduction of emissions in determining if the requirements of subparagraph (a) of this paragraph are met if another rule would require that reduction anyway.

(3) After approval of the alternate emission control application, the standards approved under this section must be subjected to a public hearing. At this public hearing there shall be an opportunity for public comment to satisfy the requirement for revisions to the state implementation plan. The owner or operator requesting this alternate emission control standard shall be responsible for publishing the required legal notices.

(4) The owner or operator of the facility must:

(a) file or post on the operating premises the certificate of alternative control.

(b) keep all pollution control equipment in good operating condition and utilize said equipment at all times.

(c) meet other conditions specified in accordance with paragraph (8) of this rule.

(5) The certificate of alternate control can be revoked for any violation of the conditions under which it was issued.

(6) The certificate of alternate control does not relieve the owner or operator of the duty for meeting all emission requirements in other rules for process emission sources commenced after the effective date of the rule.

(7) Upon revocation of the certificate of alternative control the process emission sources at the facility must comply with all other rules in this chapter.

(8) The certificate of alternate control may specify alternate test methods to determine compliance of different averaging times (so long as this time does not exceed eight hours) or may contain other conditions appropriate to insure compliance with the alternate control method and the meeting of compliance on the date specified in accordance with subparagraph (2)(b) of this rule. The certificate must contain as conditions specific standards for each emission source involved.

Authority: T.C.A. 53-3412. Administrative History. Original Rule Certified October 19, 1981. Revised effective July 31, 1981.

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S1200-3-18-.05 AUTOMOBILE AND LIGHT DUTY TRUCK MANUFACTURING

(1) For the purpose of this rule, the following definitions apply:

(a) **"Application area"** means the area where the coating is applied by dipping or spraying.

(b) **"Manufacturing plant"** is an assembly plant which coats and assembles parts supplied by a variety of sources producing a finished vehicle ready for sale to vehicle dealers. Customizers, body shops and other repainters are not part of this definition.

(c) **"Automobile"** means all passenger cars or passenger car derivatives capable of seating 12 or fewer passengers.

(d) **"Light-duty trucks"** means any motor vehicle rated at 3864 kilograms (8500 pounds) gross weight or less which are designed primarily for purpose of transportation or are derivatives of such vehicles.

(2) No owner or operator of an automotive or light-duty truck manufacturing plant subject to this rule may cause, allow or permit the discharge into the atmosphere of any volatile organic compounds except as provided in 1200-3-18-.04,.41, or .42 in excess of;

(a) 0.145 kilograms per liter of coating (1.2 pounds per gallon), excluding water, delivered to the applicator from prime coat application, flashoff area and oven operations.

(b) 0.34 kilograms per liter of coating (2.8 pounds per gallon) excluding water, delivered to the applicator from surface application, flashoff area and oven operations.

(c) 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, delivered to the applicator from topcoat application, flashoff area and oven operations.

(d) 0.58 kilograms per liter of coating (4.8 pounds per gallon), excluding water, delivered to the applicator from final repair application, flashoff area and oven operations.

(3) This rule will apply to facilities having potential VOC emissions from Automobile and Light Duty Truck Manufacturing of 100 tons per year or greater in rural counties or 25 tons per year or greater in urban counties.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979.

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S1200-3-18-.06 PAPER COATING

(1) For the purpose of this rule, the following definitions apply:

(a) **"Coating"** means the operation where the coating formulation is distributed uniformly across the substrate.

(b) **"Paper coating"** means coatings put on paper and pressure sensitive tapes regardless of substrate. The main coating application devices are knives, rollers or rotogravure devices. Related web coating processes on plastic film and decorative coatings on metal foil are included in this definition. Combined operations where a single machine prints and coats or prints and laminates in line are not part of this definition.

(2) This rule will apply, in accordance with 1200-3-18-.06-(3), to roll, knife, or rotogravure coater(s) and drying oven(s) of paper coating lines.

(3) No owner or operator of a paper coating line subject to this rule may cause, allow or permit the discharge into the atmosphere of any volatile organic compounds in excess of 0.35 kilograms per liter of coating (2.9 pounds per gallon), excluding water, delivered to the coating applicator from a paper coating line except as provided in 1200-3-18-.04,.41, or .42.

(4) This rule will apply to facilities having potential VOC emissions from Paper Coating of 100 tons per year or greater in rural counties or 25 tons per year or greater in urban counties.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979.

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S1200-3-18-.07 PETROLEUM LIQUID STORAGE

(1) For the purpose of this rule, the following definitions apply:

(a) **"Condensate"** means hydrocarbon liquid separated from natural gas which condenses due to changes in the temperature and/or pressure and remains liquid at standard conditions.

(b) **"Crude oil"** means a naturally occurring mixture which consists of hydrocarbons and/or sulfur, nitrogen and/or oxygen derivatives of hydrocarbons and which is a liquid at standard conditions.

(c) **"Custody transfer"** means the transfer of produced crude oil and/or condensate, after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.

(d) **"External floating roof"** means a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.

(e) **"Internal floating roof"** means a cover or roof in a fixed roof tank which rests upon or is floated upon the petroleum liquid being contained, and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.

(f) **"Petroleum refinery"** means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of crude oils, or through redistillation, cracking, extraction, or reforming of unfinished petroleum derivatives.

(2) This rule will apply to all fixed roof storage vessels with capacities greater than 40,000 gallons containing volatile petroleum liquids whose true vapor pressure is greater than 10.5 kPa(1.52 psia).

(3) This rule will not apply to volatile petroleum liquid storage vessels;

(a) equipped with floating roofs before January 1, 1979; or,

(b) having capacities less than 420,000 gallons used to store produced crude oil and condensate prior to lease custody transfer.

(4) Except as provided under Paragraph (3) of this rule, no owner or operator of an effected source under paragraph (2) of this rule shall permit the use of such source except as provided in 1200-3-18-.41 unless;

(a) the source has been retrofitted with an internal floating roof

equipped with a closure seal, or seals, to close the space between the roof edge and tank wall; or,

(b) the source has been retrofitted with equally effective alternative control, approved by the Technical Secretary; and,

(c) the source is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials; and,

(d) all openings, except stub drains are equipped with covers, lids, or seals such that;

1. the cover, lid, or seal is in the closed position at all times except when in actual use; and,

2. automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports; and,

3. rim vents, if provided, are set up to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting; and,

(e) routine inspections are conducted through roof hatches once per month; and,

(f) a complete inspection of cover and seal is conducted as specified by the Technical Secretary; and,

(g) records are maintained as specified by the Technical Secretary.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979. Amended September 8, 1980.

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S1200-3-18-.08 BULK GASOLINE PLANTS

(1) For the purpose of this rule, the following definitions apply:

(a) **"Bottom filling"** - means the filling of a tank truck or stationary storage tank through an opening near the tank bottom.

(b) **"Bulk gasoline plant"** - means a gasoline storage and distribution facility with an annual average daily throughput of less than 76,000 liters (20,000 gallons) which receives gasoline from bulk terminals by trailer transport, stores it in tanks, and subsequently dispenses it via account trucks to local farms, businesses, and service stations.

(c) **"Gasoline"** - means any petroleum distillate having a Reid vapor pressure of 27.6 kPa (4 psia) or greater.

(d) **"Splash filling"** - means the filling of a tank truck or stationary storage tank through a pipe or hose whose discharge opening is above the surface level at the liquid in the tank being filled.

(e) **"Submerged filling"** - means the filling of a tank truck or stationary tank through a pipe or hose whose discharge opening is entirely submerged when the liquid level is six inches above the bottom of the container.

(f) **"Vapor balance system"** - means a combination of pipes or hoses which create a closed system between the vapor spaces of an unloading tank and receiving tank such that vapors displaced from the receiving tank are transferred to the tank being unloaded.

(2) This rule will apply, in accordance with Rule 1200-3-18-.41, to the unloading, loading, and storage facilities of all bulk gasoline plants and all tank trucks or trailers delivering or receiving gasoline at bulk gasoline plants.

(3) This rule will not apply to:

(a) stationary storage tanks of less than 2,000 gallons capacity
(b) bulk plants with an annual average working daily throughput of less than 4,000 gallons, provided records of throughput are maintained and reported to the Technical Secretary annually, and provided all stationary storage tanks and tank trucks or trailers are equipped with submerged fill pipes.

(c) Facilities in rural counties, Hamilton County and Shelby County.

(4) Except as provided under paragraph (3) of this rule, no owner or operator of a bulk gasoline plant (tank truck or trailer) shall load or unload gasoline unless each tank is equipped with a vapor balance system as described under paragraph (7) of this rule and approved by

the Technical Secretary; and

(a) each tank is equipped with a submerged fill pipe, approved by the Technical Secretary; or,

(b) each tank is equipped with a fill line whose discharge opening is entirely submerged when the liquid level is eighteen inches above the bottom of the tank.

(5) Except as provided under paragraph (3) of this rule, no owner or operator of a bulk gasoline plant, tank truck or trailer shall load or unload a tank truck or trailer at a bulk gasoline plant unless each tank truck or trailer is equipped with a vapor balance system as described under paragraph (7) of this rule and approved by the Technical Secretary; and,

(a) equipment is available at the bulk gasoline plant to provide for the submerged filling of each tank truck or trailer; or,

(b) each tank truck or trailer is equipped for bottom filling.

(6) No owner or operator of a bulk gasoline plant,tank truck, or trailer shall permit the transfer of gasoline between tank truck or trailer and stationary storage tank unless:

(a) the transfer is conducted in accordance with paragraphs (4) and (5) of this rule; and,

(b) the vapor balance system is in good working order and is connected and operating; and,

(c) tank truck or trailer hatches are closed at all times during loading operations; and,

(d) there are no leaks in the tank trucks' or trailers' pressure/vacuum relief valves and hatch covers, nor the truck tanks or storage tanks associated vapor and liquid lines during loading or unloading; and,

(e) the pressure relief valves on storage vessels and tank trucks or trailers are set to release at no less than 4.8 kPa (0.7 psi) or the highest possible pressure (in accordance with state or local fire codes, or the National Fire Prevention Association guidelines).

(7) Vapor balance systems required under paragraphs (4) and (5) of this rule shall consist of the following major components:

(a) a vapor space connection on the stationary storage tank equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of organic material; and,

(b) a connecting pipe or hose equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of organic material; and,

(c) a vapor space connection on the tank truck or trailer equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of organic material.

(8) No owner or operator of a bulk gasoline plant may permit gasoline to be spilled, discharged into sewers, stored in open containers or handled in any other manner that would result in evaporation.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979. Amended October 10, 1980.

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S1200-3-18-.09 BULK GASOLINE TERMINALS

(1) For the purpose of this rule, the following definitions apply:

(a) **"Bulk gasoline terminal"** means a gasoline storage facility which receives gasoline from refineries primarily by pipeline, ship, or barge, and delivers gasoline to bulk gasoline plants or to commercial or retail accounts primarily by tank truck; and has an annual average daily throughput of more than 76,000 liters (20,000 gallons) of gasoline.

(b) **"Gasoline"** means a petroleum distillate having a Reid vapor pressure of 27.6 kPa (4 psia) or greater.

(2) This rule will apply, in accordance with 1200-3-18-.41 to bulk gasoline terminals and the appurtenant equipment necessary to load the tank truck or trailer compartments.

(3) No person may load gasoline into any tank trucks or trailers from any bulk gasoline terminal unless;

(a) the bulk gasoline terminal is equipped with a vapor control system, capable of complying with paragraph (4) of this rule, properly installed, in good working order, in operation and consisting of one of the following;

1. an adsorber or condensation system which processes and recovers vapors and gases from the equipment being controlled; or,

2. a vapor collection system which directs all vapors to a fuel gas system; or,

3. a control system, demonstrated to have control efficiency equivalent to or greater than parts (3)(a)1. or (3)(a)2. of this section and approved by the Technical Secretary; and,

(b) all displaced vapors and gases are vented only to the vapor control system; and,

(c) loading devices must not leak when in use and should be designed and operated to allow no more than 10 cc's drainage per disconnect on the basis of 5 consecutive disconnects.

(4) Sources effected under subparagraph (3)(a) may not allow mass emissions of volatile organic compounds from control equipment to exceed 80 milligrams per liter (4.7 grains per gallon) of gasoline loaded.

(5) Sources effected under paragraph (2) may not;

(a) allow gasoline to be discarded in sewers or stored in open containers or handled in any manner that would result in

evaporation; nor,

(b) allow the pressure in the vapor collection system to exceed the tank truck or trailer pressure relief settings.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979.

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S1200-3-18-.10 GASOLINE SERVICE STATIONS STAGE I.

(1) For the purpose of this rule, the following definitions apply:

(a) **"Gasoline"** means a petroleum distillate having a Reid vapor pressure of 27.6 kPa (4 psia) or greater.

(b) **"Delivery Vessel"** means tank trucks or trailers equipped with a storage tank and used for the transport of gasoline from sources of supply to stationary storage tanks of gasoline dispensing facilities.

(c) **"Submerged Fill Pipe"** means any fill pipe extending within 6 inches of the tank bottom.

(d) **"Gasoline Dispensing Facility"** means any site where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks.

(2) This rule will apply, in accordance with 1200-3-18-.41, to all gasoline dispensing facilities except as exempted in paragraph (3).

(3) This rule will not apply to;

(a) transfers made to storage tanks of gasoline dispensing facilities equipped with floating roofs or their equivalent which have been approved by the Technical Secretary.

(b) stationary gasoline storage containers of less than 7,570 liters (2,000 gallons), provided the containers are equipped with submerged fill pipes.

(c) facilities in rural counties, Hamilton County and Shelby County.

(d) gasoline dispensing facilities with an annual throughput of less than 260,000 gallons which is serviced with a tank truck with a capacity of 4,200 gallons or less, provided records of throughput are maintained and reported to the Technical Secretary annually and, provided all gasoline storage containers are equipped with submerged fill pipes.

(4) Except as provided under paragraph (3) of this rule, no owner or operator may transfer or cause or allow the transfer of gasoline from any delivery vessel into any stationary storage tank unless the tank is equipped with a submerged fill pipe and the vapors displaced from the storage tank during filling are processed by a vapor control system in accordance with a paragraph (5) of this rule.

(5) The vapor control system required by paragraph (4) of this rule shall include one or more of the following:

(a) a vapor-tight line from the storage tank to the delivery vessel

and a system that will ensure the vapor line is connected before the gasoline can be transferred into the tank; or,

(b) a refrigeration-condensation system or equivalent approved by the Technical Secretary.

(c) a system demonstrated to have control efficiency equivalent to or greater than provided under subparagraph (5)(a) or (5)(b) of this rule and approved by the Technical Secretary.

(6) The vapor-laden delivery vessel shall be subject to the following conditions;

(a) the delivery vessel must be designed and maintained to be vapor tight at all times; and

(b) the vapor-laden deliver vessel may be refilled in the regulated area only at;

1. bulk gasoline plants complying with 1200-3-18-.08; or,

2. bulk gasoline terminals complying with 1200-3-18-.09.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979.

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S1200-3-18-.11 PETROLEUM REFINERY SOURCES

(1) For the purpose of this rule, the following definitions apply:

(a) **"Accumulator"** means the reservoir of a condensing unit receiving the condensate from the condenser.

(b) **"Condenser"** means any heat transfer device used to liquefy vapors by removing their latent heats of vaporization. Such devices include, but are not limited to, shell and tube, coil, surface, or contact condensers.

(c) **"Firebox"** means the chamber or compartment of a boiler or furnace in which materials are burned but does not mean the combustion chamber of an incinerator.

(d) **"Forebays"** mean the primary sections of a wastewater separator.

(e) **"Hot well"** means the reservoir of a condensing unit receiving the warm condensate from the condenser.

(f) **"Petroleum refinery"** means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation, cracking, extraction, or reforming of unfinished petroleum derivatives.

(g) **"Refinery fuel gas"** means any gas which is generated by a petroleum refinery process unit and which is combusted, including any gaseous mixture of natural gas and fuel gas.

(h) **"Turnaround"** means the procedure of shutting a refinery unit down after a run to do necessary maintenance and repair work and putting the unit back on stream.

(i) **"Vacuum producing system"** means any reciprocating, rotary, or centrifugal blower or compressor, or any jet ejector device that takes suction from a pressure below atmospheric and discharges against atmospheric pressure.

(j) **"Vapor recovery system"** means a system that prevents release to the atmosphere of no less than 90 percent by weight of organic compounds emitted during the operation of any transfer, storage, or process equipment.

(k) **"Wastewater (oil/water) separator"** means any device or piece of equipment which utilizes the difference in density between oil and water to remove oil and associated chemicals from water, or any device, such as a flocculation tank, clarifier, etc., which removes petroleum derived compounds from waste water.

(2) This rule will apply, in accordance with 1200-3-18-.41, to vacuum producing systems, wastewater separators, and process unit turnarounds

at petroleum refineries.

(3) (a) The owner or operator of any vacuum producing systems at a petroleum refinery may not permit the emission of any noncondensable volatile organic compounds from the condensers, hot wells or accumulators of the system.

(b) The emission limit under subparagraph (3)(a) of this rule shall be achieved by;

1. piping the noncondensable vapors to a firebox or incinerator; or,

2. compressing the vapors and adding them to the refinery fuel gas.

(4) The owner or operator of any wastewater (oil/water) separators at a petroleum refinery shall;

(a) provide covers and seals approved by the Technical Secretary, on all separators and forebays; and,

(b) equip all openings in covers, separators, and forebays with lids or seals such that the lids or seals are in the closed position at all times except when in actual use.

(5) Before July 1, 1979 the owner or operator of a petroleum refinery shall develop and submit to a Technical Secretary for approval a detailed procedure for minimization of volatile organic compound emissions during process unit turnaround. As a minimum, the procedure shall provide for;

(a) depressurization venting of the process unit or vessel to a vapor recovery system, flare or firebox; and,

(b) no emission of volatile organic compounds from a process unit or vessel until its eternal pressure is 136 kilo Pascals (19.7 psia) or less; and,

(c) record keeping as specified by the Technical Secretary.

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S1200-3-18-.12 CAN COATING

(1) For the purpose of this rule, the following definitions apply:

(a) **"End sealing compound"** means a synthetic rubber compound which is coated on to can ends and which functions as a gasket when the end is assembled on the can.

(b) **"Exterior base coating"** means a coating applied to the exterior of a can to provide exterior protection to the metal and to provide background for the lithographic or printing operation.

(c) **"Interior base coating"** means a coating applied by roller coating or spray to the interior to a can to provide a protective lining between the can metal and product.

(d) **"Interior body spray"** means a coating sprayed on the interior of the can body to provide a protective film between the product and the can.

(e) **"Overvarnish"** means a coating applied directly over ink to reduce the coefficient of friction, to provide gloss and to protect the finish against abrasion and corrosion.

(f) **"Three-piece can side-seam spray"** means a coating sprayed on the exterior and interior of a welded, cemented or soldered seam to protect the exposed metal.

(g) **"Two-piece can exterior end coating"** means a coating applied by roller coating or spraying to the exterior end of a can to provide protection to the metal.

(2) This rule will apply, in accordance with 1200-3-18-.12-(3) to coating applicator(s) and oven(s) of sheet, can or end coating lines involved in sheet basecoat (exterior and interior) and overvarnish; two-piece can exterior (basecoat and overvarnish); two and three-piece can interior body spray; two-piece can exterior end (spray or roll coat); three-piece can side-seam spray and end sealing compound operations.

(3) No owner or operator of a can coating line subject to this rule may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds except as provided in 1200-3-18- .41 in excess of;

(a) 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, delivered to the coating applicator from sheet basecoat (exterior and interior) and overvarnish or two-piece can exterior (basecoat and overvarnish) operations.

(b) 0.51 kilograms per liter of coating (4.2 pounds per gallon), excluding water, delivered to the coating applicator from two- and three-piece can interior body spray and two-piece can

exterior end (spray or roll coat) operations.

(c) 0.66 kilograms per liter of coating (5.5 pounds per gallon), excluding water, delivered to the coating applicator from three-piece can side-seam spray operations.

(d) 0.44 kilograms per liter of coating (3.7 pounds per gallon), excluding water, delivered to the coating applicator from end sealing compound operations.

(4) This rule will apply to facilities having potential VOC emissions from can coating of 100 tons per year or greater in rural counties or 25 tons per year or greater in urban counties.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979.

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S1200-3-18-.14 FABRIC AND VINYL COATING

(1) For the purpose of this rule, the following definitions apply:

(a) **"Fabric coating"** means the coating of a textile substrate with a knife, roll or rotogravure coater to impart properties that are not initially present such as strength, stability, water or acid repellency, or appearance.

(b) **"Vinyl coating"** means applying a decorative or protective topcoat, or printing on vinyl coated fabric or vinyl sheets.

(2) This rule will apply, in accordance with 1200-3-18-.14(3), to roll, knife or rotogravure coater(s) and drying oven(s) of fabric and vinyl coating lines.

(3) No owner or operator of a fabric coating line or a vinyl coating line subject to this rule may cause, allow or permit the discharge into the atmosphere of any volatile organic compounds except as provided in 1200-3-18-.41 in excess of:

(a) 0.35 kilograms per liter of coating (2.9 pounds per gallon), excluding water, delivered to the coating applicator from a fabric coating line.

(b) 0.45 kilograms per liter of coating (3.8 pounds per gallon), excluding water, delivered to the coating applicator from a vinyl coating line.

(4) This rule will apply to facilities having potential VOC emissions from fabric and vinyl coating of 100 tons per year or greater in rural counties or 25 tons per year or greater in urban counties.

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S1200-3-18-.15 METAL FURNITURE COATING

(1) For the purpose of this rule, the following definitions apply:

(a) **"Application area"** means the area where the coating is applied by spraying, dipping, or flowcoating techniques.

(b) **"Metal furniture coating"** means the surface coating of any furniture made of metal or any metal part which will be assembled with other metal, wood, fabric, plastic or glass parts to form a furniture piece.

(2) This rule will apply, in accordance with 1200-3-18-.15-(3), to the application area(s), flashoff area(s), and oven(s) of metal furniture coating lines involved in prime and topcoat or single coating operations.

(3) No owner or operator of a metal furniture coating line subject to this rule may cause, allow or permit the discharge into the atmosphere of any volatile organic compounds in excess of 0.36 kilograms per liter of coating (3.0 pounds per gallon), excluding water, delivered to the coating applicator from prime and topcoat or single coat operations except as provided in 1200-3-18-.41.

(4) This rule will apply to facilities having the potential VOC emissions from Metal Furniture Coating of 100 tons per year or greater in rural counties or 25 tons per year or greater in urban counties.

(5) This rule shall not apply to the use of quick drying lacquers for repair of scratches and nicks that occur during assembly.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979.

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S1200-3-18-.16 SURFACE COATING OF LARGE APPLIANCES

(1) For the purpose of this rule, the following definitions apply:

(a) **"Application area"** means the area where the coating is applied by spraying, dipping or flowcoating techniques.

(b) **"Single coat"** means a single film of coating applied directly to the metal substrate omitting the primer application.

(c) **"Large appliances"** means doors, cases, lids, panels and interior support parts of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners and other similar products.

(2) This rule will not apply to the use of quick-drying lacquers for repair of scratches and nicks that occur during assembly.

(3) This rule will apply, in accordance with 1200-3-18-.16(3), to the area(s), flashoff area(s) and oven(s) of large appliance coating lines involved in prime, single or topcoat coating operations.

(4) No owner or operator of a large appliance coating line subject to this rule may cause, allow or permit the discharge into the atmosphere of any volatile organic compounds in excess of 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, delivered to the coating applicator from prime, single or topcoat coating operators except as provided in 1200-3-18-.41.

(5) This rule will apply to facilities having potential VOC emissions from Surface Coating of Large Appliances of 100 tons per year or greater in rural area or 25 tons per year or greater in urban areas.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979.

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S1200-3-18-.17 MAGNET WIRE COATING

(1) For the purpose of this rule, the following definition applies:

(a) **"Magnet wire coating"** means the process of applying a coating of electrically insulating varnish or enamel to aluminum or copper wire for use in machinery.

(2) No owner or operator of a magnet wire coating oven subject to this rule may cause, allow or permit the discharge into the atmosphere of any volatile organic compounds in excess of 0.20 kilograms per liter of coating (1.7 pounds per gallon), excluding water, delivered to the coating applicator from magnet wire coating operations except as provided in 1200-3-18-.41.

(3) This rule will apply to facilities having potential VOC emissions from Magnet Wire Coating of 100 tons per year or greater in rural areas or 25 tons per year or greater in urban areas.

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S1200-3-18-.18 SOLVENT METAL CLEANING

(1) For the purpose of this rule, the following definitions apply:

(a) **"Cold cleaning"** means the batch process of cleaning and removing greasy soils from metal surfaces by spraying, brushing, flushing or immersion while maintaining the solvent below its boiling point. Wipe cleaning is not included in this definition.

(b) **"Conveyorized degreasing"** means the continuous process of cleaning and removing greasy soils from metal surfaces by operating with either cold or vaporized solvents.

(c) **"Freeboard height"** means the distance from the top of the vapor zone to the top of the degreaser tank for vapor degreasers and from the liquid surface to the top of degreaser toner for cold cleaners.

(d) **"Freeboard ratio"** means the freeboard height divided by the width of the degreaser.

(e) **"Open top vapor degreasing"** means the batch process of cleaning and removing greasy soils from metal surfaces in an open top tank by condensing hot solvent vapor on the colder metal parts.

(f) **"Solvent metal cleaning"** means the process of cleaning greasy soils from metal surfaces by cold cleaning or open top vapor degreasing or conveyorized degreasing.

(2) The provisions of this rule shall apply, in accordance with 1200-3-18-.41, with the following exceptions:

(a) open top vapor degreasers with an open area smaller than 1 square meter (10.8 square feet) shall be exempt from parts (5)(c)2. and (5)(c)4. of this rule,

(b) conveyorized degreasers with an air/vapor interface smaller than 2.0 square meters (21.6 square feet) shall be exempt from subparagraph (6)(b) of this rule,

(3) This rule will apply to facilities having potential VOC emissions from Solvent Metal Cleaning of 100 tons per year or greater in rural counties or 25 tons per year or greater in urban counties.

(4) Except as provided under paragraphs (2) and (3) of this rule, the owner or operator of a cold cleaning facility shall:

(a) equip the cleaner with a cover;

(b) equip the cleaner with a facility for draining cleaned parts; and

(c) provide a permanent, conspicuous label, summarizing the operating

requirements; and,

(d) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than 20 percent of the waste solvent (by weight) can evaporate into the atmosphere; and,

(e) close the cover whenever parts are not being handled in the cleaner; and,

(f) drain the cleaned parts for at least 15 seconds or until dripping ceases; and,

(g) if used, supply a solvent spray that is a solid fluid stream (not a fine, atomized or shower type spray) at a pressure which does not cause excessive splashing.

(5) Except as provided under paragraph (2) of this rule, the owner or operator o an open top vapor degreaser shall:

(a) equip the vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone; and,

(b) keep the cover closed at all times except when processing work loads through the degreaser; and

(c) minimize solvent carryout by:

1. racking parts to allow complete drainage; and,

2. moving parts in and out of the degreaser at less than 3.3 meters per minute (11 feet per minute); and,

3. holding the parts in the vapor zone at least 30 seconds or until condensation ceases; and,

4. tipping out any pools of solvent on the cleaned parts before removal from the vapor zone; and,

5. allowing parts to dry within the degreaser for at least 15 seconds or until visually dry; and,

(d) not degrease porous or absorbent materials, such as cloth, leather, wood or rope; and,

(e) not occupy more than half of the degreaser's open top area with a workload; and,

(f) not load the degreaser to the point where the vapor level would drop more than 10 centimeters (4 inches) when the workload enters the vapor zone; and,

(g) always spray below the vapor level; and,

(h) repair solvent leaks immediately, or shutdown the degreaser; and,

(i) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than 20 percent of the waste solvent (by weight) can evaporate into the atmosphere; and,

(j) not operate the cleaner so as to allow water to be visually detectable in solvent exiting the water separator; and,

(k) not use ventilation fans near the degreaser opening, nor provide exhaust ventilation exceeding 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of degreaser open area, unless necessary to meet OSHA requirements; and,

(l) provide a permanent, conspicuous label, summarizing the operating procedures of subparagraphs (5)(b) through (5)(j) of this rule.

(6) Except as provided under paragraph (3) of this rule, the owner or operator of a conveyorized degreaser shall:

(a) not use workplace fans near the degreaser opening, nor provide exhaust ventilation exceeding 20 cubic meters per minute per square meter (65 cubic feet per minute square foot) of degreaser opening, unless necessary to meet OSHA requirements; and,

(b) equip the cleaner with equipment, such as drying tunnel or rotating (tumbling) basket, sufficient to prevent cleaned parts from carrying out solvent liquid or vapor; and,

(c) minimize openings during operation so that entrances and exits will silhouette workloads with an average clearance between the largest parts and the edge of the degreaser opening of less than 10 centimeters (4 inches) or less than 10 percent of the width of the opening; and,

(d) provide downtime covers for closing off the entrance and exit during shutdown hours; and,

(e) minimize carryout emissions by:

(i) racking parts for best drainage; and,

(ii) maintaining the vertical [sic?] conveyor speed at less than 3.3 meters per minute (11 feet per minute); and,

(f) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than 20 percent of the waste solvent (by weight) can evaporate into the atmosphere; and,

(g) repair solvent leaks immediately, or shut down the degreaser; and,

(h) not operate the cleaner so as to allow water to be visually detectable in solvent exiting the water separator; and,

(i) place downtime covers over entrances and exits of conveyorized degreasers immediately after the conveyors and exhausts are shut down and not remove them until just before start-up.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979.

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S1200-3-18-.19 CUTBACK ASPHALT

(1) For the purpose of this rule,the following definitions apply:

(a) **"Asphalt"** means a dark-brown to black cementitious material (solid, semisolid, or liquid in consistency) in which the predominating constituents are bitumens which occur in nature as such or which are obtained as residue in refining petroleum.

(b) **"Cutback Asphalt"** means asphalt cement which has been liquefied by blending with petroleum solvents (diluents). Upon exposure to atmospheric conditions the diluents evaporate, leaving the asphalt cement to perform its function.

(c) **"Penetrating prime coat"** means an application of low viscosity liquid asphalt to an absorbent surface. It is used to prepare an untreated base for an asphalt surface. The prime penetrates the base and plugs the voids, hardens the top, and helps bind it to the overlying asphalt course. It also reduces the necessity of maintaining an untreated base course prior to placing the asphalt pavement.

(2) No person may cause, allow, or permit the use or application of cutback asphalts for paving purposes in the State of Tennessee except for:

(a) long-term stockpile storage; or,

(b) application when the ambient temperature is less than 50°F within 4 hours after the time of application; or,

(c) use as a penetrating primecoat.

Authority: T.C.A. 68-25-105. Administrative History. Original rule certified July 10, 1979. Amended December 14, 1981.

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S1200-3-18-.20 FLAT WOOD PANELING COATING

(1) For the purpose of this rule, the following definitions apply:

(a) **"Printed interior panels"** are panels whose grain or natural surface is obscured by fillers and basecoats upon which a simulated grain or decorative pattern is printed.

(b) **"Hardwood plywood"** is plywood whose surface layer is a veneer of hardwood.

(c) **"Thin particleboard"** is a manufactured board made of individual wood particles which have been coated with a binder and formed into flat sheets by pressure, the thickness of the board being one-fourth inch or less.

(d) **"Natural finish hardwood plywood panels"** are panels whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by fillers and toners.

(e) **"Hardboard"** is a panel manufactured primarily from inter- felted lignocellulosic fibers which are consolidated under heat and pressure in a hot-press.

(f) **"Class II finishes for hardboard paneling"** are finishes which meet the specifications of Voluntary Product Standard PS-59-73 as approved by the American National Standards Institute.

(g) **"Tileboard"** is paneling that has a colored waterproof surface coating.

(h) **"Coating system"** includes all operations and equipment which apply, convey, and dry a surface coating or coatings, to a panel, including but not limited to spray booths, flow coaters, conveyors, flashoff areas, dryers and ovens.

(2) No owner or operator of a flat wood paneling coating system subject to this rule may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds from that system in excess of the following, except as provided for in Rules 1200-3-18-.04 or .42 or Paragraph (5) of this rule:

(a) 2.9 kg per 100 square meters (6.0 lb/1000 sq. ft.) of finished printed interior panels;

(b) 5.8 kg per 100 square meters (12.0 lb/1000 sq. ft.) of finished natural finish hardwood plywood panels; and

(c) 4.8 kg per 100 square meters (10.0 lb/1000 sq. ft.) of finished Class II finishes for hardboard panels.

(3) This rule:

(a) Applies to coating application systems in the manufacture of the following products:

1. Printed interior panels made of hardwood plywood and thin particleboard;

2. Natural finish hardwood plywood panels; and

3. Hardboard paneling with Class II finishes but

(b) Does not apply to coating application systems in the manufacture of exterior siding, tileboard, or particleboard used as a furniture component.

(4) This rule applies to coating application systems in the manufacture of exterior siding, tileboard, or particleboard used as a furniture component.

(5) The owner or operator of a coating system subject to this rule shall:

(a) Meet the applicable increments of progress in the following schedule:

1. Submit final plans for the emission control technique before April 1, 1981,

2. Award contracts or purchase orders before July 1, 1981,

3. Initiate onsite construction or installation before December 1, 1981,

4. Complete onsite construction or installation before December 1, 1982, and

5. Achieve final compliance before December 31, 1982, and

(b) Certify to the Technical Secretary within 20 days after each deadline for each applicable increment of progress whether the required increment has been met.

(6) Proof of compliance with the standards of this rule shall be provided by:

(a) Methods approved by the Technical Secretary and consistent with:

1. EPA Guideline Series document, "Measurement of Volatile Organic Compounds," EPA-450/2-78-041,

2. Appendix A of "Control of Volatile Organic Emissions from Existing Stationary Sources - Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty

Trucks," EPA-450/2-77-008, and

3. Rules 1200-3-18-.43,.44, and .45,

(b) Certification by the manufacturer of the composition of coatings, if supported by batch formulation records and approved by the Technical Secretary, may be accepted instead of coatings analyses, and

(c) Monitoring of process equipment and emission control equipment as required by the Technical Secretary to confirm continued compliance.

Authority: TCA 53-3412. Emergency Rule in effect December 31, 1980 through April 30, 1981. Permanent rule effective May 7, 1981.

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S1200-3-18-.21 SURFACE COATING OF MISCELLANEOUS METAL PARTS AND PRODUCTS

(1) For the purpose of this rule, the following definitions apply:

(a) **"Air dried coating"** is a coating which is dried by the use of air or forced warm air at temperatures up to 90°C (194°F);

(b) **"Clear coating"** is a coating which lacks color and opacity or is transparent and uses the undercoat as a reflectant base or undertone color;

(c) **"Extreme performance coating"** is a coating designed for extreme environmental conditions;

(d) **"Extreme environmental conditions"** is exposure to outdoor conditions most all of the time, temperatures consistently above 95°C, detergents, abrasive and scouring agents, solvents, corrosive atmospheres, or similar environmental conditions.

(e) **"Coating operation"** includes all equipment which applies, conveys, and dries a surface coating, including, but not limited to, spray booths, flow coaters, flashoff areas, air dryers and ovens.

(f) **"Top coating"** includes all coatings other than prime coatings.

(2) No owner or operator of a coating operation subject to this rule may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds from that operation in excess of the following, except as provided for in Rules 1200-3-18-.04 or .42 or Paragraph (7) of this rule:

(a) 0.52 kg/l (4.3 lb/gal) of coating, excluding water, delivered to a coating applicator in a clear coating operation,

(b) 0.43 kg/l (3.5 lb/gal) of coating, excluding water, delivered to a coating applicator in an air dried coating operation,

(c) 0.43 kg/l (3.5 lb/gal) of coating, excluding water, delivered to a coating applicator in an extreme performance coating operation, or

(d) 0.36 kg/l (3.0 lb/gal) of coating, excluding water, delivered to a coating applicator in all other coating operations.

(3) If more than one emission limitation in Paragraph (2) applies to a specific coating operation, then the least stringent emission limitation shall be applied.

(4) This rule applies to surface coating of the following miscellaneous metal parts and products:

(a) Large farm machinery (harvesting, fertilizing and planting

machines, tractors, combines, etc.);

(b) Small farm machinery (lawn and garden tractors, lawn mowers, rototillers, etc.);

(c) Small appliances (fans, mixers, blenders, crock pots, dehumidifiers, vacuum cleaners, etc.);

(d) Commercial machinery (office equipment, computers and auxiliary equipment, typewriters, calculators, vending machines, etc.);

(e) Industrial machinery (pumps, compressors, conveyor components, fans, blowers, transformers, etc.);

(f) Fabricated metal products (metal covered doors, frames, etc.); and

(g) Any other industrial category which coats metal parts or products under the Standard Industrial Classification Code of Major Group 33 (primary metal industries), Major Group 34 (fabricated metal products), Major Group 35 (nonelectric machinery), Major Group 36 (electrical machinery), Major Group 37 (transportation equipment), Major Group 38 (miscellaneous instruments), and Major Group 39 (miscellaneous manufacturing industries).

(5) This rule does not apply to the surface coating of the following metal parts and products:

(a) Automobiles and light-duty trucks;

(b) Metal cans;

(c) Flat metal sheets and strips in the form of rolls and coils;

(d) Magnet wire for use in electrical machinery;

(e) Metal furniture;

(f) Large appliances;

(g) Exterior surface areas of airplanes;

(h) Automobile refinishing;

(i) Customized top coating of automobiles and trucks, if production is less than 35 vehicles per day;

(j) Marine vessels;

(k) Storage vessels, and

(l) Prime and top coating aerospace components.

(6) This rule applies to facilities having potential emissions from coating

operations otherwise exempt from this rule of volatile organic compounds of 100 or more tons per year in rural counties or 25 or more tons per year in urban counties.

(7) The owner or operator of a coating operation subject to this rule shall:

(a) Meet the applicable increments of progress in the following schedule:

1. Submit final plans for the emission control technique before April 1, 1981,

2. Award contracts or purchase orders before July 1, 1981,

3. Initiate onsite construction or installation before December 1, 1981,

4. Complete onsite construction or installation before December 1, 1982 and

5. Achieve final compliance before December 31, 1982, and

(b) Certify to the Technical Secretary within 20 days after each deadline for each applicable increment of progress whether the required increment has been met.

(8) Proof of compliance with the standards of this rule shall be provided by:

(a) Methods approved by the Technical Secretary and consistent with:

1. EPA Guideline Series document, "Measurement of Volatile Organic Compounds," EPA-450/2-78-041,

2. Appendix A of "Control of Volatile Organic Emissions from Existing Stationary Sources - Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks," EPA-450/2-77-008, and

3. Rules 1200-3-18-.43,.44 and .45,

(b) Certification by the manufacturer of the composition of coatings, if supported by batch formulation records and approved by the Technical Secretary, may be accepted as the coatings analyses, and

(c) Monitoring of process equipment and emission control equipment as required by the Technical Secretary to confirm continued compliance.

Authority: TCA 53-3412 Emergency rule in effect December 31, 1980 through

April 30, 1981. Permanent rule effective May 7, 1981. Amended effective February 18, 1983.

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S1200-3-18-.22 LEAKS FROM GASOLINE TANK TRUCKS AND VAPOR COLLECTION SYSTEMS

(1) For the purpose of this rule, the following definitions apply:

(a) **"Bottom filling"** is the filling of a tank through an opening that is either flush with or near the tank bottom.

(b) **"Gasoline"** is a petroleum distillate having a Reid vapor pressure of 27.6 kPa (4 psi) or greater that is used as fuel for internal combustion engines.

(c) **"Gasoline tank truck"** is a truck or trailer equipped with a storage tank which is used for the transport of gasoline from sources of supply to stationary storage tanks of gasoline dispensing facilities, bulk gasoline plants, or bulk gasoline terminals.

(d) **"Gasoline dispensing facility"** is any site where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks.

(e) **"Bulk gasoline terminal"** is a gasoline storage facility which receives gasoline from refineries primarily by pipeline, ship, or barge, and delivers gasoline to bulk gasoline plants or to commercial or retail accounts primarily by tank truck; and has a daily average throughput of more than 76,000 liters (20,000 gal) of gasoline.

(f) **"Bulk gasoline plant"** is a gasoline storage and distribution facility with a daily average throughput of 76,000 liters (20,000 gal) or less which receives gasoline from bulk terminals by gasoline tank truck, stores it in tanks, and subsequently dispenses the gasoline via account trucks to local farms, businesses, and gasoline dispensing facilities.

(g) **"Vapor collection system"** is a vapor transport system which directs vapors from the vessel being loaded into either a vessel being unloaded or a vapor control system or vapor holding tank.

(h) **"Vapor control system"** is a system that is designed to control the release of volatile organic compounds displaced from a vessel during transfer of gasoline.

(2) No owner or operator of a gasoline tank truck, vapor control system, or vapor collection system subject to this rule may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds, except as provided in Rules 1200-3- 18-.04 or .42 or Paragraph (5) of this rule, unless the following requirements are satisfied:

(a) No owner or operator of a gasoline tank truck subject to this

rule may allow loading or unloading unless the gasoline tank truck:

1. Sustains a pressure change of no more than 750 pascals (3 in. of H_2O) or evacuated to a gauge vacuum of 1,500 pascals (6 in. of H_2 O);

2. Is repaired and retested as expeditiously as practical but not later than within 30 days of testing if this testing reveals the tank truck does not satisfy the pressure change standard in (2)(a)1 and;

3. Displays:

   (i) A sticker near the Department of Transportation certification plate which shows the date that the gasoline tank truck last passed pressure-tightness and vacuum-tightness testing and shows the serial number of the gasoline tank truck; or

   (ii) Test date markings which include the month and year of the date that the tank truck last passed pressure-tightness and vacuum-tightness testing. These markings are to be placed immediately below the DOT-required cargo tank test date markings kind are to be similar to these DOT-required markings in durability, legibility, and size;

(b) No owner or operator of a vapor collection system, a vapor control system, or gasoline loading equipment subject to this rule may allow loading or unloading unless the system or equipment:

1. Is designed and operated in a manner that prevents:

   (i) Gauge pressure from exceeding 4,500 pascals (18 in. of H_2O) and gauge vacuum from exceeding 1,500 pascals (6 in. of H_2O) in a gasoline tank truck;

   (ii) A measurement equal to or greater than 100 percent of the lower explosive limit (LEL, measured as propane) at 2.5 centimeters from all points on the perimeter of a potential leak source during loading or unloading operations at gasoline dispensing facilities, bulk plants, and bulk terminals; and

   (iii) Avoidable visible liquid leaks during loading or unloading operations at gasoline dispensing facilities, bulk plants and bulk terminals; and

2. Is repaired and retested or reinspected as expeditiously as practical but not later than within 30 days of discovery of a defect which prohibits compliance with (2)(b)1,

(c) Records of testing and repairs shall be maintained and identify the gasoline tank truck, vapor collection system, or vapor control system; the date of the test or repair; and the type of repair and the date of retest. Records must be maintained for 2 years after the date the testing or repair is completed. Records of tests shall contain data required by the Technical Secretary to verify compliance with the standards of this rule, and

(d) Copies of subject records and reports shall be made available to the Technical Secretary upon verbal or written request, at any reasonable time.

(3) The Technical Secretary shall test or inspect or require testings or inspection of a gasoline tank truck, vapor collection system, or vapor control system to confirm continuing compliance with the standards of (2)(a) or (b) and shall establish a testing or inspection schedule to assure continuing compliance.

(4) This rule is applicable to vapor collection and control systems at bulk plants, bulk terminals, and gasoline dispensing facilities regulated by Rules 1200-3-18-.08, .09 and .10 and to gasoline tank trucks equipped for gasoline vapor collection and which load or unload at regulated plants, terminals, or facilities in Davidson County.

(5) The owner or operator of a gasoline tank truck or facility subject to this rule must, before December 31, 1982, complete initial testing and certify to the Technical Secretary that the required testing has been accomplished and the standards of (2)(a) or (b) have been satisfied.

(6) Proof of compliance with the standards of this rule shall be consistent with the requirements of Rule 1200-3-18-.43 and provided by:

(a) For (2)(a)1, test procedures approved by the Technical Secretary and consistent with Appendix A of the OAQPS Guideline Series Document, "Control of Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection System," EPA-450/2-78-051, or an equivalent procedure approved by the Technical Secretary, and

(b) For (2)(b)1(ii), monitoring to confirm the continuing existence of leaktight conditions, approved by the Technical Secretary and consistent with the procedures described in Appendix B of the OAQPS Guideline Series document, "Control of Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems," EPA-450/2-78-051, or an equivalent procedure approved by the Technical Secretary.

Authority: TCA 53-3412. Emergency rule in effect December 31, 1980 through April 30, 1980. Permanent rule effective May 7, 1981. Amended effective March 2, 1983.

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S1200-3-18-.23 PETROLEUM REFINERY EQUIPMENT LEAKS

(1) For the purpose of this rule, the following definitions apply:

(a) **"Petroleum refinery"** is any facility engaged in producing gasoline, aromatics, kerosene, distillate fuel oils, residual fuel oils, lubricants, asphalt, or other products through distillation of petroleum or through redistillation, cracking, rearrangement or reforming of unfinished petroleum derivatives.

(b) **"Component"** is any piece of equipment which has the potential to leak volatile organic compounds when tested in the manner described in Appendix B of the OAQPS Guideline Series document, "Control of Volatile Organic Compound Leaks from Petroleum Refinery Equipment," EPA-450/2-78-036 or other method approved by the Technical Secretary. This includes, but is not limited to, pumping seals, compressor seals, seal oil degassing vents, pipeline valves, flanges and other connections, pressure relief devices, process drains, and open ended pipes.

(c) **"Valves not externally regulated"** are valves that have no external controls, such as in-line check valves.

(2) No owner or operator of a petroleum refinery operation subject to this rule may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds from that operation, except as provided in Rules 1200-3-18-.04 or .42 or Paragraph (4) of this rule, unless:

(a) The owner or operator conducted an inspection program approved by the Technical Secretary and organized to detect, identify, and facilitate repair of leaks from components. Pressure relief devices which are connected to an operating flare header, vapor recovery devices, inaccessible valves, storage tank valves, and valves that are not externally regulated are exempt from inclusion in this inspection program.

(b) The owner or operator, upon detection of a leaking component, shall:

1. Repair and retest the leaking component no later than 15 days after the leak is found unless the leaking component cannot be repaired until the unit is shutdown for turnaround.

2. Maintain a log which shall contain the following data:

(i) Identification of the leaking component,

(ii) The date on which the leaking component is discovered, and

(iii) The date on which a leaking component is repaired,

and

3. Copies of the log shall:

(i) Be retained by the owner or operator for a minimum of 2 years after the date on which the record was made, and

(ii) Be made available to the Technical Secretary upon request, and

(c) Except for a safety pressure relief valves, no owner or operator shall install or operate a valve at the end of a pipe or line containing volatile organic compounds unless the pipe or line is sealed with a second valve, a blind flange, a plug or a cap.

(3) This rule applies to volatile organic compounds emissions from petroleum refinery components leaks, except from recycling of waste oils.

(4) The owner or operator of a petroleum refinery operation subject to this rule shall:

(a) Submit to the Technical Secretary a proposal for an inspection program by January 1, 1982.

(b) Have instituted an approved inspection program by December 31, 1982.

(5) Testing and calibration procedures to determine compliance with this rule must be consistent with Appendix B of the OAQPS Guideline Series document, "Control of Volatile Organic Compound Leaks from Petroleum Refinery Equipment," EPA-450/2-78-036 or other procedures approved by the Technical Secretary.

Authority: TCA 53-3412. Emergency rule in effect December 31, 1980 through April 30, 1981. Permanent rule effective May 7, 1981.

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Rule 1200-3-18-.24 (Reserved)

S1200-3-18-.25 PETROLEUM LIQUID STORAGE IN EXTERNAL FLOATING ROOF TANKS

(1) For the purposes of this rule, the following definitions apply:

(a) **"Condensate"** is hydrocarbon liquid separated from natural gas which condenses due to changes in the temperature and/or pressure and remains liquid at standard conditions.

(b) **"Crude oil"** is a naturally occurring mixture which consists of hydrocarbons and sulfur, nitrogen and/or oxygen derivatives of hydrocarbons which is a liquid at standard conditions.

(c) **"Lease custody transfer"** is the transfer of crude oil and/or condensate, after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.

(d) **"External floating roof"** is a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank wall.

(e) **"Liquid-mounted seal"** is a primary seal mounted in continuous contact with the liquid between the tank wall and the floating roof around the circumference of the tank.

(f) **"Petroleum liquids"** are crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery.

(g) **"Vapor-mounted seal"** is a primary seal mounted so there is an annular vapor space underneath the seal. The annular vapor space is bounded by the bottom of the primary seal, the tank wall, the liquid surface, and the floating roof.

(h) **"Waxy, heavy pour crude oil"** is a crude oil with a pour point of 50 o F or higher as determined by the American Society for Testing and Materials Standards D97-66,"Test for Pour Point of Petroleum Oils."

(2) No owner or operator of a storage vessel subject to this rule may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds from that vessel, except as provided in Rules 1200-3-18-.04 or .42 or Paragraph (5) of this rule, unless:

(a) The vessel has been fitted with:

1. A continuous secondary seal extending from the floating

roof to the tank wall (rim-mounted secondary seal) for which:

(i) There are no visible holes, tears, or other openings in the seals or seal fabrics;

(ii) The seals are intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall; and

(iii) For vapor mounted primary seals, the accumulated area of gaps exceeding 0.32 cm (1/8 in.) in width between the secondary seal and the tank wall shall not exceed 2.12 cm^2 per meter of tank diameter (1.0 $in.^2$ per ft. of tank diameter), or

2. A seal, closure, or other device or devices which control volatile organic compound emissions with an effectiveness equal to or greater than a seal as described in (2)(a)1.

(b) Openings in the external floating roof, except for automatic bleeder vents, rim space vents,and leg sleeves, are:

1. Equipped with covers, seals, or lids in the closed position except when the openings are in actual use and

2. Equipped with projections into the tank which remain below the liquid surface at all times.

(c) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports;

(d) Rim vents are set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting,

(e) Emergency roof drains are provided with slotted membrane fabric covers or equivalent covers which cover at least 90 percent of the area of the opening;

(f) Measurements and inspections are performed annually;

(g) Records of the types of volatile petroleum liquids stored,the maximum true vapor pressure of the liquid as stored, and the results of measurements and inspections performed are maintained; and

(h) Records required to be maintained shall be retained by the owner or operator for a minimum of two years after the date on which the record was made and be made available to the Technical Secretary upon verbal or written request.

(3) The Technical Secretary may require more frequent inspections or modify monitoring and recordkeeping requirements when necessary to accomplish

the purposes of this rule.

(4) This rule:

(a) Applies to petroleum liquid storage vessels equipped with external floating roofs, having capacities greater than 150,000 liters (40,000 gal) but

(b) Does not apply to petroleum liquid storage vessels which:

1. Are used to store waxy, heavy pour crude oil;

2. Have capacities less than 1,600,000 liters (420,000 gal) and are used to store crude oil and condensate prior to lease custody transfer;

3. Contain petroleum liquid with a true vapor pressure less than 10.5 kPa (1.5 psia);

4. Contain petroleum liquid with a true vapor pressure less than 27.6 kPa (4.0 psia) and:

(i) Are of welded construction and

(ii) Possess a metallic-type shoe seal, a liquid-mounted foam seal, a liquid-mounted liquid filled type seal, or other closure device of demonstrated equivalence approved by the Technical Secretary, or

5. Are of welded construction, equipped with a metallic-type shoe primary seal, and has a secondary seal from the top of the shoe seal to the tank wall (shoe-mounted secondary seal) or a device of demonstrated equivalence approved by the Technical Secretary.

(5) The owner or operator of a petroleum liquid storage vessel subject to this rule shall:

(a) Meet the applicable increments of progress contained in the following schedule for installation of a secondary seal, closure, or other emission reduction device:

1. Submit final plans for the emission control technique before April 1, 1981,

2. Award contracts for the emission control system before July 1, 1981.

3. Initiate onsite construction or installation before December 1, 1981,

4. Complete construction or installation before December 1, 1982, and

5. Achieve final compliance before December 31, 1982.

(b) Certify to the Technical Secretary within 20 days after the deadline for each applicable increment of progress whether the required increment has been met.

(6) Compliance with (2)(a)1.(iii) shall be determined by measuring the length and width of all gaps around the circumference of the secondary seal in each place where a 0.32 cm (1/8 in.) uniform diameter probe passes freely (without forcing or binding against the seal) between the seal and tank wall and summing the areas of the individual gaps.

Authority: TCA 53-3412. Emergency rule in effect December 31, 1980 through April 30, 1981. Permanent rule effective May 7, 1981.

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S1200-3-18-.26 MANUFACTURE OF PNEUMATIC RUBBER TIRES

(1) For the purpose of this rule, the following definitions apply:

(a) **"Pneumatic, rubber tire manufacture"** is the production of pneumatic, rubber, passenger-type tires on a mass production basis.

(b) **"Passenger-type tires"** are agricultural, airplane, industrial, mobile home, light and medium duty truck, and passenger vehicle tires with a bead diameter up to but not 20.0 inches and cross section dimension up to but not 12.8 inches.

(c) **"Undertread cementing operation"** is the application of a solvent based cement to the underside of a tire tread.

(d) **"Tread-end cementing operation"** is the application of a solvent based cement to the tire tread ends. This application may be done manually or by automatic spraying.

(e) **"Green tires"** are assembled tires before molding and curing.

(f) **"Green tire spraying operation"** is the spraying of green tires, both inside and outside, with release compounds which help remove air from the tire during molding and prevent the tire from sticking to the mold.

(g) **"Water-based sprays"** are release compounds sprayed on the inside and outside of green tires, in which solids, water, and emulsifiers have been substituted for a portion of the organic solvents.

(h) **"Bead dipping operation"** is the dipping of an assembled tire bead into a solvent based cement.

(2) No owner or operator of a manufacturing operation subject to this rule may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds from that operation, except as provided in Rules 1200-3-18-.04 or .42 or Paragraph (5) of this rule, unless:

(a) The owner or operator of a subject operation shall install and operate:

1. A capture system which includes an enclosure or enclosures of the operation and its conveyors for the purpose of achieving maximum reasonable capture of evaporated volatile organic compounds. This system shall be designed consistent with good ventilation practice such as specified in Industrial Ventilation - Manual of Recommended Practice, ACGIH-l4th Edition, and Handbook of Ventilation for Contaminant Control, McDermatt. This system shall be operated and maintained to assure that openings to an

enclosure shall have an indraft during normal operation; and

2. A control device having at least a 90.0 percent reduction efficiency, as measured across the control device,

(b) The owner or operator of a tread-end cementing operation may, in lieu of using a vapor capture and control system such as specified in (2)(a), employ tread-end cementing by manual application, if it can be demonstrated to the satisfaction of the Technical Secretary that the employment of manual application results in emission which are equal to or less than would be achieved in automatic spraying application with emission controls as specified in (2)(a),

(c) The owner or operator of a green tire spraying operation may, in lieu of using a vapor capture and control system such as specified in (2)(a), use water-based sprays which contain no more than 10 percent weighted average volatile organic compounds,

(d) The owner or operator of a subject operation may, in lieu of a vapor capture and control system such as specified in (2)(a), make process changes which result in an emission reduction which is as much or more than the reduction which would be achieved with emission controls as specified in (2)(a),

(e) The owner or operator of a subject operation may, in lieu of using a vapor capture and control system such as specified in (2)(a), demonstrate to the satisfaction of the Technical Secretary that average emissions of volatile organic compounds are no greater than the following:

1. For undertread cementing, 28.8 grams per tire,

2. For tread-end cementing, 4.6 grams per tire,

3. For bead dipping, 2.1 grams per tire, or

4. For green tire spraying, 21.4 grams per tire, or

(f) The owner or operator of a facility with more than one type of subject operation may, in lieu of using a vapor capture and control system such as specified in (2)(a) for each operation, demonstrate to the satisfaction of the Technical Secretary that the sum of average emissions of volatile organic compounds per tire from the subject operations is no greater than the sum of the emission levels as specified in (2)(e) for the respective subject operations.

(3) This rule applies to the following operations in pneumatic rubber passenger type tire manufacturing:

(a) Undertread cementing,

(b) Tread-end cementing,

(c) Bead dipping, and

(d) Green tire spraying.

(4) This rule applies to facilities having potential emissions from subject pneumatic rubber tires manufacturing operations of volatile organic compounds of 100 or more tons per year in rural counties or 25 or more tons per year in urban counties.

(5) The owner or operator of a facility with operations subject to this rule shall:

(a) Meet the applicable increments of progress in the following schedule:

1. Submit final plans from emission control technique before April 1, 1981,

2. Award contracts or purchase orders before July 1, 1981,

3. Initiate onsite construction or installation before December 1, 1981,

4. Complete onsite construction or installation before December 1, 1982, and

5. Achieve final compliance before December 31, 1982, and

(b) Certify to the Technical Secretary within 20 days after the deadline for each applicable increment of progress whether the required increment has been met.

(6) Proof of compliance with the standards of this rule shall be provided by:

(a) Methods approved by the Technical Secretary and consistent with:

1. EPA Guideline Series document, "Measurement of Volatile Organic Compounds," EPA-450/2-78-041,

2. Appendix A of "Control of Volatile Organic Emissions from Existing Stationary Sources - Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light- Duty Trucks," EPA-450/2-77-008, and

3. Rules 1200-3-18-.43 and .45,

(b) Certification by the manufacturer of the composition of the green tire spray, if supported by batch formulation records and approved by the Technical Secretary, may be accepted as a green

tire spray analysis, and

(c) Monitoring of process equipment and emission control equipment as required by the Technical Secretary to confirm continued compliance.

Authority: TCA 53-3412. Emergency rule in effect December 31, 1980 through April 30, 1981. Permanent rule effective May 7, 1981.

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S1200-3-18-.27 MANUFACTURE OF SYNTHESIZED PHARMACEUTICAL PRODUCTS

(1) For the purpose of this rule, the following definitions apply:

(a) **"Synthesized pharmaceutical manufacturing"** is the manufacture of pharmaceutical products by chemical synthesis;

(b) **"Condenser"** is a device which cools a gas stream to a temperature which removes organic compounds by condensation.

(c) **"Control system"** is any number of control devices, including condensers, which are designed and operated to reduce the quantity of volatile organic compounds emitted to the atmosphere;

(d) **"Exhaust system"** is a device for collecting and directing out of the work area volatile organic compound fugitive emissions from the reactor openings, centrifuge openings, and other vessel openings for the purpose of protecting workers from excessive volatile organic compounds exposure;

(e) **"Reactor"** is a vat or vessel which may be jacketed to allow temperature control and is designed to contain chemical reactions;

(2) No owner or operator of a synthesized pharmaceutical manufacturing facility subject to this rule may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds from that facility, except as provided in Rule 1200-3-18-.04 or .42 or Paragraph (4) of this rule, unless:

(a) From reactors, distillation operations, crystallizers, centrifuges and vacuum dryers that have the potential to emit 6.80 kg/day (15 lb/day) or more of volatile organic compounds, condensers or equivalent control systems shall be used, provided that:

1. If condensers are used, the condenser outlet gas temperature must not exceed:

(i) -25°C when condensing volatile organic compounds of vapor pressure greater than 40.0 kPa (5.8 psi) at 20°C,

(ii) -15°C when condensing volatile organic compounds of vapor pressure greater than 20.0 kPa (2.9 psi) at 20°C,

(iii) 0°C when condensing volatile organic compounds of vapor pressure greater than 10.0 kPa (1.5 psi) at 20°C,

(iv) 10°C when condensing volatile organic compounds of

vapor pressure greater than 7.0 kPa (1.0 psi) at 20°C, or

(v) 25°C when condensing volatile organic compounds of vapor pressure greater than 3.50 kPa (0.5 psi) at 20°C, or

2. If equivalent control systems are used, the volatile organic compounds emissions must not be in excess of what would be emitted by using condensers which meet the requirements above.

(b) From all dryers and production equipment exhaust systems;

1. Achieve at least 90 percent control efficiency if total facility uncontrolled emissions are 150 kg/day (330 lb/day) or more, or

2. Reduce emissions to 15.0 kg/day (33 lb/day) or less if total facility uncontrolled emissions are less than 150 kg/day (330 lb/day),

(c) Provide a vapor balance system or equivalent control system with control efficiency of at least 90.0 percent for control of emissions from truck or railcar deliveries to storage tanks with capacities greater than 7,500 liters (2,000 gallons) that store volatile organic compounds with vapor pressures greater than 28.0 kPa (4.1 psi) at 20°C;

(d) Install pressure/vacuum conservation vents set at +0.2 kPa on all storage tanks that store volatile organic compounds with vapor pressures greater than 10.0 kPa (1.5 psi) at 20°C, unless a more effective control system is used,

(e) Enclose all centrifuges, rotary vacuum filters, and other filters having an exposed liquid surface, where the liquid contains volatile organic compounds and exerts a total volatile organic compounds vapor pressure of 3.50 kPa (0.5 psi) or more at 20°C,

(f) Install covers on all in-process tanks containing volatile organic compounds, and

(g) Repair leaks of liquids containing volatile organic compounds.

(3) This rule applies to operations which are sources of volatile organic compounds, including reactors, distillation units, dryers, storage of volatile organic compounds, transfer of volatile organic compounds, extraction equipment, filters, crystallizers and centrifuges that have the potential to emit 6.8 kg/day (15 lb/day) or more in synthesized pharmaceutical manufacturing facilities have total facility potential emissions, from subject operations of volatile organic compounds of 100 or more tons per year in rural counties of 25 or more tons per year in urban counties.

(4) The owner or operator of a facility subject to this rule must:

(a) Meet the applicable increments of progress contained in the following schedule:

1. Submit final plans for the emission control techniques before April 1, 1981,

2. Award contracts or purchase orders before July 1, 1981.

3. Initiate onsite construction or installation before December 31, 1981,

4. Complete onsite construction or installation before December 1, 1982, and

5. Achieve final compliance before December 31, 1982,

(b) Certify to the Technical Secretary within 20 days after the deadline for each applicable increment of progress whether the required increment has been met.

(5) Proof of compliance with the standards of this rule shall be provided by:

(a) Methods approved by the Technical Secretary and consistent with:

1. EPA Guideline Series document, "Measurement of Volatile Organic Compounds," EPA-450/2-78-041 and

2. Rules 1200-3-18-.43 and .45 and

(b) Monitoring of process equipment and emission control equipment as required by the Technical Secretary to confirm continued compliance.

Authority: TCA 68-25-105. Emergency rule in effect December 31, 1980 through April 30, 1981. Permanent rule effective May 7, 1981.

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S1200-3-18-.28 PERCHLOROETHYLENE DRY CLEANING

(1) For the purpose of this rule, "perchloroethylene dry cleaning" is the cleaning of fabrics in perchloroethylene solvent by means of one or more washes in the solvent, extraction of excess solvent by spinning, and drying by tumbling in an airstream, the operation including but is not limited to washers, dryers, filter and purification systems, waste disposal systems, holding tanks, pumps, and attendant piping and valves.

(2) No owner or operator of a perchloroethylene dry cleaning facility subject to this rule may cause, allow or permit the discharge into the atmosphere of any volatile organic compounds from the operation, except as provided in Rules 1200-3-18-.04 or .42, or Paragraph (5) of this rule, unless the owner or operator shall:

(a) Vent the dryer exhaust through a carbon adsorption system or equally effective control device;

(b) Emit no more than 100 ppmv of volatile organic compounds from the dryer control device before dilution;

(c) Maintain all components to prevent leaking of liquid volatile organic compounds;

(d) Cook or treat all diatomaceous earth filters so that the residue contains 25 kg or less of volatile organic compounds per 100 kg of wet waste material;

(e) Not exceed the allowance of volatile organic compounds from all solvent stills of 60 kg or less per 100 kg of wet waste material;

(f) Drain all filtration cartridges, in the filter housing, for at least 24 hours before discarding cartridges; and

(g) When possible, dry all drained cartridges without emitting volatile organic compounds to the atmosphere.

(3) Subparagraphs (2)(a) and (b) do not apply to a facility if:

(a) The facility is coin-operated,

(b) Insufficient steam capacity is available for desorbing of adsorption equipment, or

(c) Space is not available to accommodate adsorption equipment.

(4) The rule applies to facilities in Davidson County and to facilities having potential emissions from subject perchloroethylene dry cleaning of volatile organic compounds of 100 or more tons per year in rural counties or 25 or more tons per year in Shelby and Hamilton Counties.

(5) The owner or operator of a facility subject to this rule must:

(a) Meet the applicable increments of progress in the following schedule:

1. Award contracts, issue purchase orders, or otherwise order the emission control system and process equipment, before April 1, 1981,

2. Complete installation of the emission control and process equipment, before March 1, 1982, and

3. Achieve final compliance before April 1, 1982, and

(b) Certify to the Technical Secretary within 20 days after the deadline for each applicable increment of progress whether the required increment has been met.

(6) When so directed and required by the Technical Secretary, proof of compliance with the standards of this rule shall be provided:

(a) For (2)(a), (c), (f) and (g) by means of visible inspection,

(b) For (2) (b) by methods approved by the Technical Secretary and consistent with EPA Guidelines Series do document, "Measurement of Volatile Organic Compounds," EPA-450/2-78-041,

(c) For (2)(d) and (e) by methods approved by the Technical Secretary and consistent with the procedure in the American National Standards Institute paper, "Standard Method of Test for Dilution of Gasoline Engine Crankcase Oils," and

(d) Consistent with Rule 1200-3-18-.43.

Authority: TCA 53-3412. Emergency rule in effect December 31, 1980 through April 30, 1981. Permanent rule effective May 7, 1981.

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S1200-3-18-.29 GRAPHIC ARTS - ROTOGRAVURE AND FLEXOGRAPHY

(1) For the purpose of this rule, the following definitions apply:

(a) **"Packaging rotogravure printing"** is rotogravure printing upon paper, paper board, metal foil, plastic film, and other substrates, which are in subsequent operations formed into packaging products and labels for articles to be sold.

(b) **"Publication rotogravure printing"** is rotogravure printing upon paper which is subsequently formed in books, magazines, catalogues, brochures, directories, newspaper supplements, and other types of printed materials intended for either external or in-house use.

(c) **"Flexographic printing"** is the application of words, designs, and pictures to a substrate by means of a roll printing technique in which the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastomeric materials.

(d) **"Rotogravure printing"** is the application of words, designs, and pictures to substrate by means of a roll printing technique which involves and [sic?] intaglio or recessed image areas in the form of cells.

(e) **"Roll printing"** is the application of words, designs and pictures to a substrate usually by means of a series of hard rubber or steel rolls each with only partial coverage.

(f) **"Coating"** is the application of a uniform layer of material across the width of the substrate surface.

(g) **"Printing operation"** includes all printing, coating, oven, and drying units in a printing line.

(2) No owner or operator of a printing facility subject to this rule may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds from a printing operation, except as provided in Rules 1200-3-18-.04 or .42 or Paragraph (5) of this rule, unless:

(a) the volatile fraction of the ink, as it is applied to the substrate, contains 25.0 percent by volume or less of organic compounds and 75.0 percent by volume or more of water; or

(b) The ink, less its water content, as it is applied to the substrate, contains 60.0 percent by volume or more nonvolatile material; or,

(c) The owner or operator installs and operates an emission reduction system demonstrated to provide an overall reduction in volatile

organic compound emissions, as compared with uncontrolled emissions, of at least:

1. 75.0 percent where a publication rotogravure process is employed;

2. 65.0 percent where a packaging rotogravure process is employed; and,

3. 60.0 percent where a flexographic printing process is employed.

(3) This rule applies to packaging rotogravure, publication rotogravure, and flexographic printing operations.

(4) This rule applies to facilities having potential emissions from subject printing operations of volatile organic compounds of 100 or more tons per year.

(5) The owner or operator of a facility subject to this rule must:

(a) Meet the applicable increments of progress in the following schedules:

1. Submit final plans for emission control technique before April 1, 1981,

2. Award contracts or purchase orders before July 1, 1981,

3. Initiate onsite construction or installation before December 1, 1981,

4. Complete onsite construction or installation before December 1, 1982, and

5. Achieve final compliance before December 31, 1982, and

(b) Certify to the Technical Secretary within 20 days after the deadline for each applicable increment of progress whether the required increment has been met.

(6) Proof of compliance with the standards of this rule shall be provided by:

(a) Methods approved by the Technical Secretary and consistent with:

1. EPA Guidelines Series document, "Measurement of Volatile Organic Compounds," EPA-450/2-78-041;

2. Appendix A of "Control of Volatile Organic Emissions from Existing Sources - Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks," EPA-450/2-77- 008; and

3. Rules 1200-3-18-.43 and .45,

(b) Certification by the ink manufacturer of the composition of the ink, if supported by actual batch formulation records and approved by the Technical Secretary, may be accepted as an ink solvent analysis; and

(c) Monitoring of process equipment and emission control equipment as required by the Technical Secretary to confirm continued compliance.

Authority: TCA 53-3412. Emergency rule in effect December 31, 1980 through April 30, 1981. Permanent rule effective May 7, 1981.

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S1200-3-18-.30 SURFACE COATING OF AEROSPACE COMPONENTS

(1) For the purpose of this rule, the following definitions apply:

(a) **"Adhesive Bonding Primer"** is a coating applied in a very thin film to aerospace metal adhesive bond detail components for corrosion protection and adhesion.

(b) **"Aerospace Component"** is the fabricated part, assembly of parts, or completed unit of any aircraft, helicopter, missile or space vehicle.

(c) **"Flight Test Coating"** is a coating applied to test aircraft to protect from corrosion and to provide required marking during flight test evaluation.

(d) **"Fuel Tank Coating"** is a coating applied to the interior of fuel tank of an aircraft to protect it from corrosion.

(e) **"Maskant for Chemical Etching"** is a coating applied directly to an aerospace component to protect those areas when etching other parts of the component.

(f) **"Primer"** is a coating usually applied directly to the aerospace component for purposes of corrosion prevention, protection from the environment, functional fluid resistance and adhesion of subsequent coatings.

(g) **"Space Vehicle Coating"** is a coating applied to vehicles used beyond earth's atmosphere.

(h) **"Stripper"** is a volatile liquid applied to remove temporary protective coating, maskant for chemical etchant, paint and paint residue.

(i) **"Temporary Protective Coating"** is a coating applied to an aerospace component to protect it from mechanical and environmental damage during manufacturing.

(j) **"Topcoat"** is a coating applied over a primer or directly to the aerospace component for purposes such as appearance or identification.

(2) No owner or operator of an aerospace component coating line subject to this rule may cause, allow or permit the discharge into the atmosphere of any volatile organic compound after August 1, 1982 in excess of the following, except as provided for in Rules 1200-3-18-.04 and .42 and Paragraph (3) of this rule.

(a) 0.65 Kg/l (5.4 lb/gal) of primer, excluding water, delivered to the coating applicator from primer operations,

(b) 0.60 Kg/l (5.0 lb/gal) of top coating, excluding water, delivered to the coat applicator from top coat operations,

(c) 0.25 Kg/l (2.1 lb/gal) of temporary top coating, excluding water, delivered to the coating applicator from a temporary top coating operation,

(d) Use volatile organic compound of composite vapor pressure of 77.6 mmHg (1.5 psia) or greater at a temperature of 21.1°C (70°C) for surface preparation or cleanup, excluding paint remover.

(e) Use other than closed containers for disposal of cloth or paper impregnated with solvent containing volatile organic compounds which are used for surface preparation, cleanup and paint removal,

(f) Use volatile organic compounds for the cleanup of spray equipment in aerospace component coating operations unless 85% of the volatile organic compounds are collected and properly disposed such that they are not emitted to the atmosphere, and

(g) 0.40 Kg/l (3.3 lb/gal) of stripper, excluding water, delivered to the coating applicator from stripper operations.

(3) Subparagraphs (2)(a) and (b) shall not apply until December 31, 1982 to coating of aerospace components procured by the Federal Government.

(4) No owner or operator of an aerospace component primer coating line subject to this rule may cause, allow, or permit the discharge into the atmosphere of a volatile organic compound after January l, 1985 in excess of 0.35 Kg/l (2.9 lb/gal) of primer, excluding water, delivered to the coating applicator, except as provided for in Rule 1200- 3-18-.04 and .42 and Paragraph (5) of this rule.

(5) The owner or operator of a coating operation subject to Paragraph (4) shall:

(a) Meet the applicable increments of progress in the following schedule:

1. Submit final plans for the emission control technique before January 1, 1983,

2. Award contracts or purchase orders before July 1, 1983,

3. Initiate onsite construction or installation before December 1, 1983,

4. Complete onsite construction or installation before December l, 1984, and

5. Achieve final compliance before January 2, 1985, and

(b) Certify to the Technical Secretary within 20 days after each deadline for each applicable increment of progress whether the required increment has been met.

(6) Notwithstanding the provisions of Paragraphs (2) and (4), a person may comply with Paragraphs (2) and (4) by reducing emissions from such coating operations provided that:

(a) The emission reductions are at least equal to those which would be obtained by the use of coating specified in Paragraphs (2) and (4); and

(b) The emission reduction methods are applied to the coating operations subject to the provisions of this rule and are approved by the Technical Secretary.

(7) This rule applies to the coating applicators, ovens, and quench areas of aerospace coating lines involved in primer and top coating.

(8) Subparagraphs (2)(a), (b) and (c) and Paragraph (4) shall not apply to the following materials:

(a) Coatings for masking and chemical etching operations,

(b) Adhesive bonding primer,

(c) Flight test coatings,

(d) Space vehicle coatings, and

(e) Fuel tank coatings.

(9) This rule applies to facilities having potential emissions from aerospace component operations not otherwise exempt from this rule of volatile organic compounds of 100 or more tons per year in rural counties or 25 or more tons per year in urban counties.

(10) Proof of compliance with the standards of this rule shall be provided by:

(a) Methods approved by the Technical Secretary and consistent with:

1. EPA Guideline Series document, "Measurement of Volatile Organic Compounds," EPA-450/2-78-041,

2. Appendix A of "Control of Volatile Organic Emissions from Existing Stationary Sources-Volume II: Surface Coatings of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks," EPA-450/2-77-008, and

3. Rules 1200-3-18-.43,.44, and .45,

(b) Certification by the manufacturer of the composition of coatings,

if supported by batch formulation records and approved by the Technical Secretary, may be accepted as the coating analyses, and

(c) Monitoring of process equipment and emission control equipment as required by the Technical Secretary to confirm continued compliance.

Authority: TCA 53-3412. Administrative History. Original rule certified March 2, 1983.

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S1200-3-18-.31 through 1200-3-18-.39 (RESERVED)

S1200-3-18-.40 REGULATIONS REQUIRED ONLY IN METROPOLITAN DAVIDSON COUNTY

(1) This rule applies only in Metropolitan Davidson County.

(2) In accordance with 1200-3-18-.41, all facilities with existing sources with actual volatile organic compound emissions totaling more than 1000 tons/year or greater shall utilize reasonably available control technology (RACT).

Authority: T.C.A. 53-3412. Administrative History. Original Rule certified November 16, 1979.

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S1200-3-18-.41 COMPLIANCE SCHEDULES

(1) Process Equipment and Control Device

(a) The owner or operator of an existing source of volatile organic compound emissions subject to the standards in Rules 1200-3-18-.05 through .19 proposing to install and operate a control device and/or replacement process equipment to comply shall adhere to the increments of progress contained in the following schedule:

1. Final plans for the emission control device and/or process equipment must be submitted before November 1, 1979.

2. Contracts for the emission control systems and/or process equipment must be awarded or orders must be issued for purchase of component parts before March 1, 1980.

3. Initiation of on-site construction of control device or process equipment before October 1, 1980.

4. On-site construction or installation of the control device or process equipment completed before October 1, 1981.

5. Final compliance, [sic?] shall be determined before November 1, 1981 in accordance with the method(s) specified by the Technical Secretary.

6. Any owner or operator of an existing emission source subject to the compliance schedule of this section shall certify to the Technical Secretary within 20 days after the deadline for each increment of progress, whether the required increment of progress has been met.

(2) Low Solvent Content Coating.

(a) The owner or operator of an existing source of volatile organic compound emission subject to the standards in Rules 1200-3-18-.05 through .19 proposing to employ low solvent content coating technology to comply shall adhere to the increments of progress contained in the following schedule:

1. Final plans for the application of low solvent content coating technology must be submitted before November 1, 1979.

2. Research and development of low solvent content coating must be completed before May 1, 1980.

3. Evaluation of product quality and commercial acceptance must be completed before November 1, 1980.

4. Purchase orders must be issued for low solvent content coatings and process modifications before January 1, 1981.

5. Initiation of process modifications must begin before March 1, 1981.

6. Process modifications must be completed and use of low solvent content coatings must begin before August 1, 1981.

7. Final compliance shall be determined before September 1, 1981 in accordance with the method(s) specified by the Technical Secretary.

8. Any owner or operator of an existing source subject to the compliance schedule of this section shall certify to the Technical Secretary within 20 days after the deadline for each increment of progress, whether the required increment of progress has been met.

(3) Equipment Modification.

(a) The owner or operator of an existing source of volatile organic compound emissions subject to the standards in Rules 1200-3-18-.05 through .19 proposing to comply by modifications of existing process equipment shall adhere to the increments of progress contained in the following schedule:

1. Final plans for process modification must be submitted before November 1, 1979.

2. Contracts for process modifications must be awarded or orders must be issued for the purchase of component parts to accomplish process modifications before March 1, 1980.

3. Initiation of on-site construction or installation of process modifications must begin before October 1, 1980.

4. On-site construction or installation of process modifications must be completed before October 1, 1981.

5. Final compliance shall be determined before November 1, 1981 in accordance with the method(s) specified by the Technical Secretary.

6. Any owner or operator of an existing source subject to the compliance schedule of this section shall certify to the Technical Secretary within 30 days after the deadline for each increment of progress, whether the required increment of progress has been met.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979. Amended effective January 28, 1982.

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S1200-3-18-.42 INDIVIDUAL COMPLIANCE SCHEDULES

(1) A facility may petition for a source specific compliance schedule extending beyond those categorical compliance schedules contained in 1200-3-18-.41 and other rules in this Chapter only if one or more of the following conditions are satisfied:

(a) The facility demonstrates that it is physically impossible for the source(s) in question to comply with the date(s) in the categorical schedule.

(b) That, by allowing additional time, innovative technology will be applied and the reductions to be achieved will be significantly greater than that from the applicable emission standard. That the facility agrees that this revised value will be contained on the permit(s) as a condition of source(s) operation.

(c) Additional time is necessary to allow for the development of low solvent systems rather than apply add-on controls.

(d) The facility in question is a part of a Statewide or multistate program to prioritize the sequence of installing controls at a number similar sources owned or controlled by the same company, and the overall compliance program is as expeditious as practicable.

(2) Individual compliance schedules approved under this section must contain the below alphabetical increments of progress and achieve final compliance with the specified emission standard no later than July 1, 1987.

(a) Date control plan will be submitted.

(b) Date contract will be awarded.

(c) Date initial construction will commence.

(d) Date construction will be completed.

(e) Date final compliance will be achieved.

(3) Individual compliance schedules approved under this section will be subjected to a public hearing and incorporated as a revision to the State Implementation Plan. The facility requesting such Individual Compliance Schedule shall be responsible for all costs associated with the required legal notices.

(4) No individual compliance schedule will be granted if such a revised schedule would interfere with reasonable further progress in Davidson, Shelby or Hamilton counties.

(5) The petition for the individual compliance schedule must be received by

the Technical Secretary in the Nashville office prior to the first date contained in the applicable compliance schedule.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979. Amended effective October 19, 1981. Amended effective January 28,1982.

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S1200-3-18-.43 GENERAL PROVISIONS FOR TEST METHODS AND PROCEDURES

(1) The owner or operator of any new or existing source required to comply with standards contained in this Chapter shall, at his own expense, when so directed by the Technical Secretary, demonstrate compliance by the following methods or an alternative method approved by the Technical Secretary.

(2) No volatile organic compound emissions compliance testing will be allowed, nor the results accepted, unless prior notification has been supplied to the Technical Secretary as required under paragraph (3) and (4) of this rule and the Technical Secretary has granted approval.

(3) Any person proposing to conduct a volatile organic compound emissions compliance test shall notify the Technical Secretary of the intent to test not less than 30 days before the proposed initiation of the tests so the Technical Secretary may, at his option, observe the test.

(4) For compliance determination, the owner or operator of any new or existing source shall be responsible for providing:

(a) sampling ports, pipes, lines, or appurtenances for the collection of samples and data required by the test procedure; and,

(b) safe access to the sample and data collection locations; and,

(c) light, electricity, and other utilities required for sample and data collection.

(5) A copy (or copies) of the test report shall be submitted to the Technical Secretary by the prescribed time period in a format stipulated by the Technical Secretary.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979.

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S1200-3-18-.44 DETERMINATIONS OF VOLATILE CONTENT OF SURFACE COATINGS

(1) This method applies, in accordance with 1200-3-18-.43, to paint, varnish, lacquer, and surface coatings which are air-dried or force-dried.

(2) This method does not apply to any coating system requiring a special curing process such as:

(a) exposure to temperatures in excess of 110°C (230°F) to promote thermal cross-linking; or,

(b) exposure to ultraviolet light to promote cross-linking.

(3) For the purposes of this method, the applicable surface coatings are divided into three classes. They are:

(a) Class I: General Solvent-Type Paints. This class includes white linseed oil outside paint, white soya and phthalic alkyd enamel, white linseed ophthalic alkyd enamel, red lead primer, zinc chromate primer, flat white inside enamel, white epoxy enamel, white vinyl toluene modified alkyd, white amino modified baking enamel, and other solvent- type paints not included in Class II.

(b) Class II: Varnishes and Lacquers. This class includes emulsion or latex paints and colored enamels.

(4) For the purpose of this method, a representative sample of the surface coating shall be obtained at the point of delivery to the coater or any other point in the process that the Technical Secretary approves.

(5) The volatile organic content of the sample shall be determined as follows:

(a) Assign the coating to one of the three classes in paragraph (3) of this section. Assign any coating not clearly belongs [sic--is this "belonging" perhaps?] to Class II or III to Class I.

(b) Determine the density D_m (in grams/cubic centimeter) of the paint, varnish, lacquer, or related product according to procedure outlined in ASTM D 1475-60, Standard Method of Test for Density of Paint, Varnish, Lacquer, and Related Products. Then, depending on the class of the coating, use one of the following specified procedures to determine the volatile content:

1. Class I. Use the procedure in ASTM D 2369-73, Standard Method of Test for Volatile Content of Paints.

(i) Record the following information:

W_1 = Weight of dish and sample, grams

W_2 = Weight of dish and sample after heating, grams

S = Sample weight, grams

(ii) Compute the volatile matter content C_v (in grams/liter of paint) as follows:

$$C_v = \frac{(W_1 - W_2)\ (D_m)\ (10^3)}{S}$$

(iii) To convert grams/liter to pounds/gallon, multiply C_v by 8.3455×10^{-3}.

2. Class II. Use the procedure in ASTM D 1644-59 Method A, Standard Methods of Test for Nonvolatile Content of Varnishes (Do not use Method B).

(i) Record the following information:

A = Weight of dish, grams

B = Weight of sample used, grams

C = Weight of dish and contents after heating, grams

(ii) Compute the volatile matter content C_v (in grams/liter) as follows:

$$C_v = \frac{(A + B - C)\ (D_m)\ (10\ 3)}{B}$$

(iii) To convert grams/liter to pounds/gallon, multiply C_v by 8.3455×10^{-3}.

3. Class III. Use the procedure in ASTM D 2369-73, Standard Method of Test for Volatile Content of Paints.

(i) Record the same information as specified in paragraph (b)(5)(i) of this rule.

(ii) Determine the water content P (in percent water) of the paint according to the procedure outlined in Federal Standard 141a, Method 4082.1, Water in Paint and Varnishes (Karl Fischer Titration Method).

(iii) Compute the nonaqueous volatile matter content C_v (in grams/liter) as follows:

$$(W_1 - W_2 - 0.01\ PS)(D_m)(10^3)$$

$$C_v = \frac{\qquad\qquad\qquad\qquad\qquad\qquad}{S}$$

(iv) To convert grams/liters to pounds/gallon, multiply C_v by 8.3455×10^{-3}.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979.

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S1200-3-18-.45 TEST METHOD FOR DETERMINATION OF VOLATILE ORGANIC COMPOUND EMISSION CONTROL SYSTEM EFFICIENCY

(1) The provisions of this section are generally applicable, in accordance with 1200-3-.43, to any test method employed to determine the collection or control efficiency of any device or system designed, installed, and operated for the purpose of reducing volatile organic compound emissions.

(2) The following procedures shall be included in any efficiency determination:

(a) The volatile organic compound containing material shall be sampled and analyzed in a manner approved by the Technical Secretary such that the quantity of emissions that could result from the use of the material can be quantified.

(b) The efficiency of any capture system used to transport the volatile organic compound emissions from their point of origination to the control equipment shall be computed using accepted engineering practice and in a manner approved by the Technical Secretary.

(c) Samples of the volatile organic compound containing gas stream shall be taken simultaneously at the inlet and outlet of the emissions control device in a manner approved by the Technical Secretary.

(d) The total combustible carbon content of the samples shall be determined by a method approved by the Technical Secretary.

(e) The efficiency of the control device shall be expressed as the fraction of total combustible carbon content reduction achieved.

(f) The volatile organic compound mass emission rate shall be the sum of emissions from the control device, emissions not collected by the capture system and capture system losses.

Authority: T.C.A. 68-25-105. ....

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S1200-3-18-.46 TEST METHOD FOR DETERMINATION OF SOLVENT METAL CLEANING ORGANIC COMPOUND EMISSIONS

(1) This method is applicable to determining ["in determining"?] volatile organic compound emissions from solvent metal cleaning equipment in accordance with 1200-3-12-.43.

(2) The purpose of this method is to quantify, by material balance, the amount of solvent input into a degreaser over a sufficiently long period of time so that an average emission rate can be computed.

(3) The following procedure shall be followed to perform a material balance test:

(a) Clean the degreaser sump before testing.

(b) Record the amount of solvent added to the tank with a flow meter.

(c) Record the weight and type of work load degreased each day.

(d) At the end of the test run, pump out the used solvent and measure the amount with a flow meter. Also, estimate the volume of metal chips and other material remaining in the emptied sump,if significant.

(e) Bottle a sample of the used solvent and analyze it to find the percent that is oil and other contaminants. The oil and solvent proportions can be estimated by weighing samples of used solvent displaced by this oil along with the volume of make-up solvent added during operations is equal to the solvent emission.

Authority: T.C.A. 68-25-205. Administrative History. Original rule certified July 10, 1979.

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S1200-3-18-.47 TEST PROCEDURE FOR DETERMINATION OF VOC EMISSIONS FROM BULK GASOLINE TERMINALS

(1) This test method is applicable to determining volatile organic compound emissions from bulk gasoline terminals in accordance with 1200-3-18-.43.

(2) Principle. VOC mass emissions are determined directly using flow meters and hydrocarbon analyzers. The volume of liquid gasoline dispensed is determined by a computation based on the metered quantity of gasoline at the loading rack. Test results are expressed in milligrams of hydrocarbons emitted per liter of gasoline transferred.

(3) Summary of the Method. This method describes the test conditions and test procedures to be followed in determining the emissions from systems installed to control volatile organic compound vapors resulting from tank truck and trailer loading operations at bulk terminals. Under this procedure, direct measurements are made to compute the hydrocarbon mass exhausted from the vapor control system. All possible sources of leaks are qualitatively checked to insure that no uncontrolled vapors are emitted to the atmosphere. The results are expressed in terms of mass hydrocarbons emitted per unit volume of gasoline transferred. Emissions are determined on a total hydrocarbon basis. If methane is present in the vapors returned from the tank trucks or trailers, provisions are included for conversion to a total nonmethane hydrocarbon basis.

(4) Applicability. This method is applicable to [in?] determining VOC emission rates at tank truck and trailer gasoline loading terminals employing vapor collection systems and either continuous or intermittent vapor control systems. This method is applicable to motor tank truck and trailer loading only as per 1200-3-18-.09.

(5) Apparatus. The components essential to the evaluation of emissions from gasoline loading terminals are:

(a) portable combustible gas detector equipped to read 0 to 100 percent of the lower explosive limit,

(b) flexible thermocouple with recorder,

(c) gas volume meter, sized for the expected exhaust flow rate and range,

(d) total hydrocarbon analyzer with recorder (flame ionization detector or nondispersive infrared equipped to read 0 to 10 percent by volume hydrocarbon as propane for vapor control systems which recover the vapor as liquid; or 0 to 10,000 ppm hydrocarbons as propane for incineration vapor control systems),

(e) barometer to measure atmospheric pressure,

(f) gas chromatography/flame ionization detector with a column to separate C_1 - C_7 alkanes; used if methane is present in recovered vapors or if incineration is the vapor control technique.

(6) Test requirements.

(a) No less than three 8-hour test repetitions will be performed.

(b) During the test period, all loading racks shall be open for each product line which is controlled by the system under test. Simultaneous use of more than one loading rack shall occur to the extent that such use would normally occur.

(c) Simultaneous use of more than one dispenser on each loading rack shall occur to the extent that such use would normally occur.

(d) Dispensing rates shall be set at the maximum rate at which the equipment is designed to be operated. Automatic product dispensers are to be used according to normal operating practices.

(e) Applicable operating parameters of the vapor control system shall be monitored to demonstrate that the control unit is operating at design levels. For intermittent vapor control systems employing a vapor holder, each test repetition shall include at least one fully automatic operation cycle of the vapor holder and control device. Tank trucks and trailers shall be essentially leak free as determined by the Technical Secretary.

(7) Basic Measurements Required. The basic measurements essential to the evaluation of emissions from gasoline loading terminals are:

(a) the amount of gasoline dispensed from gasoline dispensers,

(b) leak check of all fittings and vents,

(c) the following items for the processing unit exhaust:

1. temperature,

2. pressure,

3. volume of vapors,

4. hydrocarbon concentration of vapors,

5. gas chromatograph analysis of vapors if methane is present in recovered vapors.

(8) Test Procedure.

(a) Calibrate and span all instruments as outlined under paragraph (10) of this rule.

(b) Install an appropriately sized gas meter on the exhaust vent of the vapor control system. For those vapor control systems where size restrictions preclude the use of a volume meter; or when incineration is used for vapor control, a gas flow meter (orifice, pitot tube, annubar, etc.) is necessary. At the meter inlet, install a thermocouple with recorder. Install a tap at the volume meter outlet. Attach a sample line for a total hydrocarbon analyzer (0 to 10 percent as propane) to this tap. If the meter pressure is different than barometric pressure, install a second tap at the meter outlet and attach an appropriate manometer for pressure measurement. If methane analysis is required, install a third tap for connection to a constant volume sample/pump evacuated bag assembly as described in Method 3, Federal Register, 36:247, December 23, 1977.

(c) Measurements and data required for evaluating emissions from the system:

1. at the beginning and end of each test repetition, record the volume readings on each product dispenser on each loading rack served by the system under test,

2. at the beginning of each test repetition and each 2 hours thereafter, record the ambient temperature and the barometric pressure,

3. for intermittent vapor control systems employing a vapor holder, the unit shall be manually started and allowed to process vapors in the holder until the lower automatic cut-off is reached. This cycle should be performed immediately prior to the beginning of the test repetition before readings required under part (3)(c)1 of this rule are taken.

4. for each cycle of the vapor control system during each test repetition, record the start and stop time, the initial and final gas meter readings, the average vapor temperature, pressure and hydrocarbon concentration. If a flow rate meter is used, record flow meter readouts continuously during the cycle. If required, extract a sample continuously during each cycle for chromatographic analysis for specific hydrocarbons,

5. for each tank truck or trailer loading during the test period, check all fittings and seals on the tanker compartments with the combustible gas detector. Record the maximum combustible gas reading for any incidents of Leakage of hydrocarbon vapors. Explore the entire periphery of the potential leak source with the sample hose inlet 1 cm (0.4 inches) away from the interface.

6. during each test period, monitor all possible sources of leaks in the vapor collection and control systems with the

combustible gas indicator. Record the location and combustible gas reading for any incidents of leakage.

7. for intermittent vapor control systems, the control unit shall be manually started and allowed to process vapors in the holder until the lower automatic shut-off is reached at the end of each test repetition. Record the data required under part (8)(c)4. of this rule for this manual cycle. No loading shall be in progress during this manual cycle.

(9) Calculations.

(a) terminology:

T_a = Ambient temperature (0°C)

P_b = Barometric pressure (mm Hg)

L_t = Total volume of liquid dispensed from all controlled racks during the test period (liters)

V_e = Volume of air-hydrocarbon mixture exhausted from the processing unit (M^3)

V_es = Normalized volume of air-hydrocarbon mixture exhausted, NM e @ 20°C, 760 mmHg

C_e = Volume fraction of hydrocarbons as exhausted mixture (volume % as C_3 H10/100, corrected for methane content if required)

T_e = Temperature at processing unit exhaust (°C)

P_e = Pressure at processing unit exhaust (mm Hg abs)

$(M/L)_e$ = Mass of hydrocarbons exhausted from the processing unit per volume of liquid loaded, (mg/liter),

(b) 1. Calculate the following results for each period of the vapor control system:

$V_e = V_{ef} - V_{ei}$, (M_3)

where

V_e = totalized volume flow rate and time records,

V_{ei} = initial volume.

2. normalized volume of exhausted mixture:

V_{es} = (0.3858 °K/mmHg) V_eP_e NM^3 @ 20°C, 760 mmHg

$$(T_e + 273.2)$$

3. mass of hydrocarbons exhausted from the vapor control system:

$$M_e = \frac{(1.833 \times 10^6 \ mgC_3H_8)}{NM^3C_3H_8} V_{es}C_e(mg)$$

(c) calculate the average mass of hydrocarbons emitted per volume of gasoline loaded:

$$(M/L)_e = \frac{M_e \ (mg/liter)}{L_t}$$

(10) Calibrations.

(a) Flow meters shall be calibrated using standard methods and procedures which have been approved by the Technical Secretary.

(b) Temperature recording instruments shall be calibrated prior to a test period and following the test period using an ice bath (0°C) and a known reference temperature source of about 35°C. Daily during the test period, use an accurate reference to measure the ambient temperature and compare the ambient temperature reading of all other instruments to this value.

(c) Manufacturer's instructions concerning warm-up and adjustments shall be followed for total hydrocarbon analyzers. Prior to and immediately after the emission test, perform a comprehensive laboratory calibration on each analyzer used. Calibration gases should be propane in nitrogen prepared gravimetrically with mass quantities of approximately 100 percent propane. A calibration curve shall be provided using a minimum of five prepared standards in the range of concentrations expected during testing;

1. For each repetition, zero with zero gas (3 ppm C) and span with 70 percent propane for instruments used in the vapor lines and with 10 percent propane for instruments used at the vapor control system exhaust.

2. The zero span procedure shall be performed at least once prior to the first test measurement, once during the middle of the run, and once following the final test measurement for each run.

3. Conditions in calibration gas cylinders must be kept such that condensation of propane does not occur. A safety factor of 2 for pressure and temperature is recommended.

Authority: T.C.A. 53-3412. Administrative History. Original rule certified July 10, 1979.

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Section 16-82 Control of Sulfur Dioxide Emissions

For the purpose of enforcement of the sulfur oxide emissions, Chapter 1200-3-14 of the Tennessee Air Pollution Control Regulations is hereby adopted as a portion of this Code by reference. Such regulations and all such additions, deletions, changes and amendments as may subsequently be made shall become a part of this Code or Ordinances and shall have the same effect as if set out in full herein.

(Ord. No. 1265, § 1,4-25-72; Ord. No. 1988, § 1, 3-19-74; Ord. No. 2761, § 1, 1-17-78; Code 1967, § 3-24)

CONTROL OF SULFUR DIOXIDE EMISSIONS

S1200-3-14-.01 GENERAL PROVISIONS

(1) (a) For the purpose of this chapter, each country in Tennessee will be classified by the Board into one of seven categories, defined as Class I, Class II, Class III, Class IV, Class V, Class VI, and Class VII.

(b) Each class has been established with the essential limit necessary to attain and/or maintain ambient air quality standards based on measured and predicted air quality.

(2) The county classifications are as follows:

(a) Class I - Polk

(b) Class IIA - Maury

(c) Class IIB - Humpheys

(d) Class III - Sullivan

(e) Class IV - Shelby

(f) Class V - Anderson, Davidson, Hamilton, Hawkins, Knox, Rhea

(g) Class VI - All Counties not specifically classified

(h) Class VII - Roane

(3) Upon mutual agreement of the owner or operator of any air contaminant source and the Technical Secretary, an emission limit more restrictive than otherwise specified in this Chapter may be established. This emission limit shall be stated as a special condition for any permit or order issued concerning the source. Violation of this agreed to, more stringent emission standard is grounds for revocation of the issued permit and/or other enforcement measures provided in the Tennessee air

Quality Act.

(4) Regardless of the specific emission standards contained in this Chapter, all sources identified in rule 1200-3-9-.01-(4) of these regulations shall comply with the standards set pursuant to rule 1200-3-9.

(5) Regardless of the specific emission standards contained in this Chapter, new and/or modified sources in or significantly impacting upon a nonattainment area must comply with the provisions of paragraph 1200-3-9-.01(5).

Authority: T.C.A. Section 68-35-105. Administrative History. Original Rule certified June 7, 1974. Chapter 1200-3-14 repealed. New Rule filed February 19,1976, effective March 20, 1976. Amended effective March 21, 1979. Amended effective June 21, 1979. Amended November 16, 1979. Amended July 31, 1981. Amended December 13, 1982.

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S1200-3-14-.03 PROCESS EMISSION STANDARDS.

(1) On and after July 1, 1975, the owner or operator of an air contaminant source located in a Class I county shall not cause, suffer, allow or permit the emission from that source of sulfur oxides (calculated as sulfur dioxide) in excess of 500 parts per million, 0.05 percent by volume, dry basis (one hour average). Different standards and averaging times may be met as an alternative, or as required, where they are specified in Chapter 1200-3-19.

(2) On and after July 1, 1975, the owner or operator of an air contaminant source located in a Class II, III, or VII county shall not cause, suffer, allow or permit the emission from that source of sulfur dioxide in excess of 1000 parts per million, 0.10 percent by volume, dry basis(one hour average).

(3) On and after July 1, 1975, the owner or operator of an air contaminant source located in Class IV, V or VI county shall not cause, suffer, allow or permit the emission from that source of sulfur dioxide in excess of 2,000 parts per million, 0.20 percent by volume, dry basis (one hour average).

(4) A process source in a Class IV county as an alternative to the standard in paragraph (3) above may request from the Technical Secretary of the Tennessee Air Pollution Control Board to be regulated by not being allowed to exceed their sulfur dioxide emission capacity in 1974, on a twenty-four and annual basis. These emissions will be specified in a Board Order, as a permit condition, or other legally enforceable manner. The Technical Secretary may approve such a request after being given adequate proof that this alternate standard will not cause any air quality standards to be violated and the company has an adequate continuous air monitoring network for determining the impact of its emissions.

(7) Limiting the Effect of the Definition of Modification. For the purpose of determining the applicable sulfur dioxide emission standards in this rule, a change in fuel from natural gas, propane, butane and/or fuel oil to any of these herein named fuels and any required alterations to existing fuel burning equipment to accommodate these fuels shall not be considered a modification.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Chapter 1200-3-14 repealed. New Rule filed February 19, 1976, effective March 20, 1976. Amended April 12, 1978. Amended June 16, 1978. Amended effective June 21, 1979. Amended November 16, 1979. Amended effective August 1, 1984.

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Section 16-83 Visible Emissions

For the purpose of enforcement of the visible emissions, Chapter 1200-3-5 of the Tennessee Air Pollution Control Regulations is hereby adopted as a portion of this Code by reference. Such regulations and all such additions, deletions, changes and amendments as may subsequently be made shall become a part of this Code of Ordinances and shall have the same effect as if set out in full herein.

(Ord. No. 1265, § 1, 4-25-72; Ord. No. 2921, § 1(7), 10-9-79; Code 1967, § 3-17)

CHAPTER 1200-3-5
VISIBLE EMISSIONS

S1200-3-5-.01 GENERAL STANDARD

(1) No person shall cause, suffer, allow or permit discharge of a visible emission from any air contaminant source with a density greater than number one (1) of the Ringlemann Chart or an opacity in excess of twenty (20) percent for an aggregate of more than five (5) minutes in any one (1) hour or more than twenty (20) minutes in any twenty-four (24) hour period; provided, however that, for fuel burning installations with fuel burning equipment of input capacity greater than 600 x 10^6 Btu per hour, no person shall cause, suffer, allow, or permit discharge of a visible emission from any fuel burning installation with a density greater than number one (1) of the Ringlemann chart or an opacity in excess of twenty (20) percent (6-minute average) except for one six-minute period per one (1) hour of not more than forty (40) percent opacity.

(4) Regardless of the visible emissions standard contained in this chapter, all sources identified in rule 1200-3-9-.01-(4) of these regulations shall comply with the visible emission standards set pursuant to rule 1200-3-9.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended April 21,1976. Amended in its entirety February 9, 1977. Amended effective March 21, 1979. Amended effective June 21, 1979. Amended effective December 14, 1981.

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S1200-3-5-.02 EXCEPTIONS

(1) Consistent with the requirements of Chapter 1200-3-20, due allowance may be made for visible emissions in excess of that permitted in this chapter which are necessary or unavoidable due to routine startup and shutdown and other temporary conditions. The owner or operator shall maintain a continuous, current log of such start-up and shutdown and other temporary conditions showing the time at which such conditions began and ended and that such record shall be available to the Technical Secretary or his representative upon his request. It shall be permissible to omit the record of routine start-up or shutdown and other temporary conditions not in compliance with paragraphs 1200-3-5-.01(1), 1200-3-5-.01(2), and Rules 1200-3-5-.05 provided such conditions have been made a part of the permit conditions. For sources subject to particulate emission standards regulated by Chapter 1200-3-19 such visible emission levels shall correspond to the routine startup or shutdown particulate levels.

Authority: T.C.A. Section 53-3412 Administrative History. Original Rule certified June 7, 1974. Amended April 21, 1976. Amended effective February 9, 1977. Amended in its entirety March 31, 1979. Amended effective September 4, 1980

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S1200-3-5-.03 METHOD OF RECORDING

(1) In testing compliance with the rules of this chapter visible emissions tending to produce a black plume will be evaluated in terms of the Ringelmann scale or equivalent opacity while visible emissions tending to produce a non-black plume will be evaluated in terms of equivalent opacity and expressed as percent opacity.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended April 21, 1976. Amended effective February 9, 1977.

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S1200-3-5-.04 EXEMPTION

Visible emissions from fuel-burning equipment used exclusively to provide space heating in a building containing not more than two (2) dwelling units shall not be subject to the provisions of this chapter.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule effective February 9, 1977.

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S1200-3-5-.05 STANDARD FOR CERTAIN EXISTING SOURCES

(1) Air contaminant sources meeting the conditions in paragraphs (2) and (3) of this rule and for which a certificate of validation has been issued by the Technical Secretary indicating that to his satisfaction the conditions in paragraph (2) are met, must in lieu of meeting the requirements of rule .01 of this chapter, meet the following emission standards of no visible emissions of greater density than number two (2) on the Ringelmann Chart or an equivalent opacity in excess of forty (40) percent for an aggregate of more than five (5) minutes in anyone (1) hour or more than twenty (20) minutes in any one twenty-four (24) hour period.

(2) The Technical Secretary must issue a certificate of validation if applied for and the owner or operator of the air contaminant source demonstrates to the satisfaction of the Technical Secretary the following conditions exist:

(a) The air contaminant source was commenced on or before April 3, 1972, and no modification has been made to the source since that date.

(b) The air contaminant source is regulated by rule 1200-3-6-.02 or a process emission source meeting the emission standard in paragraph 1200-3-7-.02(4).

(c) the air contaminant source does not include a gas or oil-fired boiler. However, if the particulate emissions of the fuel burning installation are less than that which rule 1200-3-6-.02 would allow for a fuel burning installation of the size Qs where Qs is the heat input rate for solid fuels and /or liquid fuels other than oil, then the previous sentence will not prohibit, in and of itself, the issuance of a certificate of validation.

(d) Each emission point, suitable for the installation of a continuously recording equivalent opacity monitor, of the air contaminant source, whether a process emission source, fuel burning installation, incinerator, or wigwam, having a flow rate of 100,000 ACFM or more shall be equipped with continuously recording equivalent opacity monitors of the reference method type as outlined in the Federal Register, Vol. 40, No. 194, of October 6, 1975, starting on page 46259, or of an equivalent or alternate type approved by the Technical Secretary. However, a monitor will not have to be installed on those emission points of the air contaminant source for which the owner or operator does not wish to be allowed to emit more than twenty percent opacity. In this event these points must be clearly specified on any application for a certificate of validation. the Technical Secretary may still require these other points to install such a monitoring system. This provision shall not apply to gas streams containing moisture which interferes with proper instrument operation.

(e) The air contaminant source meets all emission standards in these regulations outside this chapter. Demonstration of this will require, as a minimum, an acceptable stack test report for particulate matter. This test must be conducted in the presence of personnel from the Division of Air Pollution Control.

(f) The particulate ambient air quality standards are being met in the vicinity of the air contaminant source. The Technical Secretary may require this to be demonstrated.

(g) A certificate of validation has never been revoked for this air contaminant source.

(h) A fee of five hundred dollars ($500.00) has been paid to the Department to cover the costs of review of the request for the certificate of validation.

(3) The owner or operator of the air contaminant source must:

(a) Post on the operating premises the certificate of validation;

(b) maintain for at least one year the readout from the opacity monitor(s) and keep this record available for inspection by the personnel of the Division of Air Pollution Control;

(c) keep the air pollution control equipment and the recording equivalent opacity monitor in good operating condition and utilize said equipment at all times.

(4) After Administrative Hearing the certificate of validation will be revoked by the Technical Secretary if he finds any of the requirements of paragraph (2) have been violated and/or if the requirements of paragraph (3) have been frequently and flagrantly violated after its issuance.

(5) Upon the granting of a construction permit for the modification of an air contaminant source for which a certificate of validation has been issued, the certificate of validation shall become void.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule effective February 9, 1977.

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S1200-3-5-.06 WOOD-FIRED FUEL BURNING EQUIPMENT

(1) Wood-fired fuel burning equipment, subject to Rule 1200-3-6-.05(4) with a heat input of 100 million Btu/hr or greater must meet an emission limit of forty (40) per cent opacity (or a density of number two on the Ringelmann Chart).

(2) Opacity for purposes of this rule shall be determined by the reference method as specified in the Federal Register, Vol. 39, No. 219, November 2, 1974.

(3) Where this wood-fired fuel burning equipment is on March 1, 1978, exhausted to the same stack as other equipment this standard shall apply.

(4) If other emission sources are constructed to exhaust through the same stack as the wood fired fuel burning equipment on or after the effective date of this rule the opacity standard shall be V where

$$V = \frac{40.0\ V_W + (x)V_R}{V_W + V_R}$$

Where,

V = opacity standard in percent opacity

V_W = exhaust flow rate in dry standard cubic feet per minute from the wood-fired fuel burning equipment and other equipment present before the effective date of this rule.

V_R = exhaust flow rate in dry standard cubic feet per minute from the equipment (not being wood-fired fuel burning equipment) constructed so as to exhaust through the stack and commenced on or after the effective date of this rule.

(6) This rule does not apply in Davidson, Hamilton, Knox, and Shelby Counties but facilities in these counties will be subject to Rule 1200-3-5-.01.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule effective June 16, 1978.

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S1200-3-5-.07 CERTAIN WOOD FIRED FUEL BURNING EQUIPMENT

(1) Wood fired fuel burning equipment subject to Rule 1200-3-6-.05-(8)-(d) shall not discharge visible emissions from the subject fuel burning equipment with a density greater than number two (2) of the Ringlemann chart or an opacity greater than forty (40) percent for an aggregate of more than five (5) minutes in any one (1) hour period.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule effective March 21, 1979.

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S1200-3-5-.08 TITANIUM DIOXIDE (TiO_2) MANUFACTURING.

(1) Visible emissions from the spray dryers used for pigment drying in the chloride process for the manufacture of TiO_2 shall meet an emission limit of 80 percent opacity provided that the sources were constructed prior to July 1, 1975 and provided further that these sources comply with the applicable particulate matter emission limits set forth in Chapter 1200-3-7. Compliance tests to demonstrate these sources are meeting the particulate matter emission standards must be conducted when the visible emissions average at least 80% opacity for at least one consecutive six minute period during each test run accepted or when the visible emission average at least 60% opacity for each test run accepted. For similar units at the same plant, tests need be performed only on one unit, if the Technical Secretary approves it as being representative of all such units at the plant. A compliance test shall consist of at least two acceptable runs and all must be conducted in the presence of state observers.

(2) Opacity for the purposes of this rule shall be determined by the reference method specified in the Federal Register, Volume 39, No. 219, November 12, 1974.

Authority: T.C.A. Section 53-4412. Administrative History. Original rule effective June 21, 1979.

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S1200-3-5-.09 KRAFT MILL RECOVERY FURNACE

(1) Visible emissions from kraft mill recovery furnaces under construction or in operation prior to September 24, 1976, shall not exhibit 35 percent opacity or greater.

(2) Opacity for the purpose of this rule shall be determined by the reference Method specified in the Federal Register, Volume 39, No. 219, November 12, 1974.

Authority: T.C.A. Section 53-3412. Administrative History. Original rule effective February 1, 1982.

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S1200-3-5-.10 CHOICE OF VISIBLE EMISSION STANDARD FOR CERTAIN FUEL BURNING EQUIPMENT

(1) A fuel burning installation having fuel burning equipment with a heat input of between 50 million Btu/hr and 600 million Btu/hr, in operation or having a construction authorization, on the effective date of this Rule and subject to Rule 1200-3-5-.01 shall have the option of electing an alternate visible emission standard contained in paragraph 1200-3-50.10 (2). The owner or operator of such fuel burning equipment electing to be regulated by the alternate standard shall make this election known in writing, by certified mail, to the Technical Secretary within 90 days of the effective date of this rule.

(a) The election of the alternate standard will apply to all fuel burning equipment at the fuel burning installation.

(b) If the alternate standard is not elected, all fuel burning equipment at the fuel burning installation with remain subject to rule 1200-3-5-.01.

(2) No person electing the alternate visible emission standard shall cause, suffer, allow, or permit the discharge of a visible emission from any fuel burning equipment n excess of twenty (20) percent opacity (6 minute average) except for one six-minute period per one (1) hour or more than twenty four (24) minutes in any twenty four (24) hour period.

(3) Opacity for the purpose of Paragraph 1200-3-5-.10-(2) shall be determined by the reference method as specified in the Federal Register, Volume 39, No. 219, November 12, 1974.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule effective July 31, 1981.

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S1200-3-5-.11 SODA RECOVERY BOILERS

(1) Visible emissions from a Soda Recovery Boiler shall meet an emission limit of 50 percent opacity provided that the source was constructed prior to August 9, 1973 and provided further that this source complies with the applicable particulate matter emission limits set forth in Chapter 1200-3-7 and Operating Permits issued in accordance with Rule 1200-3-19-.05. Compliance tests to demonstrate that this source is meeting the particulate mater emission standards must be conducted when the visible emissions average at least 50% opacity for at least one consecutive six minute period during each test run accepted. A compliance test shall consist of at least two acceptable runs and all must be conducted in the presence of state observers.

(2) Opacity for the purpose of this rule shall be determined by the reference method specified in the Federal Register, Volume 39, No. 219, November 12, 1974.

Authority: T.C.A. Section 53-3412. Administrative History. Original rule effective December 13, 1982.

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Section 16-84 Particulate Matter from Incinerators

(a) No person shall cause, suffer, allow or permit the emissions from any incinerator having a charging rate of 2,000 pounds per hour or less, fly ash or other particulate matter in quantities exceeding 0.2 grains per cubic foot of flue gas at standard conditions corrected to 12 per cent carbon dioxide by volume excluding the contribution of auxiliary fuel.

(b) No person shall cause, suffer, allow or permit the emissions from any incinerator having a charging rate greater than 2,000 pounds per hour, fly ash or other particulate matter in quantities exceeding 0.1 grains per standard cubic foot of flue gas at standard conditions corrected to 12 per cent carbon dioxide by volume excluding the contribution of auxiliary fuel.

(c) No person shall cause, suffer, allow or permit the emissions of particles of unburned waste or ash from any incinerator which are individually large enough to be visible while suspended to the atmosphere.

(d) No person shall construct, install, use or cause to be used any incinerator which will result in odors being detectable by sense of smell in any area of human use or occupancy.

(e) No person shall install or construct an incinerator to be used for disposal of combustible waste from dwelling units if such incinerator is to be used to burn such wastes produced by fewer than twenty-five (25) dwelling units.

(f) No person shall use or cause to be used any incinerator unless all components connected to or attached to, or serving the incinerator, including control apparatus, are functioning properly and are in use. Incinerators shall be operated so as to comply with recognized good practices.

(g) Incinerators having 2.5 cubic feet furnace volume or less used solely for the disposal of infective dressings and other similar material shall not be required to meet these emission standards.

(h) No person shall cause, suffer, allow, or permit to be discharged into the atmosphere from any incinerator, visible emissions with an opacity in excess of twenty percent (20%).

(0rd. No. 1265, § 1, 4-25-72; Code 1967, § 3-23; Ord. No. 3230, § 1(4), 8-3-82)

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Section 16-85 Required Sampling, Recording, and Reporting

For the purpose of enforcement of the required sampling, recording, and reporting, Chapter 1200-3-10 of the Tennessee Air Pollution control Regulations is hereby adopted as a portion of this Code by reference. Such regulations and all additions, deletions, changes and amendments as amy subsequently be made shall become a part of this Code of Ordinances and shall have the same effect as if set out in full herein.

(Ord. No. 1265, § 1, 4-25-72; Ord. No. 2921, § 1(2), 10-9-79; Code 1967, § 3-7)

1200-3-10-.01 SAMPLING REQUIRED TO ESTABLISH AIR CONTAMINANT EMISSION LEVELS

(1) NEW FACILITIES

(a) There shall be provided for any stack or duct adequate facilities as follows:

1. Sampling ports of a size, number and location as the Technical Secretary may require;

2. Safe access to each port; and

3. Such other sampling and testing facilities as the Technical Secretary may require.

(b) The Technical Secretary may at his discretion require the applicant for an operating permit to conduct or have conducted such tests as are necessary to establish the amount of air contaminants emitted from such equipment or control apparatus. Such tests shall be conducted in a manner approved by the Technical Secretary. The Technical Secretary may require that such tests be conducted in the presence of his representative.

(c) The Technical Secretary may conduct tests of air contaminant emissions from any source. Upon request of the Technical Secretary the person responsible for the source to be tested shall provide, at no expense to the Technical Secretary, reasonable and necessary openings in stacks, vents and ducts, along with safe and easy access thereto including a suitable power source to the point of testing for proper determination of the level of air contaminant emissions.

(2) EXISTING FACILITIES.

(a) Whenever the Technical Secretary has reason to believe that the emission limits of the regulations set forth herein are being violated, he may require the owner to conduct or have conducted

at the owner's expense, tests to determine the emission level of specific air contaminants. The Technical Secretary may require that such tests be conducted in the presence of his representative.

(b) The Technical Secretary may at his discretion require the applicant for an operating permit to conduct or have conducted such tests as are necessary to establish the amount of air contaminants emitted from such equipment or control apparatus. Such tests shall be made at the expense of the applicant and shall be conducted in a manner approved by the Technical Secretary. The Technical Secretary may require that such tests be conducted in the presence of his representative.

(c) The Technical Secretary may conduct tests of air contaminant emissions from any source. Upon request of the Technical Secretary the person responsible for the source to be tested shall provide, at no expense to the Technical Secretary, reasonable and necessary openings in stacks, vents, and ducts along with safe and easy access thereto including a suitable power source to the point of testing for proper determination of the level of air contaminant emissions.

(3) PERIODIC TESTING REQUIRED.

(a) The Technical Secretary may require the owner or operator of an air contaminant source, as a condition of his operating permit, to conduct or have conducted periodic tests to establish the amount of air contaminants emitted. The nature, extent and frequency of such required testing shall be specified in the operating permit. Such tests shall be made at the expense at the owner or operator and shall be conducted in a manner approved by the Technical Secretary. The Technical Secretary shall be supplied with such data as stipulated in the operating permit.

(b) Any person affected by any of these regulations and directed to do so by the Technical Secretary, shall file emission data, as a minimum of one year, with the Technical Secretary on forms available from the Secretary.

Authority: *T.C.A. Section 68-25-105. Administrative History. Original Rule certified June 7, 1974.*

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1200-3-10-.02 MONITORING OF SOURCE EMISSIONS, RECORDING AND REPORTING OF THE SAME ARE REQUIRED

(1) MONITORING OF EMISSIONS

(a) The Technical Secretary may require the owner or operator of any air contaminant source discharging air contaminants, at the expense of the owner or operator, to install, calibrate, operate and maintain such monitoring equipment as the Technical Secretary shall prescribe; sample such emissions in accordance with methods as the Technical Secretary shall prescribe; establish and maintain such records; and make periodic emission reports as required in paragraph (2).

(b) 1. The specific source categories listed below are required to complete the installation and performance testing of the respective equipment and begin maintaining and recording within 18 months of the effective date of each rule.

(i) Fossil fuel-fired steam generators, as defined in Rule 1200-3-16.02, except as provided in the following items, with an annual average capacity factor of greater than 30 percent, as reported to the Federal Power Commission for calendar year 1974, or as otherwise demonstrated to the Technical Secretary by the owner or operator, shall conform with the following monitoring requirements:

(I) A continuous monitoring system for the measurement of opacity shall be installed, calibrated, maintained and operated by the owner or operator of any such steam generator of greater than 250 million BTU per hour heat input except where:

I. gaseous fuel is the only fuel burned, or

II. oil or a mixture of gas and oil are the only fuels burned and the source is able to comply with the applicable particulate matter and opacity regulations without utilization of particulate matter collection equipment, and where the source has never been found, through any administrative or judicial proceedings, to be in violation of any visible emission standard of these regulations.

(II) A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained, and operated on any fossil fuel-fired steam generator of

greater than 250 million BTU per hour heat input which has installed sulfur dioxide pollutant control equipment.

(III) A continuous monitoring system for the measurement of the percent oxygen or carbon dioxide shall be installed, calibrated, operated, and maintained on fossil fuel-fired steam generators where measurements of oxygen or carbon dioxide in the flue gas are required to convert sulfur dioxide continuous emission monitoring data to units of the emission standard.

(ii) Each sulfuric acid plant of greater than 300 tons per day production capacity, the production being expressed as 100 percent acid, shall install, calibrate, maintain and operate a continuous monitoring system for the measurement of sulfur dioxide for each sulfuric acid producing facility with such plant.

(iii) Each catalyst regenerator for fluid bed catalytic cracking units of greater than 20,000 barrels per/day fresh feed capacity shall install, calibrate, maintain and operate a continuous monitoring system for the measurement of opacity.

2. Any source which is subject to a regulation in Chapter 1200-3-16 or which is scheduled for retirement within five years of the effective date of the appropriate designating subparts of part 1. above, provided that adequate evidence and guarantees are provided that clearly shows that the source will cease operation prior to such date, will not be subject to the monitoring requirements of this subparagraph.

(c) 1. All monitoring equipment specified in this paragraph shall meet the performance specifications in the Federal Register, Volume 40, No. 194, October 6, 1975. The equipment shall also be installed, calibrated, operated, and maintained in accordance with the procedures in this reference.

2. (Reserved)

3. A 30-day notice shall be given to the Technical Secretary of the date upon which any sampling or testing will be conducted as required under this subparagraph.

4. The sampling point for continuous emission monitoring shall be representative of the concentration of the parameter being monitored at the source emission point. If the

monitor is located at any position except the stack, the Technical Secretary will require evidence of the representativeness of the location.

(d) 1. Each owner or operator of any air contaminant source directed by the Technical Secretary to monitor and report on specified air contaminants shall develop and submit a detailed monitoring program; and order and install sampling equipment within the following time schedule:

(i) Within 60 days after designation by the Technical Secretary of those air contaminants to be monitored, the owner or operator of the air contaminant source shall submit a detailed monitoring program for approval by the Technical Secretary.

(ii) Within 30 days after the monitoring program has been approved in writing by the Technical Secretary, sampling and monitoring equipment shall be ordered. The order shall specify a delivery date that is as expeditious as possible.

(iii) Within 90 days after delivery of the equipment the owner or operator of the air contaminant source shall place said equipment in effective operation in accordance with its approved monitoring program.

2. Any owner or operator required by subparagraph (b) to monitor must follow the schedule outlined in part 1. above with the exception that the detailed monitoring program must be submitted to the Technical Secretary within one hundred twenty (120) days of the effective date of the appropriate designating subpart of subparagraph(b) and not as specified in subpart (i) of the above part 1.

(e) Monitoring System Malfunction.

Due allowance for failure to monitor shall be made during any period of monitoring system malfunction, provided that the source owner or operator shows, to the satisfaction of the Technical Secretary, that the malfunction was unavoidable and is being repaired as expeditiously as practicable and that a log of all such malfunctions is being kept by the owner or operator, including time malfunction began, when it was detected, what was wrong, what was done to correct the malfunction, and when the malfunction was corrected.

(f) Owners and operators of fossil fuel-fired steam generators that install a continuous sulfur dioxide monitoring system as provided in Rule 1200-3-12-.04 are required to complete the installation and performance testing of the applicable equipment and begin maintaining and recording within eighteen months of the effective dates of this subparagraph unless a revised time frame is agreed to by the Technical Secretary because of the installation of

sulfur dioxide control equipment.

1. The owner or operator shall develop and submit a detailed monitoring program; and order and install measuring equipment for sulfur dioxide and either oxygen or carbon dioxide within the following time schedule:

(i) Within 150 days after the effective date of this subparagraph, the owner or operator shall submit a detailed monitoring program for approval by the Technical Secretary.

(ii) Within 30 days after the monitoring program has been approved in writing by the Technical Secretary, sampling and monitoring equipment shall be ordered. The order shall specify delivery date but as expeditious as possible.

(iii) Within 90 days after delivery of the equipment the owner or operator of the air contaminant source shall place said equipment in effective operation in accordance with the approved monitoring program.

2. The sampling point for the carbon dioxide or oxygen monitor shall be same as that for the sulfur dioxide monitor except as specified for installations using flue gas desulfurization systems.

(g) Owners and/or operators of sources required to install a continuous sulfur dioxide monitoring system as provided in Paragraph 1200-3-12-.04(3) are required to complete the installation and performance testing of the applicable equipment and begin maintaining and recording within twelve months of the effective date of this subparagraph.

(2) RECORDING AND REPORTING

(a) Records and reports as the Technical Secretary shall prescribe on air contaminant emissions, ambient air concentrations or fuel analyses shall be recorded, compiled and submitted in a format prescribed by the Technical Secretary.

(b) 1. Owners or operators of facilities subject to paragraph (1)(b) of this rule, are required to submit a written report of excess emissions for each calendar quarter and the nature and cause of the excess emissions, if known. The requirements of this subparagraph must be followed by all owners and operators when making these required reports.

2. For opacity measurements the summary shall consist of the magnitude in actual percent opacity of all one minute averages of opacity greater than the opacity standard in the applicable rule in Chapter 1200-3-5 for each hour of operation and the facility minus the five- minute exempt period. Average values may be obtained by integration over the averaging period or by arithmetically averaging a minimum of four equally spaced, instantaneous opacity measurements per minute. The averaging period used for data reporting is one minute for opacity measurements and one hour for measurements of sulfur dioxide; provided, however, that for opacity measurements for fuel burning installations with fuel burning equipment of input capacity greater than 600 x 10 6 Btu per hour, the summary shall consist of the magnitude in actual percent opacity of all six-minute averages of opacity greater than the opacity standard in the applicable plan for each hour of operation of the facility minus one six-minute exempt period per hour of no more than 40 percent opacity. Averaging values may be obtained by integration over the averaging period or by arithmetically averaging a minimum of twenty-four equally spaced, instantaneous opacity measurements per six-minute period. The averaging period for data reporting is six minutes for opacity measurements and twenty-four hours for measurements of sulfur dioxide for fuel burning installations with fuel burning equipment of input capacity greater than 600 x 10 6 BTU per hour. The averaging period used for data reporting from all other sources is one minute for opacity measurements and one hour for measurements of sulfur dioxide except as denoted in other Chapters of these regulations.

3. For gaseous measurements the summary shall consist of emission averages, in the units of the applicable standard, for each averaging period during which the applicable standard was exceeded.

4. The date and time identifying each period during which the continuous monitoring system was inoperative, except for zero and span checks, and the nature of system repairs or adjustments shall be reported. The Technical Secretary may require proof of continuous monitoring system performance whenever system repairs or adjustments have been made.

5. When no excess emissions have occurred and the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be included in the report.

6. Maintain a file of all information reported in the quarterly summaries, and all other data collected either by the continuous monitoring system or as necessary to convert monitoring data to the units of the applicable standard for a minimum of two years from the data of collection of such data or submission of such summaries.

7. Owners or operators of air contaminant sources subject to subparagraph (1)-(b) of this Rule are required to use the procedures outlined in the October 6, 1975, Federal Register, Vol. 40, No. 194 (Appendix P, Paragraph 5.0), Page 46249 for converting monitoring data to units of the standard where necessary. These procedures are essentially the same as those in subparagraphs 1200-3-16-.02 (6)(e) and (f). Where applicable, the procedures outlined in the October 12, 1976, Federal Register, Volume 41, No. 198, pages 44838-44839 may be used.

(c) Owners or operators of facilities subject to rule 1200-3-12-.04 are required to submit a written report on emissions for each calendar quarter and the nature and cause of excess emissions, if known. The Technical Secretary will specify details of the reports required after the monitor has been performance tested. General procedures are outlined below.

1. (i) The source owner or operator shall report all 3-hour averages or 24-hour averages in units of the applicable emission standard. The 3-hour and 24-hour values shall be computed by taking the average of three contiguous or 24 contiguous one-hour values of sulfur dioxide emissions. The one-hour average values may be obtained by integration over the one-hour period or may be computed from four or more data points equally spaced over each one-hour period. Data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages.

(ii) In the event that the fuel burning installation contains discharge points utilizing continuous sulfur dioxide monitoring systems and discharge points which do not require monitoring systems (or where an individual monitoring system is inoperative), and the data from the monitoring system indicates a violation, an administrative hearing may be conducted by the Technical Secretary to determine the compliance status of the entire fuel burning installation.

(iii) To determine compliance where multiple units of fuel burning equipment are involved, an average weighted on the basis of heat input shall be used.

2. The owners and operators of these sources must follow the same procedures as specified in parts 4, 6, and 7, of subparagraph 1200-3-10-.02 (2)(b). Alternative methods for converting sulfur dioxide monitoring instrument data to units of the applicable emission standard may be approved by the Technical Secretary when demonstrated to him to yield equivalent results.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended effective February 9, 1977. Amended April 12, 1978. Amended June 21, 1979. Amended December 14, 1981. Amended effective March 13, 1993.

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S1200-3-10-.03 (DELETED) Effective March 21, 1979.

THIS IS THE FEDERALLY APPROVED REGULATION AS OF JUNE 15, 1989

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Section 16-86 Methods of Sampling and Analysis

For the purpose of enforcement of the methods of sampling and analysis, Chapter 1200-3-12 of the Tennessee Air Pollution Control Regulations is hereby adopted as a portion of this Code by reference such regulations and all additions, deletions, changes and amendments as may subsequently be made shall become a part of this Code Ordinances and shall have the same effect as if set our in full herein.

(Ord. No. 1265, § 1, 4-25-72; Ord. No. 2921, § 1(3), 10-9-79; Code 1967, § 3-8)

CHAPTER 1200-3-12
METHODS OF SAMPLING AND ANALYSIS

S1200-3-12-.01 GENERAL

(1) It is explicitly implied that in addition to and consistent with specific methods of sampling and analysis described herein, that samples will be taken in such number, duration and location as to be statistically significant and representative of the condition which the sample(s) purport to evaluate.

(2) Where specific materials, equipment or procedures are specified, it shall be permissible to use other materials, equipment or procedures where it has been reliably demonstrated that their use produces results comparable to that which would have been obtained by use of the specified materials, equipment or procedures.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended in its entirety February 9, 1977.

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S1200-3-12-.02 PROCEDURES FOR AMBIENT SAMPLING AND ANALYSIS

(1) Procedures for sulfur dioxide, suspended particulate, photochemical oxidants, carbon monoxide, and non-methane hydrocarbons may be found in Federal Register, Volume 36, Number 84, dated April 30, 1971. The reference method for the sampling and the analytical procedures for nitrogen dioxide may be found in the Federal Register, Volume 41, Number 232, dated December 1, 1976. The sampling and analytical procedures for lead may be found in the Federal Register, Volume 43, Number 194, dated October 5, 1978. The reference method for sampling and analytical procedures for ozone may be found in the Federal Register, Volume 44, Number 28, Part V, dated February 8, 1979. The procedure for sampling and analyzing atmospheric fluorides shall conform with the method adopted by the American Society for Testing Materials in 1958 and bearing ASTM designation D1606- 58T.

(2) The Technical Secretary may approve the use of equivalent or alternative sampling procedures.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended in its entirety February 9, 1977. Amended in its entirety June 21, 1979. Amended in its entirety January 18, 1980.

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S1200-3-12-.03 SOURCE SAMPLING AND ANALYSIS

The methods set forth in this section shall be applicable for determining compliance with emission standards.

(a) SAMPLE AND VELOCITY TRAVERSES. - Sample and velocity traverses shall be determined by Method 1 outlined in the Federal Register, Volume 42, Number 160, August 18, 1977, as amended in the Federal Register, Volume 43, Number 57, March 23, 1978.

(b) STACK GAS VELOCITY DETERMINATION. - Stack gas velocity shall be determined by Method 2 outlined in the Federal Register, Volume 42, Number 160, August 18, 1977, as amended in the Federal Register, Volume 43, Number 57, March 23, 1978, except in such instances where a Type S pitot tube is not applicable.

(c) GAS ANALYSIS. - Gas analysis for carbon dioxide, oxygen, excess air, and dry molecular weight shall be determined by Method 3 outlined in the Federal Register, Volume 42, Number 160, August 18, 1877, as amended in the Federal Register, Volume 43, Number 57, March 23, 1978, or another type of test procedure that is direct indicating and/or recording approved by the Technical Secretary.

(d) DETERMINATION OF MOISTURE CONTENT I STACK GASES. - Moisture content shall be determined by Method 4 outlined in the Federal Register, Volume 42, Number 60, August 18, 1977, as amended in the Federal Register, Volume 43, Number 57, March 23, 1978, or other technique approved by the Technical Secretary.

(e) DETERMINATION OF PARTICULATE EMISSIONS. - The basic design of the sampling train is left to the individual, if certain criteria are observed to assure high collection efficiency and standard analysis of the collected particulates.

1. DESCRIPTION OF SAMPLING APPARATUS.

(i) This apparatus shall include interchangeable nozzles or probes, of various diameters, a filter effective for the removal of particulates exceeding 0.3 micron diameter of solid or liquid, a suitable number of impingers to reduce condensible vapors to liquid or solid particulate matter, and appropriate connecting tubing at temperature above the aqueous dewpoint of the gases. All materials of construction shall be resistant to corrosive elements in the flue gases, e.g., SO_3, NO_x, and elevated temperatures.

(ii) This filter assembly shall be maintained above the aqueous dewpoint of the flue gases throughout the sampling operation. To accomplish this, the filter assemble may be disposed inside the gas flue to be completely bathed by the hot gas stream; or it may be disposed outside the gas stream, provided the following precautions are taken.

(I) If the filter is disposed outside the hot gas flue, a temperature indicator, e.g., thermocouple, shall be provided at the sample filter gas exit to monitor the filter temperature above the aqueous dewpoint of the flue gases at all times. Auxiliary heating elements for tubing and filter holder shall be provided to maintain specified temperatures when required.

(II) Deposits in the tube connecting the probe to the exterior filter shall be quantitatively removed by washing with a suitable liquid and by brushing, the weight of the solids recovered there from being added to the weight found in the filter.

(iii) Provisions shall be included for cooling the gas stream to standard conditions (70°F) to reduce condensible vapors to liquids or solid particulate matter, and for cooling the condensed particles, including water that may be formed by condensation of water vapor in the sample. This shall be accomplished by passage through bubblers provided with an orifice submerged in water through which the gas stream passes at a velocity of approximately 100 meters per second. The bubblers shall be immersed in an ice bath to minimize evaporation. A trap of suitable shape and dimensions for the collection of overflow or overspray shall be provided downstream from the bubblers.

(iv) An indicating flowmeter shall be provided and preferably located in the train at a point preceding the source of suction, preceded by a trap to prevent condensed water from entering the flowmeter; and a vacuum gauge adjacent to the flowmeter to indicate the absolute pressure of the gas passing through the orifice meter.

(v) Operation charges comprising either graphs or tables shall be prepared and be available as a part of apparatus, to indicate proper sampling rates as a function of gas density in the stack and at the flowmeter.

2. ANALYTICAL RESULTS.- Analytical results shall be accomplished as outlined in the appendix of the Federal Register, Volume 42, Number 160, August 18, 1977, as amended in the Federal Register, Volume 43, Number 57, March 23, 1978, for the filter catch and washings up to the filter. Inclusion or exclusion of material collected in the impinger train as "particulate matter" and method of analysis will be determined on an individual air contaminant source basis.

3. EQUIVALENT METHODS.- Those procedures demonstrated to yield equivalent results and approved by the Technical Secretary may be used for sampling and analysis of particulate matter. Stack sampling methods promulgated by the Environmental Protection

Agency for specified air contaminant sources are considered to be equivalent methods and therefore acceptable.

(f) MEASUREMENT OF SULFUR DIOXIDE IN STACK GASES.

1. The approved procedure for measuring Sulfur Dioxide in stack gases is the method contained in Chapter 3 of the Tennessee Department of Public Health's January, 1975 edition of the Source Sampling Manual as amended on August 11, 1975.

2. EQUIVALENT METHODS. Many new and improved methods of continuous gaseous monitoring in stacks are now in use. Any method of stack sampling approved by the Technical Secretary may be used in accordance with good professional practice. Stack sampling methods promulgated by the Environmental Protection Agency for specified air contaminant sources are considered to be equivalent methods and therefore acceptable.

(g) DETERMINATION OF SULFURIC ACID (H_2SO_4) IN STACK GASES.- Sulfuric acid in stack gases shall be determined by Method 8 outlined in the Federal Register, Volume 42, Number 160, August 18, 1977, as amended in the Federal Register, volume 43, Number 57, March 23, 1978.

(h) DETERMINATION OF NITROGEN OXIDES IN STACK GASES. - Nitrogen oxides in stack gases shall be determined by Method 7 outlined in the Federal Register, Volume 42, Number 160, August 18, 1977, as amended in the Federal Register, Volume 43, Number 57, March 23, 1978.

(i) DETERMINATION OF THE EFFICIENCY OF FLUORIDE CONTROL DEVICES FOR POTROOMS OR PRIMARY ALUMINUM REDUCTION PLANTS, as follows:

1. The determination shall consist of three samples runs, each of which shall consist of a simultaneous inlet and outlet sample upon the control device or an equivalent test procedure approved by the Technical Secretary. Each sample shall be eight (8) hours duration and shall contain a minimum of two hundred and forty (240) dry standard cubic feet of air.

2. Other details as to be collection of the samples and their analysis shall be accomplished by either Method 13A or 13B or approved equivalent as outlined in the Federal Register, Volume 40, Number 152, August 6, 1975, and as amended in the Federal Register, Volume 41, Number 230, November 29, 1976.

3. The average efficiency of each fluoride control device shall be calculated as the average of the three control device collection efficiencies as determined by the three sample runs.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended in its entirety February 9, 1977. Amended April 12, 1978. Amended November 16, 1979. Amended January 22, 1982.

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S1200-3-12-.04 MONITORING REQUIRED FOR DETERMINING COMPLIANCE OF CERTAIN LARGE SOURCES.

(1) For a fossil fuel-fired steam generator using solid fuel subject to subparagraph 1200-3-14-.02-(1)-(e), the source owner or operator may choose the method of measuring sulfur dioxide in the stack gases depending upon the type of fuel burned. No later than 30 days after the effective date of this regulation, the source owner or operator must inform the Technical Secretary by certified mail of the method to be utilized. If no choice is made by that date the owner or operator must monitor using the methods as outlined in subparagraph (2)(b). of this rule.

(2) The available sulfur dioxide measurement methods are as follows:

(a) If low sulfur coal is the only solid fuel burned, fuel analysis procedures and methods of calculations as prescribed by the Technical Secretary may be used. The purpose of this rule, low sulfur coal is defined as coal containing less than 1.00% sulfur by weight on a dry basis. Determination will be based on records of fuel burned during calendar year 1974. The procedures used to determine if the sulfur content of the fuel meet this 1.00% limitation during this time period will be subject to approval by the Technical Secretary. If the source owner or operator elects this method, the Technical Secretary will specify the data to be submitted to verify that the sulfur content is less than the 1.00% limitation. For facilities that elect to use fuel analysis procedures, fuels are not required to be sampled or analyzed for preparation of reports of compliance until the Technical Secretary specifies the procedures and requirements. If the 1.00% limit is ever exceeded than the method specified in subparagraph (b) of this paragraph must be used for monitoring.

(b) Measurement of sulfur dioxide in the stack gases may be accomplished by the installation and operation of a continuous in-stack sulfur dioxide monitoring instrument. The type of monitor and its location will be subject to approval by the Technical Secretary. The in-stack monitoring instrument will be subject to the provisions of subparagraph 1200-3-10-.02(1)(e) of these regulations.

(3) For sulfuric acid plants and liquid sulfur dioxide plants located in a Class I county and existing on January 1, 1979, the measurement of sulfur dioxide in the stack gases must be accomplished by the installation and operation of a continuous in-stack sulfur dioxide monitor. The type of monitor and its location will be subject to approval by the Technical Secretary. The in-stack monitoring instrument will be subject to the provisions of paragraph 1200-3-10-.02-(1) of these regulations.

(4) For recovery furnaces and lime kilns located at draft mills the measurement of total reduced sulfur compounds in stack gases must be

accomplished by the installation and operation of a continuous in-stack total reduced sulfur (TRS) monitor. Such TRS monitor shall be accomplished by a continuous monitoring system for the measurement of the percent oxygen. The type of monitor and its location will be subject to approval by the Technical Secretary. The instack monitoring instrument will be subject to the provisions of paragraph 1200-3-10-.02(1) of these regulations.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified June 7, 1974. Amended June 21, 1979. Amended October 13, 1981. Amended December 13, 1982.

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Section 16-87 Limits on Emissions due to Malfunctions, Startups & Shutdowns

For the purpose of enforcement of the malfunctions, startups and shutdowns, Chapter 1200-3-20 of the Tennessee Air Pollution Regulations is hereby adopted as portion of this Code by reference. Such regulations and all such additions, deletions, changes and amendments as may subsequently be made shall become a part of this Code of Ordinances and shall have the same effect as if set out in full herein.

(Ord. No. 1265, § 1, 4-25-72; Ord. No. 2021, § 1(4), 10-9-79; Code 1967, § 3-9

CHAPTER 1200-3-20
LIMITS ON EMISSIONS DUE TO MALFUNCTIONS, START-UPS, AND SHUTDOWNS

S1200-3-20-.01 PURPOSE

(1) The purpose of this chapter is to place reasonable limits on the amount of emissions an air contaminant source (incinerator, fuel burning installation, wood fire boiler or process emission source) can emit due to a malfunction or during startup or shutdown of said source. Without such limits in many parts of the state and specifically in nonattainment areas, air quality standards will not be met and public health and welfare will be endangered.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule filed February 5, 1979, effective March 21, 1979.

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S1200-3-20-.02 REASONABLE MEASURES REQUIRED

(1) Air contaminant sources must take all reasonable measures to keep emissions to a minimum during startups, shutdowns. These measures may include installation and use of alternate control systems, changes in operating methods or procedures, cessation of operation until the process equipment and/or air pollution control equipment is repaired, maintaining sufficient spare parts, use of overtime labor, use of outside consultants and contractors, and other appropriate means. For sources identified in Chapter 1200-3-19, or by a permit condition or an order issued by the Board or by the Technical Secretary as being in or significantly affecting a nonattainment area, failures that are caused by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions, and shall be considered in violation of the emission standard exceeded and this rule.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified March 21, 1979.

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S1200-3-20-.03 NOTICE REQUIRED WHEN MALFUNCTION OCCURS.

(1) When any emission source, air pollution control equipment, or related facility breaks down in such a manner as to cause the emission of air contaminants in excess of the applicable emission standards contained in these regulations, or of sufficient duration to cause damage to property or public health, the person responsible for such equipment shall promptly notify the Technical Secretary of such failure or breakdown and provide a statement giving all pertinent facts, including the estimated duration of the breakdown. Prompt notification will be within 24 hours of the malfunction and shall be provided by telephone to the Division's Nashville office. Telephone notification shall be followed up within 72 hours by certified mail. The Technical Secretary shall be notified when the condition causing the failure or breakdown has been corrected and the standards will not and do not occur over more than a 24- hour period (or will not reoccur over more than a 24-hour period) and no damage to property and or public health is anticipated, notification is not required. Any malfunction that creates an imminent hazard to health must be reported by telephone immediately to the Division's Nashville office and to the State Civil Defense.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified March 21, 1979.

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S1200-3-20-.04 LOGS AND REPORTS

(1) (a) A log of all malfunctions, startups, and shutdowns resulting in emissions in excess of the standards in Division 1200-3 must be kept at the plant. This log must record at least the following:

1. Stack or emission point involved.

2. Time malfunction, startup, or shutdown and/or when first noticed.

3. Type of malfunction and/or reason for shutdown.

4. Time startup or shutdown was complete or time the air contaminant source returned to normal operation.

5. The company employee making entry on the log must sign date and indicate the time of each log entry.

(b) The information under item (a) 1. and 2. of this paragraph must be entered into the log by the end of the shift during which the malfunction or startup began.

(c) All information shall be entered in the log no later than twenty-four (24) hours after the startup or shutdown is complete, or the malfunction has ceased or has been corrected.

(d) Any later discovered corrections can be added in the log as footnotes with the reason given for the change.

(2) The owner or operator of all sources located in non-attainment areas or having a significant impact on air quality in a nonattainment area (for the pollutant designated under Chapter 1200-3-19 or by the Technical Secretary) must submit a report to the Technical Secretary within 30 days after the end of each calendar quarter listing the times at which malfunctions, startups and/or shutdowns, which resulted in emissions discharged during such times. This report should also include total emissions during the quarter and be reported in a format specified by the Technical Secretary. If these emissions are required to be reported under rule 1200-3-10-.02 or under rules of Chapter 1200-3-16 then the report required by this paragraph is waived.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified March 21, 1979.

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S1200-3-20-.05 COPIES OF LOG REQUIRED

(1) The Technical Secretary may require the owner or operator of any air contaminant source to submit a copy of the upset log required under rule .04 of this chapter to him ten (10) days after the log request is received. The Technical Secretary can require submission of copies of the entire log.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified March 21, 1979.

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S1200-3-20-.06 SCHEDULED MAINTENANCE

(1) General.

(a) In the case of shutdown of air pollution control equipment for necessary scheduled maintenance, the intent to shut down such equipment shall be reported to the Technical Secretary at least twenty-four hours prior to the planned shutdown where such equipment will result in the discharge of emissions in excess of the standards in this Division 1200-3. such prior notice shall include, but is not limited to the following:

1. Identification of the specific source (permit unit) to be taken out of service, as well as its location and permit number.

2. The length of time that the air pollution control equipment will be out of service.

3. The nature and quantity of emissions of air contaminants likely to occur during the shutdown period.

4. Measures such as the use of off-shift labor and equipment that will be taken to minimize the emissions during the shutdown period.

(2) Exceptions to Shutdown Reporting Requirements

(b) When shutdowns referred to in paragraph .06, (a) of this rule are on a routine schedule, the report to the Technical Secretary may be furnished on an annual basis and shall list the dates and times of the routine scheduled shutdowns during the upcoming year, with the other information required in paragraph (a).

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified March 21, 1979.

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S1200-3-20-.07 REPORT REQUIRED UPON THE ISSUANCE OF NOTICE OF VIOLATION

(1) In the case of excess emissions from any source (permit unit) subject to the rules and regulations a notice of violation shall automatically be issued except for visible emissions levels included as a permit condition under Chapter 1200-3-5-.02 (1). The owner or operator of the violating source shall submit within twenty (20) days after receipt of the notice of violation the following data to assist the Technical Secretary in deciding whether to excuse or proceed upon the violation. The Technical Secretary may extend this time period for another 20 days upon receipt in the Nashville office of a written request received during the initial 20 day period.

(2) Each report shall include, as a minimum:

(a) The identity of the stack and/or other emission point where the excess emission(s) occurred:

(b) The magnitude of the excess emissions expressed in pounds per hour and the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;

(c) The time and duration of the emissions;

(d) The nature and cause of such emissions;

(e) Steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunction;

(f) The steps taken to limit the excess emissions of the occurrence reported, and

(g) Documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions if this is the case.

(3) Failure to submit this report within the twenty (20) day period specified in paragraph (1) shall preclude the admissibility of the report data as an excuse for malfunctions, startups, and shutdowns in causing the excessive emissions.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule filed February 5, 1979, effective March 21, 1979. Amendment filed October 28, 1981; effective December 14, 1981.

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S1200-3-20-.08 SPECIAL REPORTS REQUIRED

The Technical Secretary may require any air contaminant source to submit a report within thirty (30) days after the end of each calendar quarter in a format he specifies containing as a minimum the following information:

(a) The dates on which malfunctions, startups, and shutdowns resulted in emissions greater than those allowed by the emission standards in this Division 1200-3.

(b) The estimated amount of air contaminants emitted in excess of the emission standards in units of pounds of air contaminant per hour and pounds of air contaminant per day.

(c) Other emission characteristics such as stack exit temperature, stack height and diameter, stack exit velocities, and other similar information.

(d) Information needed to evaluate the possibility of instituting measures to eliminate or reduce the number of malfunctions and/or the amount of emissions from malfunctions, startups, and shut downs.

(e) Information to determine if the excess emissions truly result from a malfunction.

(f) Information to evaluate the impact of the emissions on the surrounding area.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified March 21, 1979.

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S1200-3-20-.10 ADDITIONAL SOURCES COVERED -

The Technical Secretary may order the owner or operator of other air contaminant sources to report in accordance with the requirements in this chapter for those sources in nonattainment areas significantly impacting on nonattainment areas when he has reason to believe that an ambient air quality standards may be violated in the general vicinity where the source is located. There is sufficient reason for purposes of this rule to believe a standard may be violated if a value not to be exceeded more than once in a year is equaled or exceeded once and/or if individual readings have a mean excess of ninety per cent of a standard set for any given averaging interval regardless of the acceptability of the monitoring site, calibration of the monitor, and other similar mattes. Even if there are no monitors in an area, if mathematical modeling and/or physical damage in the area indicate the standards may be violated, he may order such reporting.

Authority: T.C.A. Section 53-3412. Administrative History. Original Rule certified November 16, 1979.

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Section 16-88 Nuisance Abatement

When dust, fumes, gases, mist odorous matte, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any regulation, the health officer may order that the building or equipment in which processing, handling and storage are done be tightly closed and ventilated in such a way that all air and gases and air of gas-borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air.

(Ord. No. 1265, § 1 4-25-72; Code 1967, § 3-19; Ord. No. 3230, § 1(3) 8-3-82)

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Section 16-89 Fugitive Dust

No person shall cause, suffer, allow, or permit 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 include, but not be limited to, the following:

(1) Use, where possible, water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;

(2) Application of asphalt, oil, water, or suitable chemicals on material stockpiles, and other surfaces which can create airborne dusts;

(3) Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.

(4) Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;

(5) Conduct of agricultural practices such as tilling of land, application of fertilizers, etc. in such manner as to not create a nuisance to others residing in the area.

(6) The paving of roadways and their maintenance in a clean condition.

(7) The prompt removal of earth or other material from paved street which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water.

(Ord. No. 1265, §1, 4-25-72)

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Section 16-90 General Alternate Emission Standard

Adopted by Reference Pursuant to T.C.A. 68-25-115.

CHAPTER 1200-3-21
GENERAL ALTERNATE EMISSION STANDARDS

S1200-3-21-.01 GENERAL ALTERNATE EMISSION STANDARD

(1) Air contaminant sources with a certificate of alternate control shall not emit particulate matter, sulfur dioxide, carbon monoxide and/or nitrogen dioxide in excess of the respective limits on said certificate. Air contaminant sources applying for a certificate of alternate control shall not be considered a modification under Chapter 1200-3-2-.01 (aa) provided the rated capacity in terms of heat input, charging rate, or process weight does not change for any fuel burning installation, incinerator, or process emission source respectively.

(2) The owner or operator of any air contaminant source that discharges particulate matter, sulfur dioxide, carbon monoxide and/or nitrogen dioxide regulated by other rules in these regulations can apply to the Technical Secretary for a Certificate of Alternate Control for an air contaminant source or a portion of an air contaminant source and he must grant the request if the following conditions are met:

(a) The air contaminant source or portion thereof is reducing or will be after a specific date taking actions to reduce emissions of particulate matter, sulfur dioxide, carbon monoxide and/or nitrogen dioxide at least as much as required under other rules of these regulations even though affected specific source(s) (i.e. permit unit) at the air contaminant source may not be meeting the mass emission standard(s) specified in the other rules of these regulations. The total final emission limits of each given pollutant must be equivalent or less for each pollutant applied in pounds per hour and tons per year for the entire air contaminant source under the conditions of the certificate than under the general rules. Credit cannot be given for reductions of fugitive emissions or other points not subject to regular stack tests. For source(s) located in or significantly impacting a specified nonattainment area the alternate emission standard must not exceed the total final emission limits allowed under RACT emission standards for the nonattainment pollutant. The specific nonattainment area plan must be in effect prior to the implementation of the alternate emission standard.

(b) If a specified future date is involved, this date must be as expeditious as is practical and be specified in a schedule of compliance as a condition on the certificate. In no case shall this date be beyond a date that would cause interference with the attainment of the Reasonable Further Progress line specified for a specific nonattainment area.

(c) The air contaminant source shall verify through modeling techniques approved by the Technical Secretary that this alternate emission standard will yield equivalent or improved air quality for the pollutant involved. Air quality need not improve or stay the same at every location affected by the alternate emission standard, but on balance, the air quality of the affected area must not be adversely affected. This will be by modeling all included emission points at the proposed alternative levels and at the allowable emission level for sources subject to emissions standards in Chapter 1200-3-19 for the pollutant involved. The lower of either the allowable emission under other Chapters in Division 1200-3 or actual emissions shall be used in all other modeling. In addition, the source shall demonstrate that the use of the alternate emission standard will not interfere with the attainment or maintenance of any ambient air quality standard nor violate any applicable ambient air quality standard nor violate any applicable ambient increment.

(d) The pollutants involved in the alternate emission standard must be comparable emissions and no interpollutant trades are allowed. Air contaminant sources subject to the standards in Chapter 1200-3-11 cannot apply the alternate emission standard to hazardous air contaminants. Air contaminant sources subject to emission standards in Chapter 1200-3-16, or Rule 1200-3-9-.01(4) or Rule 1200-3-9- .01(5)(b)2. and 3. cannot use an alternate emission standard, except for reductions in actual emissions below the level required in these rules. Such reductions may be used as credit for old existing sources.

(e) Each emission point identified in the alternate control standard shall have a specific emission limit in the applicable units of the emission standard. Compliance with the applicable emission limit shall be proven by a source test conducted in the presence of the Technical Secretary's representative for all points whose actual emissions are estimated to exceed 10 tons per year or whose allowable emissions are in excess of 5 pounds per hour.

(f) A fee of $500.00 for each pollutant for each emission point to be covered by a certificate has been paid to the Department at the time the application is made to cover the cost of review of the request for the certificate of alternate control.

(g) Air contaminant sources utilizing the alternate emission standards: (1) must be in compliance with all applicable emissions limits; (2) if not in compliance, must be meeting the requirements in an approved compliance schedule; or (3) if not in compliance, must be subject to a court order which includes a compliance schedule and allows for court order which includes a compliance schedule and allows for timely modification of the decree without delaying the final compliance date. Under no circumstances can the alternate emission standard delay or defer a specified compliance date nor shall the certificate insulate the source from any penalties or sanctions for noncompliance or affect the source's liability to comply with any regulations,

order or compliance plan.

(3) The alternate emission standards and certificate conditions shall be considered as an addition to the existing standards, and must be subjected to a public hearing and incorporated as a revision to the State Implementation Plan. The owner or operator requesting this alternate emission control emission standard shall be responsible for all costs associated with publishing the required legal notices.

(4) Good engineering practice stack heights shall be utilized on all stack changes associated with the alternate control standards.

(5) The owner or operator of the facility must:

(a) Post or file on the operating premises a copy of the certificate of alternative control.

(b) Keep all pollution control equipment in good operating condition and utilize said equipment at all times.

(6) The certificate of alternate control will be revoked after administrative hearing by the Technical Secretary or the Board if it is found that any of the requirements of paragraph (2) have been violated and/or if any of the requirements of paragraph (5) have been frequently and flagrantly violated after the certificate was issued and/or if violation of the requirements of paragraph (4) and/or conditions placed on their certificate under paragraph (9) are not corrected promptly on written notice.

(7) The certificate of alternate control does not relieve the owner or operator of the duty of meeting all emission requirements in other rules for sources commenced after the effective date of the rule.

(8) Upon revocation of the certificate of alternative control the sources at the facility must comply with other rules in these regulations that would have been applicable had the certificate not been issued.

(9) The Technical Secretary shall specify the new emission limits for each emission point as conditions on the certificate and if other than reference test methods are to be used to determine compliance, these should be specified on the certificate or the operating permit. Other conditions needed to insure and verify compliance may be placed on the certificate as conditions.

Authority: TCA 53-3412. Administrative History. Original rule certified September 8, 1980.

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Section 16-91 Lead Emission Standards

Adopted by Reference Pursuant to T.C.A. 68-25-115.

CHAPTER 1200-3-22
LEAD EMISSIONS STANDARDS

S1200-3-22-.01 DEFINITIONS

Unless specifically defined in this Chapter, the definitions from Chapter 1200-3-2 will apply:

(1) **"Significant Source of lead"** means:

(a) Any one permit unit, or combination of permit units as determined by the Technical Secretary, at any of the following stationary sources that emit lead or lead compounds (measured as elemental lead) of at least 1.25 tons per calendar quarter or at least five (5) tons per year whichever is the more restrictive: primary lead smelters, secondary lead smelters, primary copper smelters, lead gasoline additive plants, lead-acid storage battery manufacturing plants that produce 2000 or more batteries per day.

(b) Not withstanding the source sizes specified in subparagraph (a) of this paragraph, any other stationary source that emits 25 or more tons per year of lead or lead compounds measured as elemental lead.

(2) **"Source"** means any structure, building, facility, equipment, installation, or operation (or combination thereof) which is located on one or more contiguous or adjacent properties and which is owned or operated by the same person (or by persons under common control). If a portion(s) of a source is rented to or leased to another person(s) for the purpose of a totally separate business venture, the Technical Secretary may designate that (those) portion(s) as a separate source(s).

(3) **"Permit unit"** means any part of a source required to obtain an operating permit as determined by the Technical Secretary.

(4) **"Lead point source"** means:

(a) Any source the actual emissions of which are in excess of 5.0 tons per year of lead or lead compounds measured as elemental lead.

(b) Any physical change that would occur at a source not otherwise qualifying under subparagraph (4)(a) as a lead point source if the change would constitute a lead point source by itself.

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S1200-3-22-.02 GENERAL LEAD EMISSION STANDARDS

(1) No person shall cause, suffer, allow, or permit lead emissions in excess of the standards in this Chapter.

(2) Upon mutual agreement of the owner or operator of a significant source of lead and the Technical Secretary, an emission limit more restrictive than that otherwise specified in this Chapter may be established. Also, upon mutual agreement of the owner or operator of any source and the Technical Secretary, operating hours, process flow rates, or any other operating parameters may be established as a binding limit(s). The mutually acceptable limits shall be stated as a special condition(s) for any permit or order concerning the source. Violation of any accepted special limitations is grounds for revocation of the issued permit and/or other enforcement measures provided for in the Tennessee Air Quality Act.

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S1200-3-22-.03 SPECIFIC EMISSION STANDARDS FOR EXISTING SOURCES OF LEAD

(1) For an existing source that is a significant source of lead, the Technical Secretary shall specify on the operating permit(s) as permit conditions the emission level that is reasonably available control technology (RACT).

(2) The possession of a valid permit shall not protect the source from enforcement actions if permit conditions are not met.

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S1200-3-22-.04 STANDARDS FOR NEW AND MODIFIED SOURCES OF LEAD

(1) A new source the actual emissions of which are in excess of 5.0 tons per year of lead or lead compounds measured as elemental lead shall utilize best available control technology (BACT).

(2) Any modification of a lead point source which results in an increase in excess of 0.6 tons per year of lead or lead compounds measured as elemental lead shall utilize BACT.

(3) The owner or operator of a proposed new or modified source of lead shall perform a source impact analysis to demonstrate that the allowable emission increases from the proposed source or modification would not cause or contribute to a violation of the lead ambient air quality standard in the source impact area including background concentrations. Source impact analysis shall be based on the applicable air quality models and data bases acceptable to the Technical Secretary.

(4) Additional requirements for certain new or modified sources of lead are given in Paragraph 1200-3-9-.01(4), Prevention of Significant Deterioration and in Chapter 1200-3-16, New Source Performance Standards, of these regulations.

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S1200-3-22-.05 SOURCE SAMPLING AND ANALYSIS

Source sampling and analysis for lead shall be conducted in the manner prescribed in Subparagraph 1200-3-12-.03-(1)-(j) of these regulations.

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S1200-3-22-.06 LEAD AMBIENT MONITORING REQUIREMENTS

The Technical Secretary may require ambient lead monitoring in the vicinity of a source regulated by this Chapter 1200-3-22. This monitoring shall be done in accordance with the requirements of Rule 1200-3-12 of these regulations.

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Sections 16-92 to 16-105 Reserved