



Economic Impact Analysis Virginia Department of Planning and Budget

4 VAC 25-130 – Coal Surface Mining Reclamation Regulations
Department of Mines, Minerals and Energy
March 2, 2006

Summary of the Proposed Amendments to Regulation

Pursuant to legislative directive, the Department of Mines, Minerals and Energy (department) proposes two new requirements regarding coal mining safety. House Bill 2573 of the 2005 General Assembly directs the department to amend these regulations to require “coal mine permit boundary markers located on steep slopes above private dwellings or other occupied buildings to be made or marked with fluorescent or reflective paint or material” and to require “all 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.” The department proposes to amend these regulations so as to comply with the legislative directive.

Result of Analysis

The benefits likely exceed the costs for all proposed changes.

Estimated Economic Impact

The first proposed amendment to the regulations requires 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. There have been numerous complaints from neighbors of mining sites concerning materials falling on to their property.¹

According to the department, 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. The costs are relatively small and are likely to reduce the likelihood that persons conducting mining operations will accidentally go beyond the permitted boundary when it is dark. Given the apparent problems with property damage and health risks associated with work occurring beyond the boundary, the benefits associated with the proposal to 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 will likely produce a net benefit.

The second proposed 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 the 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 are not required to monitor the air blast or ground vibration with a seismograph. The department expects that most of the 22 companies in Virginia that operate surface coal mines will need to purchase one additional seismograph at an initial cost of \$7,000² apiece. Labor cost to operate each machine, assuming 240 working days per year, one hour per day, \$30 per hour, would be \$7,200.³ 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.⁴

The records produced by the seismographs will significantly improve the department's ability to determine whether blasts on coal mines exceed the maximum air blast and ground vibration limits in the regulation. According to the department, this amendment is being

¹ Source: Department of Mines, Minerals and Energy

² Ibid

³ Ibid

⁴ Ibid

proposed to help respond to the large number of complaints from the public about the effects of coal mine blasting on nearby residences. Indeed there have been many documented incidents of property damage and one death of a three-year old boy related to coal mine blasting. If the department finds that a blast exceeds the regulatory limits, the operator is subject to receiving a Notice of Violation (4 VAC 25-130-843.12).⁵ Violations can result in fines. The amount of the fine is based on the severity of the violation (4 VAC 25-130-845.13).⁶ If the danger is severe, a Cessation Order may be issued (4 VAC 25-130-843.11).⁷ Given the significant property damage and health risks, the benefits of accurately measuring blasting compliance would seem to exceed the introduced costs.

Businesses and Entities Affected

The proposed amendments affect the 22 companies that operate 71 surface coal mines in Virginia, as well as nearby residents and businesses. Sellers of seismographs and fluorescent/reflective materials will be affected as well. According to the department, none of the 22 firms that operate surface coal mines qualify as small businesses.

Localities Particularly Affected

The proposed regulatory amendments particularly affect the localities where coal mines currently operate, i.e., Buchanan, Dickenson, Wise, Lee, Tazewell, Russell, and Scott Counties.⁸

Projected Impact on Employment

The proposed regulations will most likely not have a large impact on employment. Sellers of seismographs and fluorescent/reflective materials will encounter increased demand for their products, but the increase is unlikely to be large enough to significantly affect employment.

Effects on the Use and Value of Private Property

If the proposed amendments do result in fewer incidents of damage to neighboring properties, the value of these properties will increase. As described earlier, costs for firms that operate surface coal mines will moderately increase.

⁵ See <http://leg1.state.va.us/cgi-bin/legp504.exe?000+reg+4VAC25-130-843.12>

⁶ See <http://leg1.state.va.us/cgi-bin/legp504.exe?000+reg+4VAC25-130-845.13>

⁷ See <http://leg1.state.va.us/cgi-bin/legp504.exe?000+reg+4VAC25-130-843.11>

⁸ Source: Department of Mines, Minerals and Energy

Small Businesses: Costs and Other Effects

According to the department, none of the 22 firms that operate surface coal mines qualify as small businesses. Small businesses that are located near surface mines will benefit from the reduced probability of property damage. Some small businesses that sell seismographs or fluorescent/reflective materials will also likely benefit.

Small Businesses: Alternative Method that Minimizes Adverse Impact

The proposed amendments are unlikely to produce adverse impacts for small businesses.

Legal Mandate

The Department of Planning and Budget (DPB) has analyzed the economic impact of this proposed regulation in accordance with Section 2.2-4007.H of the Administrative Process Act and Executive Order Number 21 (02). Section 2.2-4007.H 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. Further, if the proposed regulation has adverse effect on small businesses, Section 2.2-4007.H requires that such economic impact analyses include (i) an identification and estimate of the number of small businesses subject to the regulation; (ii) the projected reporting, recordkeeping, and other administrative costs required for small businesses to comply with the regulation, including the type of professional skills necessary for preparing required reports and other documents; (iii) a statement of the probable effect of the regulation on affected small businesses; and (iv) a description of any less intrusive or less costly alternative methods of achieving the purpose of the regulation. The analysis presented above represents DPB's best estimate of these economic impacts.