



Economic Impact Analysis Virginia Department of Planning and Budget

9 VAC 5-40 – Municipal Solid Waste Landfills

Air Pollution Control Board

January 7, 2003

The Department of Planning and Budget (DPB) has analyzed the economic impact of this proposed regulation in accordance with Section 2.2-4007.G of the Administrative Process Act and Executive Order Number 21 (02). Section 2.2-4007.G requires that such economic impact analyses include, but need not be limited to, the projected number of businesses or other entities to whom the regulation would apply, the identity of any localities and types of businesses or other entities particularly affected, the projected number of persons and employment positions to be affected, the projected costs to affected businesses or entities to implement or comply with the regulation, and the impact on the use and value of private property. The analysis presented below represents DPB's best estimate of these economic impacts.

Summary of the Proposed Regulation

The General Assembly mandates in §10.1-1308 of the Code of Virginia that the State Air Pollution Control Board promulgate regulations abating, controlling, and prohibiting air pollution throughout or in any part of the Commonwealth in order to protect public health and welfare.

The proposed regulation deals with the control and abatement of air pollution at municipal solid waste landfills (MSWLs) that commenced construction, reconstruction, or modification before May 30, 1991. Based on their design capacity and emission rate, these MSWLs are required to limit emissions of methane and non-methane organic compounds (NMOCs) to a level considered adequate to protect public health and welfare. The regulation establishes emission standards as well as operation, compliance, monitoring, reporting, and other requirements considered necessary to meet these standards.

Most of the changes being proposed are to meet the requirements of §111 (d) of the Federal Clean Air Act. The Act requires that states submit plans to the Environmental Protection Agency (EPA) establishing standards of performance for existing sources for any air pollutant for which air quality criteria have not been issued and for which standards of performance under this section would apply if the existing source was a new source. The plans are also required to provide for the implementation and enforcement of these standards of performance. In the absence of a state plan deemed adequate by EPA, a federal plan will be prescribed for the state in question. The proposed changes are being made in order to obtain approval of the state plan by incorporating EPA-suggested changes and addressing deficiencies identified by EPA.

The regulation also adds clarifying language recommended by EPA, modifies some definitions to make them more consistent with federal regulations, and makes minor corrections to the existing regulation.

Estimated Economic Impact

Background:

§111 (d) of the Federal Clean Air Act requires that EPA establish procedures under which states submit plans to control designated pollutants from designated sources. Designated pollutants are pollutants for which air quality criteria have not been issued under National Ambient Air Quality Standards (NAAQS) or standards established for hazardous air pollutants, but for which standards of performance for new sources have been established. Designated facilities are existing facilities that emit a designated pollutant and would have been subject to the standards of performance for that pollutant had the facility been new. EPA has promulgated federal regulations establishing procedures and requirements for the submittal and adoption of state plans for control of designated pollutants from designated sources.

Setting standards for MSWL emissions from new sources under §111 (b) of the Federal Clean Air Act and 9 VAC 5-50 of the Code of Virginia established MSWL emissions as a designated pollutant and existing MSWLs as designated facilities. Under federal regulations, following classification of a pollutant as a designated pollutant, EPA is required to publish guideline documents containing information pertinent to the control of that pollutant from designated facilities. The guideline document has to include information about acceptable emissions reduction systems, emission guidelines reflecting the application of the best system of

emission reduction (in terms of effectiveness and cost) for different types of designated facilities, and the time within which compliance with emission standards can be achieved at each type of facility. In response to this requirement, EPA published the final version of the guideline document regarding the control of MSWL emissions (methane and NMOC emissions) from existing MSWLs in 1996.

Following the publication of the guideline document for the pollutant in question (MSWL emissions in this instance), states are required to develop plans for the control of that pollutant from designated facilities and submit the plan to EPA for approval. The plans submitted by a state should provide for the implementation and enforcement of the necessary standards of performance. If a state fails to submit a satisfactory plan or enforce the provisions of an approved plan in a satisfactory manner, EPA has the authority to prescribe a federal plan for that state. On January 7, 1999, the State Air Pollution Control Board approved a final regulation to control emissions from existing MSWLs. The plan was submitted to the EPA for approval on August 11, 2000. On February 7, 2001, EPA notified Virginia that the plan could not be approved in its current form due to a number of deficiencies. .

Most of the proposed changes to the regulation are being made in order to incorporate EPA-suggested changes and address deficiencies identified by EPA.

Description of Regulation:

The proposed regulation has been in effect since June 30, 1999 and applies to all MSWLs in Virginia that began construction, reconstruction, or modification prior to May 30, 1991. MSWLs that began construction, reconstruction, or modification after May 30, 1991 are classified as new sources and regulated under §111 (b) of the Federal Clean Air Act and 9 VAC 5-50 of the Code of Virginia, which establish new source performance standards.

Existing MSWLs (i.e., municipal landfills that have not undertaken any new construction activity since May 30, 1991) are required to comply with the requirements of this regulation if they meet certain design capacity criteria. MSWLs with design capacity greater than or equal to 2.5 million megagrams and/or 2.5 million cubic meters are required to test and report their NMOC emission rate annually. If the NMOC emission rate is greater than or equal to 50 megagrams per year, the MSWL is required to submit a plan for a system to collect and control the gases generated within the landfill (primary components of MSWL emissions are methane

and NMOCs). On approval of the plan by the State Air Pollution Control Board, the MSWL is required to install the collection and control system.

More stringent design capacity and emission rate criteria are applied to MSWLs located in the Northern Virginia Volatile Organic Compounds (VOC) 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). The Northern Virginia VOC Control Area has been designated a serious ozone non-attainment area. Areas that do not meet NAAQS are designated as non-attainment areas and must submit air quality plans, known as state implementation plans, showing how they plan to attain the standards. If they do not meet this requirement, these areas face sanctions and other penalties under the Federal Clean Air Act. The tighter standards are intended to meet VOC emission reduction requirements that are part of the state implementation plan to help control ozone concentration and reduce it to levels that comply with NAAQS (VOCs are emitted as part of NMOC emissions from MSWLs). Landfills that have design capacity greater than or equal to 1.0 million megagrams and/or 1.0 million cubic meters are required to test and report their NMOC emission rate annually. If the NMOC emission rate exceeds 23 megagrams per year, the MSWL is required to submit plans for a collection and control system for methane and NMOC emissions. Following the State Air Pollution Control Board's approval of the plan, the MSWL is required to install the collection and control system.

For all MSWLs meeting or exceeding the design capacity and emission rate criteria, the regulation establishes operational standards and specifications that determine how these landfills operate their collection and control system such that emissions (of methane and NMOCs) meet certain minimum standards and the facilities are operated safely. The regulation provides test methods and procedures for MSWLs to follow when calculating their NMOC emissions rate. The regulation also specifies the compliance, monitoring, reporting, and record keeping requirements to be met by these MSWLs.

Proposed Changes:

The proposed changes to the regulation are largely to meet the requirements of §111 (d) of the Federal Clean Air Act and retain regulatory control over the implementation of performance standards for existing MSWLs. EPA approval of the regulation will allow Virginia

to regulate emissions from existing MSWLs without EPA oversight. If EPA were to disapprove the plan, a federal plan would be prescribed for Virginia.

Since the approval of the regulation by the State Air Pollution Control Board in January 1999, EPA has made amendments to the guideline document and the new source performance standards. For example, on February 24, 1999, EPA added explanatory language to the definition of certain terms and clarified when a landfill that exceeded the design capacity criteria would be subject to this regulation and when it would be subject to the new source performance standards. On April 10, 2000, EPA added clarifying language for terms used in the formula to calculate NMOC emissions and made a change to the temperature monitoring requirements for boilers and heaters used in gas collection systems. The proposed changes to the existing regulation incorporate these amendments. The changes include other recommendations by EPA, such as changes to the definition of certain terms and the addition of clarifying language. The proposed changes also modify certain definitions to make them consistent with federal regulations and correct minor errors in the existing regulation.

The net economic impact of the changes being proposed is not likely to be significant. This regulation has been in effect since June 30, 1999 and most of the affected landfills are already complying or are in the process of complying with its requirements. According to DEQ, the proposed changes are primarily for the purpose of clarity and consistency with federal requirements and do not affect emission standards, work practices, and actual source requirements. Thus, the proposed changes are not expected to impose significant additional costs on existing MSWLs. To the extent that the clarifications and corrections improve the understanding and implementation of the regulation, they are likely to have a small positive economic impact.

Businesses and Entities Affected

The proposed regulation affects all MSWLs in Virginia that commenced construction, reconstruction, or modification before May 30, 1991. According to the most up-to-date information available, there are approximately 95 MSWLs, including four in the Northern Virginia VOC Control Area, that are likely to be affected by this regulation. However, the net economic impact of the proposed changes on these landfills is not expected to be significant.

Localities Particularly Affected

The proposed regulation will affect all localities in the Commonwealth where MSWLs that commenced construction, reconstruction, or modification before May 30, 1991 are located.

Projected Impact on Employment

The proposed regulation is not expected to have a significant impact on employment.

Effects on the Use and Value of Private Property

The proposed regulation is not likely to have a significant impact on the use and value of private property. The changes to the existing regulation being proposed are minor and intended to provide clarification on certain aspects of the regulation and increase consistency with federal requirements. They are not expected to impose significant additional compliance costs on existing MSWLs.