

EPA Issues Comprehensive Guidance to Protect Appalachian Communities From Harmful Environmental Impacts of Mountain Top Mining

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WASHINGTON - The U.S. Environmental Protection Agency (EPA) today announced a set of actions to further clarify and strengthen environmental permitting requirements for Appalachian mountaintop removal and other surface coal mining projects, in coordination with federal and state regulatory agencies. Using the best available science and following the law, the comprehensive guidance sets clear benchmarks for preventing significant and irreversible damage to Appalachian watersheds at risk from mining activity.

Mountaintop removal is a form of surface coal mining in which explosives are used to access coal seams, generating large volumes of waste that bury adjacent streams. The resulting waste that then fills valleys and streams can significantly compromise water quality, often causing permanent damage to ecosystems and rendering streams unfit for swimming, fishing and drinking. It is estimated that almost 2,000 miles of Appalachian headwater streams have been buried by mountaintop coal mining.

"The people of Appalachia shouldn't have to choose between a clean, healthy environment in which to raise their families and the jobs they need to support them. That's why EPA is providing even greater clarity on the direction the agency is taking to confront pollution from mountain top removal," said EPA Administrator Lisa P. Jackson. "We will continue to work with all stakeholders to find a way forward that follows the science and the law. Getting this right is important to Americans who rely on affordable coal to power homes and businesses, as well as coal communities that count on jobs and a livable environment, both during mining and after coal companies move to other sites."

EPA's Actions:

- **Improved Guidance and Clarity:** EPA is communicating comprehensive guidance to its regional offices with permitting responsibility in Appalachian states. The guidance clarifies existing requirements of the Section 402 and 404 Clean Water Act permitting programs that apply to pollution from surface coal mining operations in streams and wetlands. The guidance details EPA's responsibilities and how the agency uses its Clean Water Act (CWA) authorities to ensure that future mining will not cause significant environmental, water quality and human health impacts. EPA also expects this information will provide improved consistency and predictability in the CWA permitting process and help to strengthen coordination with other federal and state regulatory agencies and

mining companies.

- **Strong Science:** EPA is making publicly available two scientific reports prepared by its Office of Research and Development (ORD). One summarizes the aquatic impacts of mountaintop mining and valley fills. The second report establishes a scientific benchmark for unacceptable levels of conductivity (a measure of water pollution from mining practices) that threaten stream life in surface waters. These reports are being published for public comment and submitted for peer review to the EPA Science Advisory Board.
- **Increased transparency:** EPA is creating a permit tracking Web site so that the public can determine the status of mining permits subject to the EPA-U.S. Army Corps of Engineers Enhanced Coordination Procedure (ECP).

A growing body of scientific literature, including previous and new studies performed by EPA, show significant damage to local streams that are polluted with the mining runoff from mountaintop removal. To protect water quality, EPA has identified a range of conductivity (a measure of the level of salt in the water) of 300 to 500 microSiemens per centimeter. The maximum benchmark conductivity of 500 microSiemens per centimeter is a measure of salinity that is roughly five times above normal levels. The conductivity levels identified in the clarifying guidance are intended to protect 95 percent of aquatic life and fresh water streams in central Appalachia.

EPA will solicit public comments on the new guidance. The guidance will be effective immediately on an interim basis. EPA will decide whether to modify the guidance after consideration of public comments and the results of the SAB technical review of the EPA scientific reports.

The EPA guidance identifies improvements in mining practices and operations that will reduce adverse impacts on water quality. EPA will continue to work with coal companies that are interested in modifying their projects to reduce their environmental footprint and prevent harm to water quality and human health. Earlier this year, EPA approved the Hobet 45 permit in West Virginia. Working with the mining company, EPA was able to reduce stream impacts by almost 50 percent and minimize mine runoff into surface waters. Those changes helped permanently protect local waters, maximize coal recovery and reduce costs for the operators.

In contrast, EPA recently proposed to significantly restrict or prohibit mountaintop mining at the Spruce No. 1 surface mine in Logan County, W. Va. Attempts at dialogue with the company failed to ensure a significant decrease of environmental and water quality impacts from the project. The Spruce No. 1 mine, as proposed, would bury more than seven miles of headwater streams, directly impact 2,278 acres of forestland, and degrade water quality in streams adjacent to the mine. The project was permitted in 2007 and subsequently delayed by litigation.

EPA's guidance offers recommendations to its regions on the application of the National Environmental Policy Act (NEPA) to surface coal mining projects permitted by the U.S. Army Corps of Engineers. The Corps is separately announcing plans for rulemaking to

expand the scope of NEPA review. EPA is supportive of this effort and will work closely with the Corps.

All the documents: <http://www.epa.gov/owow/wetlands/guidance/mining.html>

Fact Sheet on EPA Guidance and Scientific Reports

Additional Comprehensive Guidance

EPA is issuing comprehensive guidance clarifying the standards that its regional offices should apply in permitting reviews of Appalachian surface coal mining projects under the Clean Water Act (CWA). This guidance directs EPA field staff to coordinate with their federal and state regulatory partners to strengthen the environmental review of new Appalachian surface coal mining projects and to improve protection of the communities' local water and environment. More specifically, the guidance:

- Incorporates the latest scientific information in clarifying how CWA permits should assure compliance with existing water quality standards to protect the use of streams by communities and to ensure healthy aquatic life.
- Clarifies how CWA requirements apply to the disposal of mining overburden in streams to reduce the size and number of valley fills, to limit water quality contamination of streams near mining operations, and to prevent significant environmental degradation of streams and wetlands.
- Improves opportunities for the voices of adversely affected Appalachian communities to be heard in the process of reviewing proposed new mining operations.

EPA Releases Two Draft Scientific Reports for Public Comment

- Field-Based Aquatic Life Benchmark for Conductivity

This draft report adapts EPA's traditional approach for developing water quality criteria to field data in central Appalachia in order to develop a conductivity benchmark protective of stream life in Appalachian surface waters. Conductivity is a measure of the level of salinity (salt) in the water. There are mining materials that are dumped or runoff into water that can raise the salinity level that turns fresh water into salty water. When this happens, living organisms have difficulty surviving because they cannot tolerate the high salinity level.

The draft report makes the following conclusions:

- The salinity of water has been shown to negatively affect aquatic organisms (stream life).
- By plotting the conductivity levels at which organisms are no longer observed in streams, we can determine a level of conductivity that results in their loss. EPA identified a benchmark of 300 microSiemens per cm (units of conductivity) that protects 95 percent of aquatic organisms living in streams in central Appalachia.
- EPA derived this benchmark using more than 2,000 field samples

collected in West Virginia. These results were validated using data from Kentucky.

- Although the method is applicable to any region, the value 300 is only applicable to Central Appalachian streams containing the types of salts found in those streams.
 - Additional analyses demonstrate that the observed effects on the aquatic community are due types of salts that are consistent with minerals leached from mountaintop mining operations and not to other variables that were evaluated.
- Mountaintop Mining / Valley Fill Impacts Report

EPA's Office of Research and Development (ORD) conducted a literature review of peer-reviewed studies focusing on aquatic environmental and water quality impacts of mountaintop mining and valley fills. The draft report among other conclusions, found:

- Burial of headwater streams by valley fills causes permanent loss of ecosystems.
- Concentrations of salts as measured by conductivity are, on average, 10 times higher downstream of mountaintop mines and valley fills than in un-mined watersheds.
- The increased levels of salts disrupt the life cycle of freshwater aquatic organisms and some cannot live in these waters.
- Water with high salt concentrations downstream of mountaintop mines and valley fills is toxic to stream organisms. To date, there is no evidence that streams that undergo a restoration process have returned to their normal ecological functions after the mining is completed.