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**Committee:** Senate Committee on Environment and Public Works, Subcommittee on Water and Wildlife  
**Hearing:** The Impacts of Mountaintop Removal Coal Mining on Water Quality in Appalachia

The State of West Virginia appreciates the opportunity to be a part of the dialogue regarding mountaintop mining and its impact on water quality. Because West Virginia is home to the majority of the Appalachian highlands where mountaintop mining is practiced, the State is at the center of the debate from both a regulatory and geographical perspective.

It is important that the discussion is framed in the proper context. Mountaintop mining is one of many surface mining methods recognized and regulated by the Surface Mining Control and Reclamation Act. What must be understood is that the connection between protecting water quality and the practice of mountaintop mining is not a unique one. Nor is the assumption by many that valley fills, which have been the focal point of attention in recent months, are only associated with mountaintop mining. In fact, the debate cannot be limited to surface coal mining. Mining through streams, hard rock surface mining and development activities could warrant the same scrutiny that is being given to the use of valley fills. There are many surface mines requiring valley fills that are not mountaintop removal mines by definition. Also, the Clean Water Act and West Virginia's Water enforcement program require the same levels of protection for all mining activity.

Coal production is the leading revenue generator for West Virginia, and many in the State are concerned about losing the opportunities for future economic development associated with mountaintop mining. The greater concern for the Department of Environmental Protection, however, as protector of the State's water resources, is the unintended consequences of the Environmental Protection Agency's recent actions that have the potential to significantly limit all types of mining.

### **West Virginia Water Regulatory Program**

The Surface Mine Control and Reclamation Act (SMCRA) was enacted by Congress in 1977 to provide a comprehensive program to regulate surface coal mining and reclamation operations including mountain top mining and associated valley fills. The West Virginia Surface Coal Mining Reclamation Act (WVSCMRA) and its implementation was designed and approved to be as stringent and effective as the Federal program, which regulates coal mining under the SMCRA. In 1981, WV was approved as the primary regulating authority of coal mining activities under SMCRA.

In 1982, WV was authorized by United States Environmental Protection Agency to be the primary regulatory authority under the National Pollution Discharge Elimination System program. The West Virginia Department of Environmental Protection was designated as the

certifying authority under 401 of the CWA as to whether a proposed Federal undertaking will comply with State water quality standards.

Things have changed a great deal, particularly in the last 10 years, with regard to the scope and scale of surface mining in West Virginia. Surface mining operations have shrunk, for example there were seven draglines in 1998 compared to only three today.

The environmental programs that apply to mining have matured considerably, and the US Army Corps of Engineers and the State of West Virginia have done everything that EPA has requested:

- West Virginia developed, at EPA's urging, an Approximate Original Contour policy under SMCRA that is an engineering formula used to verify valley fills are as small as physically possible. EPA's approval of the AOC policy as optimization of fill space was sent in a formal letter to both the Corps and WVDEP.

- The EPA was concerned that mining permits were being approved by the Corps through nationwide or general section 404 permits. The mining industry in West Virginia responded and made the transition to the Individual Permit process under section 404 while other states and regions continued to use the nationwide permit process that required less review and environmental analysis.

- West Virginia has gone above and beyond the EPA's recommended water quality parameters for coal mining by assigning water-quality-based effluent limitations for mining operations that broaden the parameters for which mining operations receive assigned permit limits. Other states continue to use tech based limits that assign permit standards for pH, iron, manganese and Total Suspended Solids. West Virginia permits have limits for these parameters and a host of others such as aluminum.

- West Virginia developed an anti-degradation program that considers the ability of the receiving stream to assimilate discharges of parameters that was approved by EPA and increased the detail and complexity of the Cumulative Hydrologic Impact Assessment (CHIA) required by the 1977 Surface Mining Act.

- For the past several years the State has required every permit to include a Surface Water Runoff Analysis which is an engineered formula that assures no flooding potential from proposed mining operations. Additionally, West Virginia modified its valley fill construction rules to further assure no flooding potential in times of short, intense runoff from flash storms and thunderstorms.

- The State has participated in a multi-agency effort to establish on-site mitigation and stream reconstruction and replacement in the restored mining area to mimic the functions of headwater streams. These practices were specifically sustained by the 4th United States Circuit Court of Appeals.

During the development of the Mountain Top Mining/Valley Fill (MTM/VF) Environmental Impact Study nearly a decade ago, there were permitting protocol agreements entered into by the

Corps, the EPA and the WVDEP that outlined what needed to be included in all the regulatory applications to allow for the issuance of the various permits required. These agreed upon requirements were intended to minimize the effects of MTM/VF on water quality and the environment as a whole. The approach also makes the review of permits more consistent and provides a stable playing field for the applicant.

The WVDEP has followed the agreed upon approach. It assigns water-quality-based effluent limitations in its NPDES permits in accordance with all applicable state requirements: the West Virginia Water Pollution Control Act, W.Va. Code §§ 22-11-1 through 22-11-29; the Coal National Pollution Discharge Elimination System Rule, 47 CSR 30; Water Quality Standards Rule, 47 CSR 2; and, the Antidegradation Implementation Rule, 60 CSR 5, all of which have been approved by the EPA. In addition to complying with all applicable State requirements, the effluent limitations in the WVDEP's NPDES permits also comply with all applicable Total Maximum Daily Loads.

### **Lack of Distinction Between Mining Types**

Mountaintop mining currently is one of the recognized mining methods in the law for extracting coal, and is regulated by the State of West Virginia under the Surface Mining Reclamation Act and the Clean Water Act.

As mentioned, West Virginia has authority under the Clean Water Act, Section 401 to issue certifications ensuring that the project will comply with State water quality standards. It is this certification that the U.S. Army Corps of Engineers uses to determine whether a 404 permit allowing the construction of a valley fill will be issued.

Valley fills are not unique to mountaintop mining, but are, in fact, a necessary part of many mining practices – including those for hard rock, other minerals, ores, refuse fills and deep mines.

### **West Virginia Concerns Regarding Recent EPA Actions**

The consequences of the EPA's recent position moves West Virginia and the nation toward the elimination of valley fills. In fact, EPA's position cannot be limited only to mining related fills. If these impacts are real, they are real for all earth moving activities and would impact highway construction and other development activities.

With the exception of mitigation, there has been no change in the law since the Clinton administration to justify the sharp change in direction that the EPA has taken. The only new development that appears to have precipitated the EPA to change its position on valley fills is the publication of a study conducted by the EPA's Region 3 freshwater biology group in 2008 (Pond, et al., 2008). The WVDEP does not believe that this study justifies the sweeping change in regulatory approach the EPA is making.

Based on the Pond study, the EPA contends that water quality is not being protected downstream of the fills proposed by mining companies. In West Virginia, downstream water quality is principally regulated through the NPDES permit issued by the WVDEP, which believes that the NPDES permits it issues for these types of mining operations fully comply with all requirements, and the recently published Pond study does not change this belief. In fact, when WVDEP is satisfied that the proposed activity is protective, it issues a certification under section 401 of the CWA, over which it has authority.

The EPA contends that these mines will violate one of the State's narrative water quality criteria. This water quality standard prohibits a "significant adverse impact to the . . . biologic component[] of aquatic ecosystems." The Pond study concludes that this standard has been violated downstream from valley fills associated with mining operations, based on its application of two biologic assessment tools, the West Virginia Stream Condition Index (WVSCI) and the draft Genus Level Index of Most Probable Stream Status (GLIMPSS), to samples of benthic macroinvertebrate life taken from these streams.

A first observation about this study is that West Virginia does not use the draft GLIMPSS in its assessment of the biologic health of State streams. Various activities will need to be accomplished before GLIMPSS is finalized and put into regulatory use. Those activities include scientific peer review, allowing opportunity for public comment and the establishment of implementation thresholds. Second, WVDEP uses the WVSCI to assess biological integrity under the narrative water quality criterion. This practice has been utilized since 2002 with EPA approval. These tools are just that, tools. They are not stand alone determinants of compliance with the narrative criterion. Any application of these assessment tools in determining compliance with the narrative criterion must faithfully apply the language of the standard itself, which prohibits significant adverse impacts on the biologic component of the aquatic ecosystem. In that regard, the WVDEP considers streams with WVSCI scores less than 60.6 as biologically impaired.

Without evidence of any significant impact on the rest of the ecosystem beyond the diminished numbers of certain genus of mayflies, the State cannot say that there has been a violation of its narrative standard.

### **Alternatives/Avoidance/Minimization**

Beyond the water quality issues, the EPA also questions whether the extent of the fills, as proposed, have been sufficiently avoided and minimized. The agency is questioning whether application of the Approximate Original Contour formulae would result in less aerial extent of fill. Nine years ago, the EPA agreed that it would accept the application of the AOC and AOC + formulae as determinative of whether the extent of fill proposed in connection with a surface mine site has been sufficiently avoided and minimized. Leaving a flat area on the mountain top to accommodate emergency flood relief housing on the Highland project and construction of the King Coal Highway on the Consol of Kentucky and Frasure Creek projects will not cause the extent of the fill to be larger than it would be if these sites were restored to their approximate original contour. The toes of the proposed fills for these projects would not be moved upstream if they were reclaimed to AOC because the AOC formula was used to establish the location of

the toes of these fills. The volume of spoil material that would have been used in reclamation to approximate original contour (rebuilding the ridgelines that are present in the pre-mining topography) will be spread out over the extent of the fill and backfill areas to provide a sufficient footprint of flat land for the proposed emergency flood relief housing and highway portions of these projects. As a result of spreading this material out instead of using it to rebuild the ridgeline, the elevation of the top of the fill will be higher than the target fill elevation dictated by the AOC formula. Despite that AOC is not being restored on the Highland, Consol of Kentucky and Frasure Creek projects, the extent of the fill is no greater than if these projects were reclaimed to AOC.

The approach EPA has taken in its objection letters indicate that EPA is hostile to post-mining land uses that call for something other than a return of mined land to its approximate original contour (AOC). This approach is contrary to the intent of Congress regarding development of mined lands expressed by its adoption of the federal surface mining act. The Report of the House of Representatives' Committee on Interior and Insular Affairs, H.R. 95-218, which accompanied and recommended adoption of the bill that became the Surface Mining Control and Reclamation Act of 1977, said:

[S]urface mining also presents possible land planning benefits as such mining involves the opportunity to reshape the land surface to a form and condition more suitable to man's uses. In such instances, the overburden and spoil become a resource to achieve desired configurations rather than a waste material to be disposed of or handled by the most economic means. The performance standards recognize that return to approximate premining conditions may not always be the most desirable goal of reclamation and thus appropriate exceptions to the general requirements are provided.

H.R. 95-218, p. 94. This committee report also went on to state:

[I]t may not always be best to return mountain lands to their approximate original contour. In various areas such as the mountainous Appalachian coalfields, there is a paucity of flood free, relatively flat developable land. Thus some surface mining operations offer the opportunity for creating a resource which otherwise might not be available or might be prohibitively expensive.

The mining application process and environmental standards allow the regrading and spoil placement requirements for mountaintop mining in order to achieve post mining land uses including industrial, commercial, agricultural, residential, or public facility (including recreational facilities) development.

H.R. 95-218, p. 124. To take advantage of the opportunity to create flat, developable lands in Appalachia presented by surface coal mining operations, Congress specifically provided for variances from the AOC requirement in 30 U.S.C. § 1265( c) so industrial, commercial, agricultural, residential or public facilities, including recreational facilities could be created. This opportunity is very important in the southern West Virginia coal mining region where no flat land exists. To assure that these opportunities are not lost, this year, the State has adopted legislation that requires a mine's post-mining land use to comport with county master land use plans that are developed by local economic development officials and approved by the State's

Office of Coalfield Community Development. These master land use plans target lands which are proximal to transportation or other infrastructure for development, so these areas of the State, which historically have had little economic activity other than coal mining, can develop sustainable post-coal economies. EPA's objection to land uses which would allow for development of mined lands is contrary to the expressed intention of both the Congress and the West Virginia Legislature.

## **Problems**

The recent increased scrutiny by the EPA over the Corps of Engineers authority to issue valley fill permits is intended to be a way to curb mountaintop mining. The EPA has clearly stated this on numerous occasions. The agency's selected venue has been to attack West Virginia's 401 certification program, by claiming the state is failing to enforce its own rules, which have gone through proper rule making channels and have been approved by the EPA as being protective. This position by the EPA has evolved out of Region 3 in Philadelphia since January in the absence of a Regional Administrator appointed by President Obama.

## **Impact on West Virginia's Economy**

West Virginia participated in a multimillion-dollar, multi-agency Environmental Impact Study that included studies on the ability to extract coal in Central Appalachia without fills. This study predicted a 90 percent reduction in recoverable coal reserves at the 11 mining sites examined. Most notable was the fact that one of the mines was a large underground mining complex with a refuse fill, which also requires a section 404 permit. All of the coal at the underground mining complex was deemed unmineable because of the inability to construct a refuse fill.

Without valley fills, the effect on coal production in Appalachia would be felt in the world's energy markets. The elimination of valley fills would effectively bring coal production to a point that it would be difficult to sustain energy production and the impact to the State's economy would be staggering.

Valley fills are a key component of post-mine-land-use development and any move toward elimination of valley fills would jeopardize the future opportunity to develop land for a meaningful purpose after mining. This would directly affect the post-mine-land-use legislation signed into law last week by Governor Joe Manchin, and could stifle economic development on former mine sites in communities throughout Appalachia.

## **Impact on Energy Production**

In West Virginia, nearly 100 percent of the State's energy needs are supplied by coal-fired power plants. Nearly 50 percent of the nation's energy needs are supplied in the same manner.

It is one of few energy sources that can support the nation's current electrical power grid configuration. While nearly everyone agrees that moving to a more diversified energy portfolio is eminent, today coal remains a key component to gaining energy independence.

Even as coal's future is being debated, West Virginia is positioning itself to continue to be an energy producing state. In the past month, Governor Manchin has signed into law three pieces of legislation to accomplish just that.

One piece of legislation requires coal burning power plants to diversify their energy portfolios to include alternative and renewable energy. A second creates a regulatory framework for permitting carbon capture and sequestration and the third transforms reclaimed surface-mined lands into a resource to be used in a post-mining economy.

West Virginia and the nation need jobs and coal. Nothing in the debate over mountaintop mining is going to change that in the short term. But, in the long term, as we mine and use a nonrenewable resource and as we develop alternative energy sources, the people that live in the steep, hostile terrain of southern West Virginia need a future, too. The opportunities created by surface mining will be gone if not taken advantage of now. We must have a base upon which to build our future and surface mining provides a key piece that base.