

Summary of Final Guidance on Improving EPA Review of Appalachian Surface Coal Mining Operations Under the Clean Water Act, National Environmental Policy Act, and the Environmental Justice Executive Order

July 21, 2011

On July 21, 2011, EPA released final guidance to its Appalachian Regional offices to clarify EPA's roles and expectations, in coordinating with Federal and State partners, to assure more consistent, effective, and timely review of Appalachian surface coal mining operations with respect to provisions of the Clean Water Act (CWA), the National Environmental Policy Act (NEPA), and the Environmental Justice Executive Order (E.O. 12898).¹

EPA's final guidance replaces interim guidance that was released on April 1, 2010. While developing this final guidance, EPA has worked to ensure that it reflects the most recent science, responds to public comments, and reflects the experience EPA has gained in working with its Federal and State partners:

- **Peer-Reviewed Science**: EPA's final guidance reflects additional peer-reviewed science on the impacts of mountaintop mining and valley fills on Appalachian streams and the communities that depend on them. In particular, it incorporates the recommendations provided by EPA's independent Science Advisory Board, which reviewed two draft EPA scientific reports and was supportive of their methodology and conclusions.
- **Public Input**: EPA's final guidance was developed after reviewing more than 60,000 public comments received by EPA during an eight-month comment period.
- **Implementation Experience**: EPA's final guidance recognizes the experience that EPA has gained over the past year in implementing the April 1, 2010 interim guidance, working collaboratively with state and federal agencies, mining companies, and the public.

EPA's final guidance retains EPA's expectation that permits for Appalachian surface coal mining operations reflect best-available science and comply with the law, while providing additional clarity and flexibility on the use of Clean Water Act tools in protecting Appalachian streams and safeguarding the health of Appalachian communities.

Clean Water Act Section 402

EPA's final guidance reiterates the importance of protecting water quality through state-issued National Pollutant Discharge Elimination System (NPDES) permits for Appalachian surface coal mining operations. As EPA Regions exercise their Clean Water Act responsibility to oversee authorized state NPDES programs, Regions should work to ensure that permits comply with the Clean Water Act in the following ways:

- **Ensure Adequate Effluent Characterization**: The applicant should characterize the effluent from the proposed operation using facility-specific data, data from similar mining operations, or data submitted in support of permit applications under other laws.
- **Conduct Adequate Reasonable Potential Analyses**: The permitting authority should conduct an adequate analysis as to whether a discharge has the reasonable potential to

¹ This summary of EPA's final guidance is provided for informational purposes only. It does not by itself provide guidance to EPA's Regional offices. To view the actual guidance document, please visit <http://www.epa.gov/owow/wetlands/guidance/mining.html>.

cause a violation of both narrative and numeric water quality standards. States should meaningfully implement narrative standards and reflect best-available science, such as the 300 $\mu\text{S}/\text{cm}$ value derived in EPA's final conductivity benchmark report² and 500 $\mu\text{S}/\text{cm}$ described in Pond et al. 2008.³

- Set Water Quality-Based Effluent Limits: For parameters that are shown to have reasonable potential, the permitting authority should set water quality-based effluent limits necessary to achieve water quality standards. With respect to conductivity, states can implement this requirement through a numeric limit for conductivity or a numeric effluent limitation for other parameters, presuming such a limitation is scientifically defensible and adequately protective.
- Incorporate WET Limits: Permits should also generally include a limit for Whole Effluent Toxicity (WET) where reasonable potential exists, but such limits alone are generally not protective unless coupled with other numeric effluent limits.
- Incorporate Other Permit Conditions: The permitting authority may also include other permit conditions to protect narrative standards, such as measurements of the in-stream biological community (bioassessment), Best Management Practices (BMPs) for reducing downstream water quality concerns, water quality offsets, and sequencing of valley fills (whereby a multiple-fill project is constructed one fill at a time so as to demonstrate water quality protection).
- Address Other Permitting Considerations: The permitting authority should effectively implement antidegradation analyses in support of any lowering of water quality. Regions should also work with states to ensure protective general permits, address watershed-level water quality impacts in addition to localized effects, and ensure adequate consideration of environmental justice issues and adequate community participation in the permitting process.

Clean Water Act Section 404

As Regions review permit applications for surface coal mining activities under Section 404 of the Clean Water Act, they should ensure that permits comply with the Section 404(b)(1) Guidelines and other applicable Clean Water Act regulations in the following ways:

- Analyze Less Damaging Practicable Alternatives: Regions should coordinate with state and federal agencies to find ways to reduce impacts to waters of the United States.
- Protect Against Water Quality Standards Violations: Regions should evaluate the extent to which a proposed project has the potential to violate water quality standards, consistent with best-available science. Regions should inform the U.S. Army Corps of Engineers (Corps) of EPA's concerns if EPA believes that the project, considering permit conditions imposed under other authorities, is likely to violate such standards.
- Prevent Significant Degradation: Regions should be informed by the available science on the downstream water quality effects of surface coal mining operations, including the 300-500 $\mu\text{S}/\text{cm}$ peer-reviewed conductivity science described above. To prevent significant degradation, Regions should, for example, recommend permit conditions that

² *A Field-Based Aquatic Life Benchmark for Central Appalachian Streams* (Final Report). This report and the SAB's final review report are available at <http://www.epa.gov/owow/wetlands/guidance/mining.html>.

³ Pond, G.J., M.E. Passmore, F.A. Borsuk, L. Reynolds, and C.J. Rose. 2008. *Downstream Effects of Mountaintop Coal Mining: Comparing Biological Conditions Using Family- and Genus-Level Macroinvertebrate Bioassessment Tools*. *J. N. Am. Benthol. Soc.* 27(3):717-737.

include numeric triggers for conductivity (or similar parameters), that are tied to adaptive management actions, and that incorporate offsets in already degraded watersheds (as appropriate) in order to promote watershed-level restoration.

- **Minimize Impacts:** Regions should recommend implementation of appropriate BMPs on a case-by-case basis to help prevent downstream water quality impacts from conductivity, selenium, and other parameters. Techniques could include materials handling plans, fill construction best practices, sediment pond impact reductions, and sequencing of multiple valley fills.
- **Adequately Mitigate for Project Impacts:** Regions should ensure that adequate structural and functional assessments are conducted and that mitigation timeframes, monitoring, and adaptive remedial action are adequately incorporated. Regions should carefully review proposals for stream creation and ditch conversion, which the scientific literature has shown may not compensate for lost stream functions.

Regions should also work to ensure that Section 404 permits require adequate water quality and biological monitoring and that the Regions evaluate and make recommendations for mitigating potential environmental justice concerns while ensuring effective public participation.

Clean Water Act Section 401

EPA Regions should work with states to ensure that they meaningfully utilize their Section 401 certification authority in order to protect state water quality standards.

National Environmental Policy Act (NEPA)

Regions should work with the Corps and the Office of Surface Mining (OSM), as appropriate, to:

- Ensure the public availability of key NEPA documents, such as draft environmental assessments;
- Engage with local communities, including low-income and minority populations, to identify potential adverse human health and environmental impacts and mitigation measures;
- Conduct appropriate watershed-scale cumulative impact analysis;
- Review the use of mitigation measures to ensure that they will be effective at avoiding or compensating for significant impacts; and
- Recommend preparation of an Environmental Impact Statement (EIS) when impacts are not reduced to levels below significance.

Environmental Justice Executive Order (E.O. 12898)

Regions should work with States, the Corps and OSM to ensure that applicable provisions of the Clean Water Act and NEPA are recognized as opportunities to address environmental hazards in minority communities and low-income communities, to prevent disproportionate environmental and human health effects, and to provide transparency and meaningful participation by these communities in government decision-making regarding surface coal mining.