

Response to Public Comments on April 1, 2010 Interim EPA Guidance Memorandum 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 April 1, 2010, EPA released interim guidance to promote more consistent, effective, and timely review of Clean Water Act permits associated with Appalachian surface coal mining operations, in coordination with Federal and State regulatory agencies. Concurrent with release of the interim guidance, EPA began an eight-month public comment period, which concluded on December 1, 2010. During this public comment period, EPA received more than 60,000 public comments. EPA released final guidance on July 21, 2011.

This document responds to the major areas of concern raised by public commenters on major areas of EPA's April 1, 2010 interim guidance, and describes the major type (or types) of commenter who provided each comment. This document does not respond to comments to which EPA has already responded through correspondence to the commenter. It also does not summarize comments that focus primarily on the Science Advisory Board (SAB) review of two draft EPA scientific reports, on the Enhanced Coordination Procedures (ECP) for Section 404 permit applications, or on EPA's Permit Quality Review (PQR) of State Clean Water Act Section 402 permits. It also generally does not include comments that recommend that EPA take actions which EPA lacks authority to implement without regulatory or statutory changes.

Overall Comments

Comment: EPA did not provide a sufficient opportunity for participation by the public or by States, and should have provided an opportunity for such review and comment before being issued (States, Industry, Federal agency).

Response: EPA issued interim guidance on April 1, 2010 in order to provide additional clarity and transparency regarding EPA's review of Clean Water Act permits or permit applications associated with Appalachian surface coal mining operations. As part of that release, EPA provided for an eight-month public comment period. We believe this public comment period provided an opportunity for meaningful public participation, and EPA's final guidance reflects this public input. Moreover, the final guidance reflects the results of the ongoing dialogue between EPA and Appalachian States regarding permits under Clean Water Act Section 402.

Comment: EPA's guidance should have been issued through rulemaking under the Administrative Procedure Act (APA) and should be withdrawn until it goes through that process (States, Industry, Congressional representatives).

Response: EPA disagrees. The guidance does not represent a new law or regulation and is not binding. EPA's interim guidance represents EPA's interpretation of best-available science and existing legal requirements in the context of Clean Water Act permits associated with Appalachian

surface coal mining operations. The guidance also reiterates the regulations that States must implement in permitting and suggests options for how States can draft permits that are consistent with those regulations. Through its final guidance, EPA has further clarified the non-binding nature of its guidance and has provided examples (Appendix 6) of how the interim guidance has been applied as guidance and not as a binding rule.

Comment: EPA should further strengthen the guidance and further protect streams through rulemaking (Environmental groups).

Response: EPA believes that its final guidance reflects a strengthened scientific foundation for EPA's recommendations regarding the environmental and water quality impacts of Appalachian surface coal mining operations. EPA believes that existing regulations provide strong protection for streams if implemented consistently, and EPA's guidance is a significant step toward achieving that protection. Any commitment to conduct rulemaking associated with Appalachian surface coal mining operations would be conducted outside the scope of EPA's final guidance.

Comment: EPA's guidance is unnecessary. Existing laws and regulations are sufficient, the Appalachian environment is cleaner than ever, and existing requirements simply need to be uniformly enforced (Local officials).

Response: EPA agrees that existing laws and regulations provide strong protections for streams and its guidance is designed to aid in consistent implementation of those existing requirements. The guidance does not represent a new law or regulation and is not binding. EPA believes that its interim guidance has helped to provide additional clarity and transparency in the permitting process through describing best-available science and existing legal requirements in the context of Clean Water Act permits associated with Appalachian surface coal mining operations. As EPA makes progress in improving water quality and protecting the Appalachian environment and human health, peer-reviewed science continues to document environmental impacts of concern. EPA's final guidance is designed to help ensure that Clean Water Act permits are consistent with best-available science and the law.

Comment: More, stronger guidelines are needed to reduce or eliminate the burying or poisoning of streams in Appalachia, which can cause flooding, downstream pollutant leaching, biodiversity loss, and loss of ecosystem services (Local citizen, environmental groups).

Response: EPA recognizes the significant environmental impacts of Appalachian surface coal mining operations as described in the peer-reviewed scientific literature. EPA believes that its final guidance appropriately reflects this current science and will help ensure that EPA Regions recognize and incorporate this science as they work to review Clean Water Act permits for Appalachian surface coal mining operations. The guidance also offers ways to improve permitting actions so that States can better protect streams and issue permits consistent with the goals and requirements of the Clean Water Act. Any strengthened future guidelines that would require changes to laws and regulations would need to be developed outside the scope of this guidance.

Comment: EPA's guidance is unclear about whether it applies to surface coal mining, mountaintop mining, underground mining, or other mining practices, and is unclear about where it applies geographically. This ambiguity makes it clear that EPA is targeting surface coal mining (States, Industry).

Response: EPA's interim and final guidance are focused on addressing discharges associated with surface coal mining operations, which pertains to a variety of surface coal mining methods. EPA's guidance is not designed to address underground mining operations. EPA believes that the overall six-state geographic focus of its interim guidance was clear and consistent with the June 11, 2009 interagency Memorandum of Understanding on Appalachian surface coal mining. EPA's final guidance maintains this overall geographic area of focus.

Based on recommendations from EPA's SAB, EPA's final guidance acknowledges that the conductivity benchmarks described in the guidance should not be used beyond the areas (ecoregions) of West Virginia and Kentucky in which the conductivity benchmark was derived without further validation. EPA's consideration of the guidance and its conductivity benchmarks will be conducted on a case-by-case basis, and EPA stands ready to work with States, permit applicants, and the public to discuss the relevance of the guidance's specific recommendations in a particular case.

Comment: EPA's guidance usurps States' roles under the Clean Water Act, Corps roles under Section 404 of the Clean Water Act, and State roles under the Surface Mining Control and Reclamation Act (SMCRA), and this is contrary to principles of cooperative federalism (States, Industry, Congressional representatives).

Response: EPA's interim and final guidance are designed to provide recommendations to EPA Regions 3, 4, and 5 as they review permits or permit applications for discharges associated with Appalachian surface coal mining operations. The guidance does not change the authorities provided to States and the U.S. Army Corps of Engineers under the Clean Water Act, or to States pursuant to SMCRA. The guidance also does not change EPA's oversight authorities described in Sections 402 and 404 of the Clean Water Act. EPA has worked effectively with both State and Federal agencies before and since April 1, 2010, and is eager to continue this dialogue in the future.

Comment: EPA should work more closely with other Federal agencies to protect species and the environment (Environmental groups).

Response: EPA agrees that close coordination with other State and Federal agencies is critical to ensuring that surface coal mining operations are consistent with the law and best-available science. EPA's final guidance reflects the agencies' recent close coordination on reviewing surface coal mining permits and more recent science documenting the environmental effects of Appalachian surface coal mining operations.

Comment: EPA's guidance is infeasible with respect to conductivity, valley fill sequencing, and in other areas, and is imposing unnecessary or indefensible requirements (States, Industry, Private citizens).

Response: As identified more prominently in EPA's final guidance, EPA believes that consideration of scientific information and recommendations for reducing water quality impacts should always take into account site-specific factors. With respect to both conductivity and sequencing, permits have been issued by the U.S. Army Corps of Engineers since April 1, 2010 that include conductivity permit conditions tied to valley fill sequencing. Monitoring data show that EPA's conductivity benchmarks are being met and that EPA's recommendations for protecting water quality are in fact feasible. EPA Regions will continue to review permits associated with proposed mining projects and will recommend permitting approaches that reflect best-available science and the Clean Water Act. EPA believes that permits issued since April 1, 2010 that have included such conditions have improved environmental protection and enabled projects to move forward consistent with applicable law. EPA will continue to work closely with Federal and State agencies, the mining industry, and affected communities to encourage environmentally responsible surface coal mining practices that protect communities, their health, and the environment on which they depend.

Science and Conductivity

Comment: EPA's interim guidance was based on incomplete and biased science and data, particularly on the impacts of conductivity on aquatic life. The impacts of mining operations are similar to that of other sectors that are important but ignored, and causation is unclear. EPA should peer review its science first and obtain more data (States, Industry).

Response: EPA's interim guidance was based on the best-available science at the time of its issuance. Since its release, EPA has obtained independent peer review of two scientific reports, and the SAB endorsed EPA's methods and conclusions, particularly the effects of conductivity on aquatic life and the causal link between surface coal mining, elevated conductivity, and downstream aquatic life effects. EPA's final guidance incorporates the results of these scientific reviews and is based on an even stronger peer-reviewed scientific foundation. EPA will continue to review available scientific literature and will ensure that States and Regions have the best-available science available to them as they review permits and make permitting decisions.

Comment: EPA's guidance establishes a numeric water quality standard for conductivity in Appalachian States and thereby usurps State roles (States, industry) / EPA should develop a water quality criterion for conductivity (Environmental groups, private citizens).

Response: EPA's interim guidance and final guidance do not establish a water quality standard for conductivity. Rather, they directly present the results of high-quality scientific research in the context of how elevated levels of conductivity affect aquatic life. As outlined more prominently in EPA's final guidance, EPA believes that these conductivity benchmarks are relevant to Clean Water Act permit reviews but should be considered in light of any high-quality, site-specific information that may exist. Any decision to subsequently develop a recommended water quality criterion for

conductivity pursuant to Section 304(a) of the Clean Water Act would be made outside the context of EPA's guidance.

Comment: EPA's conductivity benchmark should be (lower/higher) and should apply to (more/fewer) areas based on the data on which it was based (Environmental groups/Appalachian States and Industry).

Response: The conductivity benchmarks in EPA's interim and final guidance flow directly from EPA's conductivity benchmark report and Pond et al. (2008), both of which have been peer reviewed. EPA has recognized and considered the results of these studies in its guidance to inform Regional review of Clean Water Act permits. As recommended by the SAB, EPA's final guidance refines the applicability of the conductivity benchmark to include only those areas (ecoregions) of West Virginia and Kentucky in which the benchmark was derived or validated. In this way, EPA's final guidance directly incorporates this peer-reviewed science regarding the impacts of specific conductivity levels on aquatic life and the geographic areas in which this scientific information should be used.

Comment: EPA's conductivity benchmarks exceed background levels and are above mineral water conductivity levels (Industry).

Response: As described in EPA's final conductivity benchmark report, background conductivity levels in undisturbed Appalachian headwaters streams are very low (70-150 $\mu\text{S}/\text{cm}$ on average) and lower than the conductivity benchmarks described in peer-reviewed scientific literature. EPA's final guidance better articulates EPA's goal that in watersheds with already-high conductivity (as a result of previous mining or other factors), EPA should work with States and the Corps to ensure that Clean Water Act requirements are met and to improve watershed condition. Because EPA's conductivity benchmark is designed to protect aquatic life in central Appalachian streams, not to protect drinking water, comparisons between concentrations in mineral water and Appalachian streams are inappropriate.

Comment: EPA should use constituent ions rather than conductivity specifically (Industry).

Response: EPA recognizes that conductivity is a measure of salinity, or the level of ions dissolved in water. The SAB review of EPA's conductivity benchmark report recognizes the importance of determining the ionic composition of the conductivity mixture when assessing its potential impacts on aquatic life. However, EPA's conductivity benchmark report (with support from the SAB) identified a common ionic mixture of sulfate and bicarbonate in Appalachian streams and concluded that conductivity itself is an effective measure of ionic toxicity in these circumstances. EPA's final guidance explicitly recognizes conductivity as a recommended and straightforward approach for monitoring and permitting, but also makes clear that approaches that involve a suite of constituent ions may also be an appropriate mechanism for developing permit limits or conditions.

Clean Water Act Section 402

Comment: States have existing procedures for implementing their narrative standards that EPA should consider rather than its own guidance. EPA's guidance, in contrast, is a one-size-fits-all approach that ignores other methods like WET or BMPs and is a formal interpretation of State water quality standards (States, Industry).

Response: EPA's interim guidance was issued to provide EPA's recommendations to Regions 3, 4, and 5 on considerations for their review of permits for discharges associated with surface coal mining operations. It did not represent a formal interpretation of State narrative water quality standards, nor does EPA's final guidance. EPA agrees that each State's narrative standards are different, and EPA's final guidance explicitly acknowledges this (see Appendix 3). As outlined in EPA's final guidance, a variety of permitting approaches are available to help protect narrative standards, such as numeric limits for conductivity or conditions that incorporate other Clean Water Act tools, such as Whole Effluent Toxicity (WET), Best Management Practices (BMPs), and other methods.

Comment: EPA is usurping State roles and exercising unnecessary oversight in States with authorized National Pollutant Discharge Elimination System (NPDES) permitting programs (States).

Response: EPA's interim guidance and final guidance clearly articulate EPA's longstanding role to oversee authorized State NPDES permitting programs. That oversight role is established by Section 402(d) of the Clean Water Act. Since April 1, 2010, EPA has used its interim guidance to inform its review of State permitting under Section 402 and, where appropriate, has provided its concerns about a specific permit to the State, based on the Clean Water Act and EPA's implementing regulations. In some cases, EPA has objected to a State permit that did not comply with critical provisions of the Clean Water Act, and continues to work with States to resolve remaining concerns. As outlined in Appendix 6, in reviewing Section 402 permits, EPA has consistently applied the Clean Water Act and implementing regulations, rather than the interim guidance.

Comment: EPA should work to ensure data quality in self-reported data provided by mining operations to prevent fraudulent data, and should review data that are provided (Environmental groups).

Response: EPA agrees that high-quality data are required in order to conduct necessary Clean Water Act analyses of discharges from surface coal mining projects. Both EPA's interim guidance and final guidance reinforce the need for effective permitting analyses under both Clean Water Act Sections 402 and 404 to characterize the impacts of likely discharges and to set appropriate limits. EPA Regions will continue to review proposed permits, permit applications, and monitoring data from permitted operations to ensure that the data provided by agencies and applicants is of high quality and is sufficient for making Clean Water Act decisions.

Comment: EPA should object to more Section 402 permits, regardless of whether the State has signed off on a permit or agrees with EPA's action (Environmental groups).

Response: EPA's decision as to whether to object to a State Section 402 permit is discretionary, and EPA's strong preference is to work together with States to discuss and resolve any issues that may arise, without requiring EPA to object to a State permit. EPA will continue its dialogue with Appalachian States to ensure that their permitting activities reflect best-available science and are consistent with the Clean Water Act.

Comment: State permitting practices do not provide sufficient opportunities for public participation or dialogue in the permitting process, or are not effective (Private citizen, Environmental groups).

Response: EPA recognizes the importance of ensuring transparency in Clean Water Act permitting processes. Issuing interim and then final guidance represents one of EPA's many efforts to promote additional clarity and transparency regarding its permit reviews. EPA's final guidance includes additional discussion of how States and other Clean Water Act agencies can ensure that their permitting analyses are clear, based on best-available science, and reflective of public input and involvement. EPA will continue to work with its Federal and State agency partners toward these goals.

Clean Water Act Section 404

Comment: Requiring sequencing is not appropriate under SMCRA, is beyond the scope of EPA's CWA authority, and is infeasible (Industry). Sequencing is unproven in its attempt to avoid water quality impacts, represents an experiment with water quality, and prevents public participation in decisions to authorize future phases of mining (Environmental groups).

Response: EPA believes that sequencing is an appropriate mechanism for helping to manage the uncertainty associated with surface coal mining projects. EPA's final guidance better clarifies that the appropriateness of EPA recommending a sequenced fill construction approach in a specific case will depend upon site-specific factors, such as mine design, geology, downstream water quality, and other factors. Some projects permitted by the Corps of Engineers before and since April 1, 2010 have included sequencing as an approach for managing water quality uncertainty. Monitoring data has shown that valley fills have been able to meet water quality goals. EPA's recommendation to pursue a sequenced approach has been based on clear water quality outcomes to promote maximum transparency in the decision to authorize further phases of a sequenced project.

Comment: EPA's science disregards the effectiveness of reforestation or mitigation. Such techniques have generally been successful for reforestation and habitat restoration (States and Industry) / Stream functions have not been and cannot be replaced through stream creation (Environmental groups).

Response: EPA's guidance reflects EPA's understanding of the relevant science regarding the effectiveness of reclamation and mitigation following surface coal mining activities. EPA's final guidance reflects the results of SAB peer review of EPA's draft mountaintop mining and valley fills

impacts report, which was revised to acknowledge past experience with successful reclamation of previously mined sites. EPA's guidance reflects concerns articulated in the peer-reviewed scientific literature regarding the ability of stream creation to replace lost stream functions, and EPA's final guidance recommends that Regions closely evaluate any such proposals.

Comment: EPA is improperly using Section 404 to address issues properly regulated under Section 402 (Industry).

Response: As reiterated in EPA's interim guidance and final guidance, the Section 404(b)(1) Guidelines include an independent requirement that Section 404 permits address possible threats to water quality. EPA's recommendations to the Corps regarding water quality impacts are offered consistent with this provision of the Guidelines. EPA's final guidance more clearly recognizes that EPA Regions should evaluate the extent to which a Section 402 permit has addressed water quality impacts when determining whether to provide comments to the Corps regarding water quality.

Comment: EPA is asserting jurisdiction in upland areas by suggesting regulation of spoil as far upstream in a valley as feasible (Industry).

Response: EPA's review of surface coal mining operations extends only to whether the permits or permit applications for such discharges are consistent with the Clean Water Act and implementing regulations. EPA's recommendation regarding the evaluation of spoil disposal opportunities further upstream in valleys is designed to avoid and minimize impacts to waters of the United States associated with discharges from such operations, not to dictate activities in uplands that are regulated under SMCRA or other laws.

Comment: Best Management Practices (BMPs) described in the guidance are not one size fits all. They may not be applicable to all operations depending upon the number and configuration of fills and other details of the mining process (States, Industry).

Response: EPA agrees. The BMPs outlined in EPA's interim guidance and final guidance should be evaluated on a case-by-case basis depending on the characteristics of each mining operation. As outlined in Appendix 6 of EPA's final guidance, EPA has implemented its interim guidance taking into account case-specific factors, and will continue to do so in its implementation of the final guidance.

Comment: EPA is ignoring the benefits of re-mining to help improve Appalachian watersheds (States).

Response: EPA recognizes the potential benefits of re-mining to help restore already degraded Appalachian watersheds. EPA's final guidance includes additional discussion of how permits under Clean Water Act Section 402 and 404 can be issued in ways that help to reduce existing levels of water quality pollution and improve overall watershed condition. For example, the final guidance describes opportunities for using offsets or mitigation to help restore previously mined areas and achieve positive water quality outcomes.

Comment: Adaptive management poses a moving target and a “blank check” that limits certainty and increases impracticability for permittees (Industry) / Post-hoc monitoring is not a legal or effective substitute for preventing harm (Environmental groups).

Response: EPA believes that adaptive management approaches can be effective in ensuring that permits for discharges from surface coal mining operations comply with the Clean Water Act and provide sufficient flexibility to take remedial action if environmental concerns arise. Adaptive management measures have been incorporated in many recent Section 404 permits for Appalachian surface coal mining operations based on clear numeric water quality triggers. If exceeded, these triggers lead to the permittee taking additional action to prevent water quality from exceeding levels of concern. We believe this approach provides an opportunity for mining projects to move forward in a way that is consistent with the law, reflective of best-available water quality science, and capable of addressing water quality issues that may arise during the applicable term of the permit.

National Environmental Policy Act

Comment: EPA’s guidance usurps other agencies’ NEPA regulations, and EPA did not submit its NEPA recommendations to CEQ as required (Industry, States)

Response: EPA’s guidance provides recommendations to EPA’s Regions in their review of Clean Water Act permits for Appalachian surface coal mining operations, and does not alter the provisions of any NEPA regulations. EPA’s interim guidance and final guidance do not reflect formal NEPA procedures that require review and approval by CEQ.

Comment: EPA should clarify the origin of its concern that “one mile of impacts and more than one valley fill” is likely to result in significant impacts, or withdraw this claim (States, industry).

Response: EPA’s discussion regarding the number of valley fills and the length of stream impacts represent guideposts and are not formal impact thresholds. EPA’s final guidance clarifies that such impacts should deserve a “hard look” by Regions to ensure that impacts are effectively mitigated and resulting impacts are not significant. EPA’s final guidance recommends that Regions use these guideposts to encourage additional transparency in the NEPA process so that affected communities and the public have adequate opportunities for input into the decision-making process.

Comment: Cumulative impacts analysis (CWA, NEPA) should be improved and better measured (Environmental groups).

Response: EPA recognizes that assessing the cumulative effects of surface coal mining operations in Appalachia is important, as reinforced by EPA’s final peer-reviewed mountaintop mining and valley fills impacts report. EPA is actively working with other Federal agencies to improve our understanding of cumulative effects and to inform Federal decision-making on this critical issue.

Comment: EPA should require an EIS for all surface coal mining projects (Environmental groups).

Response: EPA's final guidance provides that Regions recommend preparation of an EIS where the impacts would be significant. EPA does not have the authority to require other agencies to prepare an EIS.

Environmental Justice and Human Health

Comment: EPA should better evaluate accurate socioeconomic factors and health impacts in permitting and develop guidance on environmental justice for Appalachian surface coal mining (Environmental groups) / EPA's analyses should better consider jobs and employment that would be lost if permits were not issued (States).

Response: As outlined in EPA's guidance, EPA recognizes that potential impacts to human health and socioeconomic factors such as jobs are critical to the environmental justice analysis of proposed Appalachian surface coal mining projects. EPA's final guidance provides more detailed recommendations to EPA Regions on what EPA believes is important to include in environmental justice analyses. Moreover, EPA's final guidance more strongly advocates for robust transparency and public involvement in decision-making processes, which will help improve the quality of the analyses supporting Federal agency decisions.

Comment: EPA's guidance inappropriately suggests that mining is the main contributor to negative health effects in the Appalachian region, ignoring other factors like drug abuse, tobacco use, lack of sanitation, and other factors (States).

Response: EPA's interim guidance described preliminary scientific evidence of potential human health effects associated with Appalachian surface coal mining operations, and EPA's final guidance references additional peer-reviewed scientific studies that strengthen these associations. These studies have typically acknowledged and controlled for the impacts of drug abuse, tobacco use, and similar factors in causing negative health outcomes, and do not suggest that surface coal mining is the sole cause of all negative health outcomes. EPA will continue to review the available public health literature as it evolves to ensure that EPA is effective in protecting human health and the environment.

Comment: Guidance should provide for additional public participation and comment opportunities for local communities (Environmental groups).

Response: EPA agrees that local communities should have a meaningful opportunity to be informed about and participate in the permit decision-making process for Appalachian surface coal mining operations. EPA's final guidance further emphasizes to EPA Regions the goal of providing transparency and public involvement in permitting processes under Clean Water Act Sections 402 and 404 and the National Environmental Policy Act.