

Virginia Regulatory Town Hall

Proposed Regulation Agency Background Document

Agency Name:	State Air Pollution Control Board
Regulation Title:	Regulations for the Control and Abatement of Air Pollution
Primary Action:	Article 46 (9 VAC 5-40-6550 et seq.) of 9 VAC 5 Chapter 40
Secondary Action(s):	None.
Action Title:	Small Municipal Waste Combustors (Rev. K00)
Date:	August 30, 2001

This information is required pursuant to the Administrative Process Act (§ 9-6.14:9.1 *et seq.* of the *Code of Virginia*), Executive Order Twenty-Five (98), and the *Virginia Register Form, Style and Procedure Manual*. Please refer to these sources for more information and other materials required to be submitted in the regulatory review package.

Summary *

Please provide a brief summary of the proposed new regulation, amendments to an existing regulation, or the regulation being repealed. There is no need to state each provision or amendment or restate the purpose and intent of the regulation.

The proposed regulation applies to small municipal waste combustors (SMWCs), and includes emission limits for particulate matter, carbon monoxide, dioxins/furans, hydrogen chloride, sulfur dioxide, nitrogen oxides, lead, cadmium, and mercury. Special SMWC operator training and qualification requirements are included in order to assure proper facility operation and compliance with the emissions limitations. Compliance, emissions testing, and monitoring requirements are delineated, as well as recordkeeping and reporting of such test results. Finally, specific compliance schedules are provided.

Basis *

Please identify the section number and provide a brief statement relating the content of the statutory authority to the specific regulation proposed. Please state that the Office of the Attorney General has certified that the agency has the statutory authority to promulgate the proposed regulation and that it comports with applicable state and/or federal law.

Section 10.1-1308 of the Virginia Air Pollution Control Law (Title 10.1, Chapter 13 of the Code of Virginia) authorizes the State Air Pollution Control Board to promulgate regulations abating, controlling and prohibiting air pollution in order to protect public health and welfare. Written assurance from the Office of the Attorney General that (i) the State Air Pollution Control Board possesses the statutory authority to promulgate the proposed regulation amendments and that (ii) the proposed regulation amendments comport with the applicable state and/or federal law is available upon request.

Purpose *

Please provide a statement explaining the rationale or justification of the proposed regulation as it relates to the health, safety or welfare of citizens.

The purpose of the regulation is to establish emission standards that will require the owners of small municipal waste combustors (SMWCs) to limit emissions of organics (such as dioxins/furans), metals (such as particulate matter), and acid gases (such as sulfur dioxide and hydrogen chloride) to a specified level necessary to protect public health and welfare. The regulation is being proposed to meet the requirements of Section 111(d) and Section 129 of the federal Clean Air Act, and 40 CFR Part 60 Subpart BBBB of federal regulations.

Substance *

Please identify and explain the new substantive provisions, the substantive changes to existing sections, or both where appropriate. Please note that a more detailed discussion is required under the statement providing detail of the regulatory action's changes.

The regulation defines and identifies the sources to which it applies, as well as exemptions. Emission limits for particulate matter, carbon monoxide, dioxins/furans, hydrogen chloride, sulfur dioxide, nitrogen oxides, lead, cadmium, and mercury are established, as well as limitations for and cross references to existing state requirements for visible emissions, fugitive dust/emissions, odor, and toxic pollutants. General good operating practices that contribute to the overall effectiveness of the technical requirements are included, in the form of an operator training and qualification program, which is intended to reduce the amount of emissions. A compliance schedule with specific increments of progress is provided. Operating limits for operating parameters such as maximum charge rates, temperature limits, and carbon feed rates and usage are prescribed. Test methods to be used in determining compliance with the emission limits,

as well as compliance requirements, including testing schedules, are specified. Equipment necessary to monitor compliance with the site-specific operating limits are to be installed, calibrated, maintained, and operated. Records of monitoring and test results are to be maintained and reported. Air curtain incinerators that burn 100 percent yard waste must meet separate requirements for increments of progress, opacity limits, compliance monitoring and testing, recordkeeping, and reporting. Procedures to be followed in the event of facility and control equipment maintenance or malfunction are provided. Finally, state requirements for facility and control equipment maintenance or malfunction; test methods and procedures; compliance, monitoring; recordkeeping and reporting; registration; and permits are cross-referenced.

Issues *

Please provide a statement identifying the issues associated with the proposed regulatory action. The term "issues" means: 1) the primary advantages and disadvantages to the public of implementing the new or amended provisions; and 2) the primary advantages and disadvantages to the agency or the Commonwealth. If there are no disadvantages to the public or the Commonwealth, please include a sentence to that effect.

1. Public: The general public will experience a number of health and welfare advantages. SMWC emissions cause a number of serious health effects. Therefore, reduction of these emissions will reduce disease and its related costs. Reduction of SMWC emissions will also reduce the risk of damage to vegetation and property, which will in turn enhance property values, tax revenues, payroll, and other socioeconomic components. Generally, the wide availability of alternatives to incineration will limit disadvantages, and may in fact provide a benefit in the form of reduced costs.

A number of SMWCs may benefit by seeking more efficient and cost-effective alternatives to incineration. In addition to SMWCs, industry in general will also benefit from the rule: overall ozone reductions may lessen the risk of current attainment areas being designated nonattainment, and current nonattainment areas being reclassified to a more serious classification.

2. Department: The Department may need to perform additional inspection, monitoring and recordkeeping to ensure that the emissions limitations are being met, which will require increased expenditure in personnel and equipment. However, the increase in data to be gathered and analyzed will benefit the Department by enhancing its ability to make both short- and long-term planning decisions. Furthermore, these sources have been permitted, inspected, and monitored for many years, therefore, little—if any--new additional new effort will be expended.

Localities Particularly Affected *

Please provide the identity of any localities particularly affected by the proposed regulation.

There is no locality which will bear any identified disproportionate material air quality impact due to the proposed regulation which would not be experienced by other localities.

Public Participation *

Please indicate the nature of the comments the Department is soliciting pursuant to this notice.

The Department is seeking comment on the proposed regulation and the costs and benefits of the proposal. The Department is also seeking comment on the impacts of the proposed regulation on farm and forest lands.

Impact

Please identify the anticipated fiscal impacts and at a minimum include: (a) the projected cost to the state to implement and enforce the proposed regulation, including (i) fund source / fund detail, (ii) budget activity with a cross-reference to program and subprogram, and (iii) a delineation of one-time versus on-going expenditures; (b) the projected cost of the regulation on localities; (c) a description of the individuals, businesses or other entities that are likely to be affected by the regulation; (d) the agency's best estimate of the number of such entities that will be affected; and (e) the projected cost of the regulation for affected individuals, businesses, or other entities. Include a description of the beneficial impact the regulation is designed to produce.

1. Entities Affected

Currently, approximately 3 facilities located throughout the state generally meet the criteria for "small municipal waste combustor." When a more definitive inventory is conducted as part of the section 111(d) plan, this number may be revised.

2. Fiscal Impact

a. Costs to Affected Entities

EPA estimates that the total annual cost (including annualized capital and operating costs) of implementing the emissions guidelines for SMWCs that will need to install control equipment is approximately \$25.30 per ton of municipal solid waste combusted. Virginia's potentially affected facilities have, however, already installed control equipment; EPA estimates that the cost of implementing the emissions guidelines for this type of source will be about \$3.30 per ton.

EPA projects an increase in the average annual household cost of waste disposal of about \$25 for communities that have SMWCs. The actual cost per household will depend on local conditions, including the extent to which recycling and landfiling are used in the affected community.

Because the potentially affected sources have been in operation for a number of years, and have already installed pollution control equipment, the anticipated costs of implementing the emissions guidelines are expected to be minimal.

b. Costs to Localities

The projected cost of the regulation on localities is not expected to be beyond that of other affected entities and are addressed in paragraph 2a above.

c. Costs to Agency

It is not expected that the regulation will result in any cost to the Department beyond that currently in the budget. The sources of Department funds to carry out this regulation are the general fund and the federal trust (grant money provided by the U.S. Environmental Protection Agency under Section 105 of the federal Clean Air Act or permit fees charged to affected entities under the permit program). The activities are budgeted under the following program (code)/subprogram (code): Environmental and Resource Management (5120000)/Air Quality Stationary Source Permitting (5122000) and Air Quality Stationary Source Compliance Inspections (5122100). The costs are expected to be ongoing.

d. Benefits

The industries directly affected by this regulation will experience a number of benefits. Companies will be able to identify whether their SMWCs are operating efficiently, or if they should be replaced by more efficient equipment, or perhaps a more efficient process. Waste minimization has been proven to produce considerable savings. Operation of the incinerator by qualified staff will enhance employee safety and minimize disruptions, including damage to equipment, thereby resulting in the avoidance of costly errors and in an overall more efficient operation.

The regulation will benefit the Commonwealth by helping to prevent air pollution, the source of damage to health, welfare, and property. While no specific data on the cost benefits from the controls are available, costs are, to a degree, offset by the benefits in human health and welfare, including a reduction in the number of cancer cases and other disease, reduction in structural damage, and an increase in welfare factors such as visibility.

Benefits to the department and board stemming from the regulation include better determination of compliance and monitoring, as well as a better knowledge of emissions in an affected area. The regulation will also provide specific standards that ensure statewide regulatory consistency.

Finally, implementation of a Virginia program will ensure Virginia management of Virginia sources without federal intervention.

e. Small Business Impact

The impact upon facilities that meet the definition of small business provided in § 9-199 of the Code of Virginia is addressed in paragraph 2a above.

Legal Requirements

Please identify the state and/or federal source of the legal requirements that necessitate promulgation of the contemplated regulation. The discussion of these requirements should include a description of their scope and the extent to which the requirements are mandatory or discretionary. Full citations for the legal requirements and web site addresses, if available, for locating the text of the cited legal provisions should be provided.

Federal Requirements

Federal Clean Air Act (CAA):

<http://www.epa.gov/ttn/oarpg/gener.html>

Code of Federal Regulations (CFR):

<http://www.access.gpo.gov/nara/cfr/cfr-retrieve.html>

Federal Register (FR):

http://www.gpo.gov/su_docs/aces/aces140.html

Section 111(d) requires that each state submit a plan which will (i) establish standards of performance for any existing source for any air pollutant for which criteria have not been issued or which is not included on a list published under § 108(a) (or emitted from a source category which is regulated under § 112 or 112(b)) but to which a standard of performance under this section would apply if such existing source were a new source, and (ii) provides for the implementation and enforcement of such standards of performance. The state may take into consideration the remaining useful life of the existing source to which standards apply.

The EPA Administrator has the authority to prescribe a plan for a state in cases where the state fails to submit a plan and to enforce the provisions of such plan in cases where the state fails to enforce them.

Section 129 requires that EPA establish standards of performance for both new and existing solid waste combustion sources, with new sources covered under § 129(a) and existing sources covered under § 129(b).

Section 129(a), new source performance standards, requires EPA to develop performance standards pursuant to § 111 for each category of solid waste incineration units. A schedule is given in §§ 129(a)(B) through (E) for promulgating the standards, depending on size and type of unit--large municipal waste combustors (MWCs) to be promulgated first, followed by small MWCs and medical waste incinerators, then commercial/industrial solid waste incinerators, and, finally, remaining types of solid waste incineration units.

Section 129(a)(2), Emissions Standard, provides detail on what the standards are to contain the maximum degree of reduction in emissions of air pollutants, taking into consideration cost and any non-air quality health and environmental impacts and energy

requirements. The degree of reduction must be no less stringent than the emissions control that is achieved in practice by the best controlled similar unit. Section 129(a)(3) states that the standards must be based on methods and technologies for removal or destruction of pollutants before, during, and after combustion, and must incorporate siting requirements that will minimize potential risks to public health or the environment.

The performance standards promulgated in §§ 111 and 129 must include numerical emissions limitations, as required under § 129(a)(4). The limitations must be determined for particulate matter, opacity, sulfur dioxide, hydrogen chloride, nitrogen oxides, carbon monoxide, lead, cadmium, mercury, and dioxins and furans. EPA is required to review and revise, as needed, the performance standards of §§ 111 and 129 periodically.

Section 129(b) addresses existing units. It directs EPA to develop guidelines that are to include emissions limitations and requirements on monitoring, operator training, permits, and residual risk. States are to then develop plans for implementing and enforcing these guidelines. Such plans must be no less stringent than the guidelines, and must be approved by EPA. As provided in § 129(a)(2), emission standards for existing units may be less stringent than standards for new units, but may not be less stringent than the average emissions limitation achieved by the best performing 12 percent of units in a particular category.

Monitoring requirements must be included in each performance standard, as are found in § 129(c), and must require sources to monitor emissions at various points, and to report monitoring results. Operator training and certification is also required, as put forth in § 129(d). Finally, according to § 129(e), sources must obtain Title V operating permits, whether from EPA or from an EPA-approved state operating permit program.

Section 129(f) contains a schedule of effective dates and enforcement for both new and existing units. Section 129(g) contains applicable definitions; § 129(h) discusses state and other authority under the Act.

40 CFR Part 60 subpart B provides the criteria for adoption and submittal of state plans for designated facilities. The issues include: (i) publication of guideline documents, emissions guidelines, and final compliance times; (ii) adoption and submittal of state plans including public hearings; (iii) emission standards and compliance schedules; (iv) emission inventories and source surveillance, reports; (v) actions by the EPA Administrator; (vi) plan revisions by the state; and (vii) plan revisions by the Administrator. The emission guidelines established by EPA under the provisions of § 129(b) of the Act are also contained in 40 CFR Part 60.

40 CFR Part 60, subpart BBBB (65 FR 76378, December 6, 2000) provides the emission guidelines for small municipal waste combustors. The regulation that the state develops based on the emission guidelines must be no less stringent than the guidelines.

Please describe the provisions of the proposed regulation which are more restrictive than applicable federal requirements together with the reason why the more restrictive provisions are needed.

The proposed regulation amendments are not more restrictive than the applicable legal requirements.

Need

Please provide an explanation of the need for the proposed regulation and potential consequences that may result in the absence of the regulation. Also set forth the specific reasons the agency has determined that the proposed regulatory action would be essential to protect the health, safety or welfare of citizens or would be essential for the efficient and economical performance of an important governmental function. Include a discussion of the problems the regulation's provisions are intended to solve.

Section 111(d) of the Clean Air Act requires U.S. Environmental Protection Agency (EPA) to establish procedures under which states submit plans to control certain existing sources of certain pollutants. EPA implemented § 111(d) by promulgating Subpart B of 40 CFR Part 60 establishing procedures and requirements for adoption and submittal of state plans for control of "designated pollutants" from "designated facilities". Designated pollutants are pollutants which are not included on a list published under § 108(a) of the Clean Air Act (National Ambient Air Quality Standards) or § 112(b)(1)(A) (Hazardous Air Pollutants), but for which standards of performance for new sources have been established under § 111(b). A designated facility is an existing facility which emits a designated pollutant and which would be subject to a standard of performance for that pollutant if the existing facility were new.

Subpart B of 40 CFR Part 60 provides that EPA publish guideline documents for development of state emission standards after promulgation of any standards of performance for designated pollutants. The documents must specify emission guidelines and times for compliance and include other pertinent information such as discussion of the pollutant's effects on public health and welfare and description of control techniques and their effectiveness and costs. The emission guidelines reflect the degree of emission reduction attainable with the best adequately demonstrated systems of emission reduction, considering costs as applied to existing facilities.

After publication of a final guideline document for the pollutant in question, the states must develop and submit plans for control of that pollutant from designated facilities. After the final plan submittal date, EPA approves or disapproves each plan (or portion thereof). If a state plan (or portion thereof) is disapproved, EPA promulgates a federal plan (or portion thereof). These and related provisions of Subpart B are basically patterned after § 110 of the Clean Air Act and 40 CFR Part 51 (concerning adoption and submittal of state implementation plans under § 110).

Because failure to develop an adequate regulation will result in imposition of a federal program, meeting the basic requirements of the law and its associated regulations will

ensure that Virginia retains its rights to govern Virginia sources, and result in the efficient and economical performance of an important governmental function.

Designated pollutant controls are critical for two reasons. First, only a limited number of air pollutants potentially harmful to human health are regulated at the federal level. Second, health risks from small exposures to designated air pollutants can be high, depending on the substances involved. SMWC emissions consist of particulate matter, carbon monoxide, dioxin/furan, and other substances known or suspected of causing cancer, nervous system damage, developmental abnormalities, reproductive impairment, immune suppression, liver dysfunction, hormone imbalance, and other serious health effects. Control of such emissions will reduce and prevent such serious health effects.

EPA has determined that SMWC facilities should be regulated under § 111 (New Source Performance Standards) of the Clean Air Act because:

1. SMWC emissions may be reasonably anticipated to contribute to the endangerment of public health and welfare.
2. The range of health and welfare effects and the range and uncertainties of estimated cancer risks do not warrant listing SMWC emissions as a hazardous pollutant under § 112 of the Act.
3. Section 112 of the Act could not be used to address particular constituents or subgroups of emissions (such as hydrogen chloride).
4. Section 111(d) of the Act would permit a more thorough evaluation of existing SMWCs at the state level than would be feasible in a general rulemaking at the federal level.

The 1990 Clean Air Act Amendments added a new § 129 to the Act that applies to solid waste incinerators, including large and small municipal waste combustors, hospital/medical/infectious waste incinerators, and commercial/industrial solid waste incinerators. Section 129 of the Act and its associated standards were promulgated because EPA determined that incinerator emissions cause or contribute significantly to air pollution which may reasonably be expected to endanger public health and welfare. The intended effect of the standards and guidelines is to form a basis for state action to develop state regulations controlling SMWC emissions to the level achievable by the best demonstrated system of continuous emission reduction, considering costs, non-air quality health and environmental impacts, and energy requirements.

Section 129 of the Act directs that the standards and guidelines for SMWCs be broadened, and provides the schedule for this activity. Regulating SMWC emissions for new sources under § 111(b) of the Act (New Source Performance Standards) establishes SMWC emissions as a designated pollutant, and requires the EPA to promulgate guidelines under § 111(d) for states to use in developing regulations to control pollutants from existing SMWCs. Emissions guidelines for existing SMWCs that began construction

on or before August 30, 1999 have been promulgated under §§ 111(d) and 129 of the Act. In order for §§ 111 and 129 to be effected, the specific guidelines are promulgated in the Code of Federal Regulations (CFR) (subpart BBBB of 40 CFR 60). State regulations must be at least as protective as the guidelines.

EPA's final rule was published in the Federal Register of December 6, 2000 (65 FR 76378). State plans are due by December 6, 2001.

Detail of Changes

Please detail any changes, other than strictly editorial changes, that are being proposed. Please detail new substantive provisions, all substantive changes to existing sections, or both where appropriate. This statement should provide a section-by-section description of changes implemented by the proposed regulatory action. Where applicable, include cross-referenced citations when the proposed regulation is intended to replace an existing regulation.

1. The regulation identifies the sources and geographic areas to which the regulation applies, as well as exemptions. [9 VAC 5-40-6550]
2. Terms unique to the article are defined. [9 VAC 5-40-6560]
3. Emission limits for particulate matter, carbon monoxide, dioxins/furans, hydrogen chloride, sulfur dioxide, nitrogen oxides, lead, cadmium, and mercury are established. [9 VAC 5-40-6570 through 9 VAC 5-40-6650]
4. Limitations for and cross references to existing state requirements for visible emissions, fugitive dust/emissions, odor, and toxic pollutants are provided. [9 VAC 5-40-6660 through 9 VAC 5-40-6690]
5. Operator training and qualification requirements are specified. [9 VAC 5-40-6700]
6. A compliance schedule with specific increments of progress is provided. [9 VAC 5-40-6710]
7. Operating limits for operating parameters such as maximum charge rates, temperature limits, and carbon feed rates and usage are prescribed. [9 VAC 5-40-6720]
8. Compliance requirements, including testing schedules, are specified. [9 VAC 5-40-6730].
9. Test methods and procedures for determining compliance with the emission limits are included. [9 VAC 5-40-6740]
10. Equipment necessary to monitor compliance with the site-specific operating limits are to be installed, calibrated, maintained, and operated. [9 VAC 5-40-6750]

11. Records of monitoring and test results are to be gathered and maintained. [9 VAC 5-40-6760]
12. Monitoring and test results must also be reported at certain intervals. [9 VAC 5-40-6770]
13. Air curtain incinerators that burn only yard waste must meet separate requirements for increments of progress, opacity limits, compliance monitoring and testing, recordkeeping, and reporting. [9 VAC 5-40-6780]
14. In the event of facility and control equipment maintenance or malfunction, certain procedures must be followed. [9 VAC 5-40-6800]
15. Cross references are provided for state requirements for facility and control equipment maintenance or malfunction; test methods and procedures; compliance, monitoring; recordkeeping and reporting; registration; and permits. [9 VAC 5-40-6800, 9 VAC 5-40-6740, 9 VAC 5-40-6730, 9 VAC 5-40-6750, 9 VAC 5-40-6760, 9 VAC 5-40-6770, 9 VAC 5-40-6790, 9 VAC 5-40-6810]

Alternatives

Please describe the process by which the agency has considered less burdensome and less intrusive alternatives for achieving the need. Also describe, to the extent known, the specific alternatives to the proposal that have been considered to meet the need, and the reasoning by which the agency has rejected any of the alternatives considered.

As provided in the public participation procedures of the State Air Pollution Control Board, the Department included, in the Notice of Intended Regulatory Action, a description of the Department's alternatives and a request for comments on other alternatives and the costs and benefits of the Department's alternatives or any other alternatives that the commenters provided.

Following the above, alternatives to the proposed regulation amendments were considered by the Department. The Department determined that the first alternative is appropriate, as it is the least burdensome and least intrusive alternative that fully meets the purpose of the regulation. The alternatives considered by the Department, along with the reasoning by which the Department has rejected any of the alternatives being considered, are discussed below.

1. Amend the regulations to satisfy the provisions of the law and associated regulations and policies. This option is being selected because it meets the stated purpose of the regulatory action: to comply with the requirements of the federal Clean Air Act.

2. Make alternative regulatory changes to those required by the provisions of the law and associated regulations and policies. This option is not being selected because it will not ensure consistency with federal requirements.
3. Take no action to amend the regulations. This option is not being selected because it will result in the imposition of a federal program.

Public Comment

Please summarize all public comment received during the NOIRA comment period and provide the agency response. If no public comment was received, please include a statement indicating that fact.

No public input was received during the public comment period for this intended regulatory action.

Clarity of the Regulation

Please provide a statement indicating that the agency, through examination of the regulation and relevant public comments, has determined that the regulation is clearly written and easily understandable by the individuals and entities affected.

The Department, through examination of the regulation and relevant public comments, has determined that the regulation is clearly written and easily understandable by the individuals and entities affected.

Periodic Review

Please supply a schedule setting forth when the agency will initiate a review and re-evaluation to determine if the regulation should be continued, amended, or terminated. The specific and measurable regulatory goals should be outlined with this schedule. The review shall take place no later than three years after the proposed regulation is expected to be effective.

The Department will initiate a review and re-evaluation of the regulation to determine if it should be continued, amended, or terminated within three years after its effective date.

The specific and measurable goals the proposed regulation amendments are intended to achieve are as follows:

1. To protect public health and welfare with the least possible cost and intrusiveness to the citizens and businesses of the Commonwealth.
2. To ensure that owners comply with air pollution emission limits and control technology requirements in order to control levels of designated pollutants being emitted into the ambient air.
3. To ensure the safe destruction of potentially hazardous materials, and to reduce the physical bulk of material placed within landfills.

Family Impact Statement

Please provide an analysis of the proposed regulatory action that assesses the potential impact on the institution of the family and family stability including the extent to which the regulatory action will: 1) strengthen or erode the authority and rights of parents in the education, nurturing, and supervision of their children; 2) encourage or discourage economic self-sufficiency, self-pride, and the assumption of responsibility for oneself, one's spouse, and one's children and/or elderly parents; 3) strengthen or erode the marital commitment; and 4) increase or decrease disposable family income.

It is not anticipated that these regulation amendments will have a direct impact on families. However, there will be positive indirect impacts in that the regulation amendments will ensure that the Commonwealth's air pollution control regulations will function as effectively as possible, thus contributing to reductions in related health and welfare problems.

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