



## Proposed Regulation Agency Background Document

<b>Agency name</b>	Department of Mines, Minerals and Energy
<b>Virginia Administrative Code (VAC) citation</b>	4 VAC 25 -130
<b>Regulation title</b>	Coal Surface Mining Reclamation Regulations
<b>Action title</b>	Permit boundary signs and blasting near residences and occupied buildings
<b>Date this document prepared</b>	February 3, 2006

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Orders 21 (2002) and 58 (1999), and the *Virginia Register Form, Style, and Procedure Manual*.

### Brief summary

*In a short paragraph, please summarize all substantive changes that are being proposed in this regulatory action.*

This regulation was promulgated as an emergency regulation and published in the Virginia Register of Regulations on September 5, 2005. This proposal is to make the regulation permanent. The regulation will:

- require coal mine permit boundary markers located on steep slopes above private dwellings or occupied buildings to be made or marked with fluorescent or reflective material, and
- require persons conducting blasting operations on coal mines occurring within 1,000 feet of a private dwelling or occupied building to conduct seismic monitoring of the blasting.

This regulation amendment was recommended in the accident investigation report following an August 20, 2004 incident in Wise County that resulted in fatal injuries to a three-year old boy.

## Legal basis

*Please identify the state and/or federal legal authority to promulgate this proposed regulation, including (1) the most relevant law and/or regulation, including Code of Virginia citation and General Assembly chapter number(s), if applicable, and (2) promulgating entity, i.e., the agency, board, or person. Describe the legal authority and the extent to which the authority is mandatory or discretionary.*

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The Department of Mines, Minerals and Energy (DMME) has authority to promulgate this regulation under the Code of Virginia § 45.1-161.3, Powers of the Department, § 45.1-230, Authority and duties of Director, and § 45.1-242, Performance standards.

- Section 45.1-161.3 empowers DMME, with the approval of the Director, to promulgate regulations necessary or incidental to the performance of duties or execution of powers under Title 45.1 of the Code of Virginia.
- Section 45.1-230 of the Code of Virginia empowers the DMME Director to promulgate regulations as may be necessary to carry out the provisions of the Virginia Coal Surface Mining Control and Reclamation Act, Chapter 19 of Title 45.1 of the Code.
- Section 45.1-242 of the Code of Virginia directs the DMME Director to establish performance standards applicable to all surface mining and reclamation operations. Establishment of these performance standards by regulation is mandatory.

## Purpose

*Please explain the need for the new or amended regulation by (1) detailing the specific reasons why this regulatory action is essential to protect the health, safety, or welfare of citizens, and (2) discussing the goals of the proposal, the environmental benefits, and the problems the proposal is intended to solve.*

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The proposed amendments are intended to increase the safety of people in occupied buildings near active coal mines and reduce the risk of property damage from mining operations.

The first amendment to the regulations will require coal mine operators to install and maintain permanent permit boundary markers that are made out of or marked with fluorescent or reflective paint in areas located above residences or occupied buildings. This requirement is being put into place to ensure that persons conducting mining operations can clearly locate the boundaries of the permitted site during the night or day when they are working on slopes above residences or occupied buildings. The goal of this change is to ensure that no danger is posed from material that may move off of the permitted mine site downhill into areas containing residences or other occupied buildings.

The second amendment to the regulations will require operators of coal mines to monitor with a seismograph all blasts that are conducted within 1,000 feet of a residence or occupied building. Under current regulations, operators may use a formula, called the scaled distance equation, to determine the allowable charge weight of explosives to be detonated in any 8-millisecond period and not be required to monitor the air blast or ground vibration with a seismograph. This amendment is being put in place to help respond to the large number of complaints from the public about the effects of coal mine blasting on nearby residences. Monitoring every blast will enable the Department of Mines, Minerals and Energy to better determine whether blasts on coal mines exceed the maximum air blast and ground vibration limits in the regulation.

## Substance

*Please briefly identify and explain the new substantive provisions, the substantive changes to existing sections, or both where appropriate. (More detail about these changes is requested in the "Detail of changes" section.)*

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The Department of Mines, Minerals and Energy is proposing amendments to two sections of the 4 VAC 25-130 Coal Surface Mining Reclamation Regulations.

One section deals with the signs and markers used to mark the boundaries of areas permitted for surface mining operations. The regulation that existed before the emergency amendments required the signs and markers to be made of durable material and maintained during the conduct of permitted activities in those areas. The change to this section requires that, in areas on steep slopes above private dwellings or other occupied buildings, such markers be made of or marked with fluorescent or reflective paint or other material. Such marking will allow the boundaries to be seen by equipment operators under most conditions, even when operations occur after dark.

The other section applies to seismic monitoring of blasting on coal mines. The pre-emergency regulation required blasts to be monitored with a seismograph if the weight of charge being detonated within an 8-millisecond period exceeded the allowable amount calculated using the scaled distance equation, an industry-standard formula for determining the affect of a blast at a distance. The change to this regulation requires all blasts within 1,000 feet of an occupied building to be monitored with a seismograph.

## Issues

*Please identify the issues associated with the proposed regulatory action, including:*

- 1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions;*
- 2) the primary advantages and disadvantages to the agency or the Commonwealth; and*
- 3) other pertinent matters of interest to the regulated community, government officials, and the public.*

*If the regulatory action poses no disadvantages to the public or the Commonwealth, please so indicate.*

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The primary advantage of the proposed regulatory amendments is that they will improve the safety of people in residences and occupied commercial buildings near active coal mines. They will also reduce the risk of property damage from offsite-material and blasting. The agency foresees no disadvantages to the public. There will be some additional expense to the coal industry for permanent fluorescent boundary markers and additional blast monitoring.

Regulations will be enforced under existing regulatory programs with existing personnel; therefore, there will be little fiscal impact to the agency or Commonwealth.

## Requirements more restrictive than federal

*Please identify and describe any requirement of the proposal which are more restrictive than applicable federal requirements. Include a rationale for the need for the more restrictive requirements. If there are no applicable federal requirements or no requirements that exceed applicable federal requirements, include a statement to that effect.*

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Both proposed amendments will result in regulations that are more restrictive than the federal Office of Surface Mining requirements. The requirements for fluorescent or reflective boundary markers and seismic monitoring of blasts within 1,000 feet of occupied buildings were recommended in the accident investigation report following the August 2004 offsite fatality. The rationale was that these changes were necessary to protect people and property near active surface coal mining operations. DMME was directed to enact the recommendations as regulations by the Virginia General Assembly in HB 2573 (2005).

**Localities particularly affected**

*Please identify any locality particularly affected by the proposed regulation. Locality particularly affected means any locality which bears any identified disproportionate material impact which would not be experienced by other localities.*

The proposed regulatory amendments apply to any locality in which coal mines operate. Currently, coal mines are operating in seven counties in southwestern Virginia: Buchanan, Dickenson, Wise, Lee, Tazewell, Russell, and Scott.

**Public participation**

*Please include a statement that in addition to any other comments on the proposal, the agency is seeking comments on the costs and benefits of the proposal and the impacts of the regulated community.*

In addition to any other comments, the agency is seeking comments on the costs and benefits of the proposal and the potential impacts of this regulatory proposal. Also, the agency is seeking information on impacts on small businesses as defined in § 2.2-4007.1 of the Code of Virginia. Information may include 1) projected reporting, recordkeeping, and other administrative costs, 2) probable effect of the regulation on affected small businesses, and 3) description of less intrusive or costly alternative methods of achieving the purpose of the regulation.

Anyone wishing to submit written comments may do so by mail, email, or fax to Stephen A. Walz, Regulatory Coordinator, Department of Mines, Minerals and Energy, 202 N. 9th St., 8<sup>th</sup> Floor, Richmond, VA 23219, telephone (804) 692-3211, FAX (804) 692-3237, or e-mail [stephen.walz@dmme.virginia.gov](mailto:stephen.walz@dmme.virginia.gov). Written comments must include the name and address of the commenter. In order to be considered, comments must be received by the last date of the public comment period.

**Economic impact**

*Please identify the anticipated economic impact of the proposed regulation.*

<p><b>Projected cost to the state to implement and enforce the proposed regulation, including (a) fund source / fund detail, and (b) a delineation of one-time versus on-going expenditures</b></p>	<p>The regulation will be enforced under an existing regulatory program with existing personnel; no additional cost to the state is anticipated.</p>
<p><b>Projected cost of the regulation on localities</b></p>	<p>There will be no cost to localities.</p>

<p><b>Description of the individuals, businesses or other entities likely to be affected by the regulation</b></p>	<p>The proposed regulation will affect companies engaged in the surface mining of coal.</p>
<p><b>Agency’s best estimate of the number of such entities that will be affected. Please include an estimate of the number of small businesses affected.</b></p>	<p>Currently, 22 companies operate a total of 71 surface coal mines in Virginia. None of these are “small businesses” as defined here.</p>
<p><b>All projected costs of the regulation for affected individuals, businesses, or other entities. Please be specific. Be sure to include the projected reporting, recordkeeping, and other administrative costs required for compliance by small businesses.</b></p>	<p>The additional cost of adding reflective or fluorescent material to existing required permit boundary markers is estimated to average \$275 per year for a typical surface mine with 5,000 feet of boundary needing to be marked, and assuming a seven-year replacement cycle for the material. No additional administrative costs are anticipated.</p> <p>For blast monitoring, it is expected that most of the 22 companies will need to purchase one additional seismograph at an initial cost of \$7,000 apiece. Labor cost to operate each machine, assuming 240 working days per year, one hour per day, \$30 per hour, would be 7,200 hours. Assuming the machines have a ten-year life, average annual cost per company would be \$7,900. The seismographs automatically record the blasting record, so no additional costs are anticipated for recordkeeping.</p>

**Alternatives**

*Please describe any viable alternatives to the proposal considered and the rationale used by the agency to select the least burdensome or intrusive alternative that meets the essential purpose of the action. Also, include discussion of less intrusive or less costly alternatives for small businesses, as defined in §2.2-4007.1 of the Code of Virginia, of achieving the purpose of the regulation.*

The Department of Mines, Minerals and Energy (DMME) was directed to promulgate these regulatory amendments on an emergency basis in accordance with the third enactment clause of Chapter 3 of the 2005 Virginia Acts of Assembly (HB 2573). The emergency amendments will expire on August 9, 2006. This action will make the amendments permanent. DMME has no alternative to this action that would meet the mandate of the legislation.

**Regulatory flexibility analysis**

*Please describe the agency’s analysis of alternative regulatory methods, consistent with health, safety, environmental, and economic welfare that will accomplish the objectives of applicable law while minimizing the adverse impact on small business. Alternative regulatory methods include, at a minimum: 1) the establishment of less stringent compliance or reporting requirements; 2) the establishment of less stringent schedules or deadlines for compliance or reporting requirements; 3) the consolidation or simplification of compliance or reporting requirements; 4) the establishment of performance standards for small businesses to replace design or operational standards required in the proposed regulation; and 5)*

*the exemption of small businesses from all or any part of the requirements contained in the proposed regulation.*

DMME was directed to promulgate these regulatory amendments by an act of the Virginia General Assembly in 2005. The regulations are designed to protect and improve the safety of people occupying buildings near active coal mines. DMME considered less stringent compliance or reporting requirements, but determined they would not meet the mandate of the legislative action. Exempting small businesses such as small coal mining companies would not provide the public protections intended in the regulations.

**Public comment**

*Please summarize all comments received during public comment period following the publication of the NOIRA, and provide the agency response.*

The agency received no comments in response to the NOIRA for these amendments.

**Family impact**

*Please assess the impact of the proposed regulatory action on the institution of the family and family stability including to what extent 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.*

These regulatory changes are designed to help ensure that there will be no damage or injury to persons who occupy buildings near active coal mines. The amendments are being promulgated in response to recommendations from a Department of Mines, Minerals and Energy report of a coal mining accident in Wise County that resulted in the death of a three-year old child in 2004. The amendments will increase the safety and welfare of families living in areas near coal mines.

**Detail of changes**

*Please detail all changes that are being proposed and the consequences of the proposed changes. Detail all new provisions and/or all changes to existing sections.*

*If the proposed regulation is intended to replace an emergency regulation, please list separately (1) all changes between the pre-emergency regulation and the proposed regulation, and (2) only changes made since the publication of the emergency regulation.*

The proposed regulatory amendments are intended to replace an emergency regulation. The following table lists the changes between the pre-emergency regulation and the proposed regulation. No changes have been made since the publication of the emergency regulation.

Current section	Proposed new section	Current requirement	Proposed change and rationale
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number	number, if applicable		
4 VAC 25-130- 816.11	N/A	Signs and markers on permitted coal mines must be made of durable material and be maintained during the conduct of all activities to which they pertain.	<p>In addition to being made of durable material and properly maintained, permit boundary markers on areas that are located on steep slopes above private dwellings or other occupied buildings will also be required to be made of or marked with fluorescent or reflective paint or material.</p> <p>This change is essential to protect the safety and welfare of persons living or in occupied buildings near coal mines. Workers on coal mines in areas located on steep slopes above residences or occupied buildings must have clear knowledge of the mine's boundary location. If operations move beyond these boundaries, there is increased risk of releasing material off of the site. This material may travel down the steep slopes and into occupied structures, as happened in a fatal coal mine incident on August 20, 2004, in Wise County.</p>
4 VAC 25-130- 816.64	N/A	When blasting with explosives on coal mines, the coal mine operator may use a formula, called the scaled distance equation, to determine the allowable charge weight of explosives to be detonated in any 8-millisecond period and not be required to monitor blast with a seismograph.	<p>Seismic monitoring will be required whenever blasting operations on a surface coal mine are conducted within 1,000 feet of a private dwelling or occupied building. This change will eliminate the exception for seismic monitoring when the scaled distance equation is used for blasting near occupied buildings.</p> <p>This amendment is essential to protect the safety and welfare of persons living near blasting operations on coal mines. Persons and property are at risk from blasting due to air blast, ground vibration, or fly rock from improper blasting. Blasting is the most common source of complaints about coal mining operations. Monitoring every blast close to occupied buildings will enable the Department of Mines, Minerals and Energy to better determine whether blasts on coal mines exceed the maximum air blast and ground vibration requirements in the regulation.</p>