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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 43 (9 VAC 5-40-5800 et seq.) of 9 VAC 5 Chapter 40
Secondary Action(s):	None.
Action Title:	Municipal Solid Waste Landfills
Date:	September 12, 2002

This information is required pursuant to the Administrative Process Act (§ 2.2-4000 *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provide a brief summary of the proposed new regulation, amendments to an existing regulation, or the regulation being repealed.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.

Facilities to which the rule applies are municipal solid waste landfills which commenced construction, reconstruction, or modification before May 30, 1991. In the Northern Virginia VOC Control Area, the design capacity applicability criteria is 1.0 million megagrams (Mg) or more; the emission rate applicability criteria is emissions of nonmethane organic compounds (NMOCs) greater than or equal to 23 Mg per year. In the remainder of the Commonwealth, the design capacity applicability criteria and the emissions rate applicability criteria are 2.5 million Mg in capacity and 50 Mg per year or more in emissions, respectively.

Landfills with a design capacity equal to or greater than the design capacity applicability criteria must determine their NMOC emissions. If the NMOC emission rate is less than the emission rate applicability criteria, the landfill must submit an emission report, and recalculate the NMOC emission rate until it is equal to or greater than the emission rate applicability criteria or the landfill is closed. If the calculated NMOC emission rate is equal to or greater than the emission rate applicability criteria, a collection and control system design plan must be submitted, followed by the installation of a collection and control system.

Active collection systems must be designed to handle the maximum expected gas flow rate at a sufficient extraction rate, and be designed to minimize off-site gas migration. Passive collection systems must be installed with liners, then either destroy the collected gas or treat it for sale or use. Operational standards direct how landfills must operate collection systems in order to minimize emissions and operate safely. Test methods and procedures are provided in order for sources to calculate the NMOC emission rate. Once the NMOC emission rate is established, the landfill is classified as Tier 1, 2, or 3, depending on whether the NMOC emission rate is less or greater than the emission rate applicability criteria; if the NMOC concentration is determined using a specific sampling procedure; or if the NMOC mass emission rate is determined using specific equations.

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Compliance is determined through specific methods. Monitoring of operations is achieved through the installation of various sampling ports and devices. Reporting and recordkeeping requirements are delineated. Finally, installation of emission collection and control equipment capable of meeting the standards must be accomplished by 30 months after the rule's effective date.

The proposed amendments to the regulation are being made to make the regulation consistent with changes made to 40 CFR Part 60 Subparts Cc and WWW of federal regulations, in order to meet the requirements of § 111(d) of the Clean Air Act.

Basis *

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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.

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 the State Air Pollution Control Board possesses the statutory authority to promulgate the proposed regulation amendments 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 require the owners of municipal solid waste landfills (MSWLs) to limit emissions of volatile organic compounds (VOCs) and non-methane organic compounds (NMOCs) to a specified level necessary to protect public health and welfare. The purpose of the proposed amendments is to amend the regulation in order to meet the requirements of § 111(d) of the federal Clean Act, and 40 CFR Part 60 Subpart Cc 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.

- 1. General cross-references to "design applicability criteria" and "emission rate applicability criteria" have been replaced with specific criteria throughout the regulation.
- 2. Specific design capacity criteria have been revised for consistency with 40 CFR Part 60.
- 3. Minor revisions for clarity promulgated by EPA on February 24, 1999 have been made.
- 4. Minor revisions for clarity promulgated by EPA on April 10, 2000 have been made.
- 5. Minor revisions for clarity and minor corrections have been made.

Issues *

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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: There are no disadvantages to the public associated with this action. The regulation will be improved by incorporation of EPA's clarifications and corrections. This will result in improved understanding and implementation of the regulation, which improves compliance, and more efficient and effective source operation. Ultimately, this will contribute to the reduction of air pollution and a concurrent improvement in public health and welfare.
- 2. Department: There are no disadvantages to the Department associated with this action. Improved understanding and implementation of the regulation will result in improved compliance, which will result in more efficient and effective operation of sources. Additionally, submission of this regulation as part of the § 111(d) plan will enable the Department to implement the program without EPA oversight.

Localities Particularly Affected *

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

Sources located in the Northern Virginia Volatile Organic Compound Emissions Control Area (Arlington County, Alexandria City, Fairfax County, Fairfax City, Falls Church City, Loudoun County, Manassas City, Manassas Park City, Prince William County, and Stafford County) must meet more restrictive applicability requirements in terms of design capacity and emission standards, in order to meet § 110 State Implementation Plan requirements.

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, as well as any pollution prevention benefits that could be realized.

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.

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Entities Affected

Approximately 95 municipal solid waste landfills are affected by this regulation.

2. Fiscal Impact

a. Costs to Affected Entities

The affected regulation has been effective since 1999. The sources subject to this regulation have therefore been meeting its requirements for a number of years. The proposed changes to the regulation are minor, primarily intended for clarity and consistency with federal requirements, and do not affect any emission standards, work practices, or actual source requirements. Little, if any cost, is associated with these changes. There may be a slight cost savings to sources as a result of better regulatory understanding and related improvements in general efficiencies.

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

The regulation on which this action is based has been effective since 1999. The sources subject to this regulation have therefore been meeting its requirements for a number of years. The proposed changes to the regulation are minor, primarily intended for clarity and consistency with federal requirements, and do not affect any emission standards, work practices, or actual source requirements. Little, if any cost, is associated with these changes. There may be a slight cost savings to the Department as a result of better regulatory understanding and related improvements in general efficiencies. 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, the federal trust (grant money provided by the U.S. Environmental Protection Agency under § 105 of the federal Clean Air Act) and 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 regulation on which this action is based has been effective since 1999. The sources subject to this regulation have therefore been meeting its requirements for a number of years. The proposed changes to the regulation are minor, primarily intended for clarity and consistency with federal requirements, and do not affect any emission standards, work practices, or actual source requirements. Little, if any cost, is associated with these changes. There may be a slight cost savings to the Department as a result of better regulatory understanding and related improvements in general efficiencies.

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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

The contemplated regulation is mandated by federal law and regulation. A succinct statement of the source (including legal citation) and scope of the mandate may be found below.

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. EPA is required to review and revise, as needed, the performance standards of § 111 periodically.

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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 are also contained in 40 CFR Part 60.

40 CFR Part 60, subpart Cc provides the emission guidelines for municipal solid waste landfills. The regulation that states develop based on the emission guidelines must be no less stringent than the guidelines.

The final emissions guidelines and NSPS were originally published by EPA in the Federal Register of March 12, 1996 (61 FR 9905). Amendments to the final rules were made on June 16, 1998 (63 FR 32743), February 24, 1999 (64 FR 9258), April 10, 2000 (65 FR 18906), and October 17, 2000 (65 FR 61778); additional proposed amendments were published on May 23, 2002 (67 FR 36475).

Comparison with Federal Requirements

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 more restrictive than the specific requirements for designated pollutant plans in one respect: sources located in the Northern Virginia Volatile Organic Compound Emissions Control Area must meet more restrictive applicability requirements in terms of design capacity and emission standards. Unlike the requirements of the emissions guidelines, which are intended to control § 111(d) designated pollutants, these requirements are being made to control ozone, which is a National Ambient Air Quality Standard covered by the § 110 State Implementation Plan (SIP). The Northern Virginia Volatile Organic Compound Emissions Control Area is in the Northern Virginia Ozone Nonattainment Area, which is designated as a serious ozone nonattainment area. These additional requirements are intended to meet the VOC emissions reduction requirements of the § 110 SIP, and are no more restrictive than the applicable requirements in that regard. Thus, all provisions of the regulation amendments are necessary to meet applicable federal 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.

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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, which establishes 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 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.

Control of designated pollutant controls is important 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. The primary components of MSWL emissions are nonmethane organic compounds (NMOC), which include volatile organic compounds (VOCs), hazardous air pollutants, and odorous compounds, and methane, both of which are capable of causing serious adverse health and welfare effects.

Regulating MSWL emissions for new sources under § 111(b) of the Act (NSPSs) establishes MSWL emissions as a designated pollutant, and requires EPA to promulgate guidelines for states to use in developing regulations to control pollutants from existing MSWLs. The specific emissions guidelines for existing MSWLs (which commenced construction, reconstruction or modification before May 30, 1991) have been promulgated in subpart Cc of Part 60 of the Code of Federal Regulations. State regulations must be no less stringent than the guidelines.

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On January 7, 1999, the State Air Pollution Control Board approved a final regulation implementing the requirements of subpart Cc, which was then submitted to EPA on August 11, 2000 as part of the state's §111(d) Plan. EPA notified the state on February 7, 2001 that the plan is not approvable due to a number of deficiencies, including several associated with the regulation. Therefore, it is necessary to initiate a new regulatory action in order to amend the regulation in such a way as to address deficiencies identified by EPA.

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. General cross-references to "design applicability criteria" and "emission rate applicability criteria" have been replaced with specific criteria throughout the regulation. [9 VAC 5-40-5810 C (definition of "design capacity"), 9 VAC 5-40-5820 B, 9 VAC 5-40-5820 B, 9 VAC 5-40-5820 C, 9 VAC 5-40-5850 C, 9 VAC 5-40-5850 D, 9 VAC 5-40-5855 A, 9 VAC 5-40-5855 B, 9 VAC 5-40-5855 C, 9 VAC 5-40-5855 D, 9 VAC 5-40-5860 B, 9 VAC 5-40-5880 E, 9 VAC 5-40-5
- 2. Specific design capacity criteria have been revised for consistency with 40 CFR Part 60. [9 VAC 5-40-5820 A 1 and 2, 9 VAC 5-40-5920 D]
- 3. Minor revisions for clarity promulgated by EPA on February 24, 1999 have been made. [9 VAC 5-40-5810 C (definition of "modification"), 9 VAC 5-40-5820 B 1, 9 VAC 5-40-5820 C, 9 VAC 5-40-5820 C 1 b (1), 9 VAC 5-40-5824 A 3 b]
- 4. Minor revisions for clarity promulgated by EPA on April 10, 2000 have been made. [9 VAC 5-40-5860 B 1 b, 9 VAC 5-40-5870 C, 9 VAC 5-40-5870 D 1, 9 VAC 5-40-5880 E, 9 VAC 5-40-5890 D 2]

5. Minor revisions for clarity have been made to address additional issues identified by EPA. [9 VAC 5-40-5810 C (definitions of "closed landfill," "design capacity," "federal operating permit" "household waste," and "industrial solid waste"), 9 VAC 5-40-5820 B, 9 VAC 5-40-5820 D, 9 VAC 5-40-5850 G, 9 VAC 5-40-5850 H, 9 VAC 5-40-5855 A, 9 VAC 5-40-5860 A, 9 VAC 5-40-5880 C 2 a, 9 VAC 5-40-5880 C 2 b, 9 VAC 5-40-5880 F, 9 VAC 5-40-5890 D 4]

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6. Minor corrections have been made. [9 VAC 5-40-5800 D 1, 9 VAC 5-40-5810 A, 9 VAC 5-40-5810 C (definitions of "CERCLA," "gas management system," "NMOC," and "offsite gas migration"), 9 VAC 5-40-5820 C 2 a (4), 9 VAC 5-40-5820 C 2 c (2) (b), 9 VAC 5-40-5822, 9 VAC 5-40-5870 F, 9 VAC 5-40-5890 E 1 b, 9 VAC 5-40-5910, 9 VAC 5-40-5920 B]

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 was chosen because it meets the stated purpose of the regulation: 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

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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.

1. **SUBJECT:** Title V permit due dates.

COMMENTER: U.S. EPA, Region III

TEXT: DEQ has informally proposed to revise 9 VAC 5-40-5920 D to stipulate that April 6, 2001 is the Title V permit application due date. This is acceptable; however, 9 VAC 5-40-5800 C, relating to federal operating permits, now needs revision to avoid confusion or conflict with 9 VAC 5-40-5920 D.

RESPONSE: The language in 9 VAC 5-40-5800 C is identical to the federal requirement of 40 CFR 60.32c(c). This language is neither confusing nor in conflict with the requirements of 9 VAC 5-40-5920 D. If Region III strongly feels that this is an issue of serious concern, perhaps EPA should revise 40 CFR 60.32c(c) now that the emissions guidelines are currently being revised (see comment 2 below). Virginia could then be assured that it is continuing to meet EPA's requirements in full.

Additionally, we have been advised by state legal counsel to avoid including retroactive dates in regulations, and we have therefore removed this specific date from 9 VAC 5-40-5920 D. However, this has no effect on the regulation's enforceability without the specific date, as the permit application deadline requirements are already clearly specified in 9 VAC 5-40-5800 C.

2. **SUBJECT:** Additional federal amendments.

COMMENTER: U.S. EPA, Region III

TEXT: On May 23, 2002 (67 FR 6476), EPA proposed additional landfill rule amendments. Although the proposed amendments would amend the landfill NSPS, they would also serve to amend the emission guidelines. Hopefully, the amendments will be promulgated within the next few months, and then incorporated into the Virginia regulation. We plan to keep you informed on the status of the pending amendments.

RESPONSE: The primary reason this regulatory action was initiated was in order to incorporate EPA revisions to the emission guidelines and NSPS that had transpired after our promulgation of the original rule. In its latest proposal EPA states, "The proposed amendments will not change the basic control requirements of the final rule or the level of health protection it provides, but will improve implementation, compliance, and regulatory flexibility while reducing unnecessary regulatory burden." While clarification of a regulation is always laudable, we note that it is difficult for states to continually expend resources on constant minor regulatory changes. We, too, hope that the amendments will be finalized in time for incorporation in this regulatory action.

Clarity of the Regulation

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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 volatile organic compound emissions and non-methane organic compound emissions being emitted into the ambient air.
- 3. To prohibit emissions which would contribute to nonattainment of the national air quality standards or interference with maintenance of the standards.

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

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function as effectively as possible, thus contributing to reductions in related health and welfare problems.

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