

* OHIO VALLEY ENVIRONMENTAL COALITION * COAL RIVER MOUNTAIN WATCH
* WEST VIRGINIA HIGHLANDS CONSERVANCY * EARTHJUSTICE
* SIERRA CLUB * PUBLIC JUSTICE *
* APPALACHIAN CENTER FOR THE ECONOMY AND THE ENVIRONMENT *

June 3, 2010

Docket No. EPA-R03-OW-2009-0985

Via E-Mail: ow-docket@epamail.epa.gov

Via Federal eRulemaking Portal

Comments Re: Environmental Protection Agency, Proposed Determination to Prohibit, Restrict, or Deny the Specification, or the Use for Specification (Including Withdrawal of Specification), of an Area as a Disposal Site; Spruce No. 1 Surface Mine, Logan County, WV, 75 Fed. Reg. 16,788 (Apr. 2, 2010)

Dear EPA Regional Administrator Garvin and Administrator Jackson:

The permit in this case covers one of the largest mountaintop removal mines ever authorized by the U.S. Army Corps of Engineers. If mining were to proceed, the Spruce No. 1 Mine would destroy great expanses of Appalachian mountains, forests, and waterways.¹ It would cause irreparable harm to already devastated local watersheds and the communities, fisheries, and wildlife that rely on them. Based on the factual record, the best available science, and the legal requirements of the Clean Water Act, EPA must veto the Spruce permit to prevent these unacceptable adverse effects. We respectfully submit this letter in support of EPA's proposed veto on behalf of the above-named commenters.²

I. INTRODUCTION

The Spruce No. 1 Mine and related discharges would directly harm nearly seven and a half miles of vital Appalachian headwater streams and also would cause harm to Spruce Fork and other downstream waters in the Little Coal River watershed and Coal River sub-basin.³ These waters are the lifeblood of communities, fisheries, and wildlife that depend on them, not just in the area of the proposed mine but also downstream in the watershed. EPA's proposed veto demonstrates the great extent of the harm that the Spruce No. 1 Mine is likely to cause and

¹ For recent photographs of some of the affected area, see Ohio Valley Env't'l Coalition Website, Spruce No. 1 Mine: Spruce Valley and Pigeon Roost Hollow, Logan County, WV, High Resolution Mountaintop Removal Pictures (Apr. 28, 2010), ohvec.org/galleries/mountaintop_removal/021/index.html.

² For more information about commenters, visit: www.crmw.net; www.ohvec.org; www.wvhighlands.org; www.westvirginia.sierraclub.org; www.sierraclub.org/coal/mtr; www.appalachian-center.org.

³ EPA, Proposed Determination to Prohibit, Restrict, or Deny the Specification, or the Use for Specification (Including Withdrawal of Specification), of an Area as a Disposal Site; Spruce No. 1 Surface Mine, Logan County, WV, 75 Fed. Reg. 16,788, 16,792, 16,806 (Apr. 2, 2010) ("proposed veto").

shows that EPA has sufficient information to satisfy all applicable veto requirements under section 404(c) of the Clean Water Act ("CWA"), 33 U.S.C. § 1344(c).

The Spruce No. 1 Mine has a long and controversial history.⁴ The U.S. Army Corps of Engineers ("Corps") initially approved this project under a then-applicable nationwide permit. Commenters challenged that authorization as unlawful and won a preliminary injunction in federal district court.⁵ In his ruling, Judge Haden found that "the harms to Plaintiffs are imminent and irreversible" due to "the permanent destruction of the stream by filling it with tons of rock and fill."⁶ As a result of a later partial settlement, the project was required to go through the permitting process as an individual permit application and to have an environmental impact statement prepared due to the project's likely significant impact.⁷

In 2007, the Corps issued an individual section 404 permit to the current mining operator in violation of the Clean Water Act and applicable science.⁸ Commenters have challenged this permit in federal court.⁹ Although the form of the permit is different, Judge Haden's original finding that the Spruce project would cause permanent and irreversible harm to the streams and riparian areas at issue remains true, as shown by the even greater evidence available in the record now than at the time of his ruling. Due to the currently pending case, most of the mining activity and discharges proposed under the permit are on hold.¹⁰

Under the Clean Water Act, EPA has a unique responsibility to step in and veto a permit when necessary to protect the waters and aquatic resources under EPA's stewardship from unacceptable adverse effects,¹¹ and EPA should do so here.

II. COMMENTS IN SUPPORT OF A COMPLETE EPA VETO THAT PROHIBITS OR DENIES THE SPRUCE NO. 1 MINE PERMIT

Commenters urge EPA to issue a full veto of the Spruce No. 1 permit and all of the proposed discharges into local waters. The following comments support and supplement EPA's notice of proposed veto with additional information. For all of the reasons described by EPA in

⁴ See 75 Fed. Reg. at 16,791.

⁵ *Bragg v. Robertson*, 54 F. Supp. 2d 635, 641 (S.D. W. Va. 1999) (granting preliminary injunction later lifted after approval of settlement in 54 F. Supp. 2d 653 (S.D. W. Va. 1999) and entry of consent decree at 83 F. Supp. 2d 713 (S.D. W. Va. 2000)).

⁶ *Id.* at 646 ("Destruction of the unique topography of southern West Virginia, and of Pigeonroost Hollow in particular, cannot be regarded as anything but permanent and irreversible.").

⁷ See *Bragg v. Robertson*, 54 F. Supp. 2d 653 (S.D. W. Va. 1999); 83 F. Supp. 2d 713 (S.D. W. Va. 2000), *aff'd in part sub. nom.*, *Bragg v. W. Va. Coal Ass'n*, 248 F.3d 275 (4th Cir. 2001) (affirming the district court's entry of settlement decree).

⁸ Dep't of the Army Permit No. 199800436-3 (Section 10: Coal River) ("Spruce permit").

⁹ *Ohio Valley Env'tl. Coal. v. U.S. Army Corps of Eng'rs*, Civ. No. 3:05-0784 (S.D. W. Va.) (4th Suppl. Compl., filed Jan. 30, 2007) (Dkt. No. 250).

¹⁰ EPA has noted that Mingo Logan has begun part of the project so some harm has already occurred in connection with the construction of one valley fill. See 75 Fed. Reg. at 16,791, 16,792.

¹¹ Denial or Restriction of Disposal Sites; Section 404(c) Procedures, 44 Fed. Reg. 58,076, 58,081 (Oct. 9, 1979).

the proposed veto and discussed below, it would be arbitrary and capricious for EPA to take any action other than prohibiting the specification and denying the use of the permit-defined area as a disposal site for mining waste, pursuant to section 404(c), 33 U.S.C. § 1344(c).

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**EPA SHOULD FINALIZE A VETO THAT
PROHIBITS OR DENIES THE SPRUCE NO. 1 PERMIT IN FULL**

A. The permit record requires EPA to issue a final veto under Section 404(c).

Section 404(c) authorizes EPA “to prohibit the specification (including the withdrawal of specification) of any defined area as a disposal site.”¹² In addition, under section 404(c) EPA has authority “to deny or restrict the use of any defined area for specification (including the withdrawal of specification) as a disposal site.” In order to take such action, known as a “veto” of a Corps’ permit, EPA must “determine[] . . . that the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas.” By regulation, EPA has defined “unacceptable adverse effect” as “impact on an aquatic or wetland ecosystem which is likely to result in significant degradation of municipal water supplies (including surface or ground water) or significant loss of or damage to fisheries, shellfishing, or wildlife habitat or recreation areas.”¹³ EPA’s rules also direct that “[i]n evaluating the unacceptability of such impacts, consideration should be given to the relevant portions of the section 404(b)(1) guidelines.”¹⁴ EPA has promulgated the Section 404(b)(1) Guidelines, in conjunction with the Corps, to provide scientifically sound and consistent standards for the Corps’ permitting process.¹⁵

The Clean Water Act’s core objectives also inform the meaning of “unacceptable adverse effect.” EPA must exercise its section 404(c) veto authority in a manner that is consistent with its overall duties under the Clean Water Act.¹⁶ The Act places significant value on all U.S. waters in their own right, by establishing a national objective “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”¹⁷ The Act requires the elimination of all pollution in our nation’s waters and establishes an antidegradation policy for discharges in U.S. waters.¹⁸ It also prohibits the discharge of any pollutant into U.S. waters without a permit meeting CWA requirements.¹⁹

¹² 33 U.S.C. § 1344(c).

¹³ 40 C.F.R. § 231.2(e).

¹⁴ *Id.* (citing 40 C.F.R. part 230).

¹⁵ *See* 33 U.S.C. § 1344(b)(1); 33 C.F.R. § 320.2(f), 320.4(a)(1).

¹⁶ 33 U.S.C. § 1251(d).

¹⁷ *Id.* § 1251(a).

¹⁸ 33 U.S.C. § 1251(a); *see also id.* § 1313(d)(4)(B); *cf.* 40 C.F.R. § 131.12(a) (requiring that “[e]xisting instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected”).

¹⁹ 33 U.S.C. § 1311(a).

1. The Spruce discharges would have unacceptable adverse effects.

a. Significant harm to waters in the Little Coal River Watershed and Coal River Sub-basin

EPA has well documented the severe harm to waters that would occur if the Spruce permit were allowed to proceed in whole or in part, and commenters submit the information in this letter to support and complement EPA's findings.²⁰ The impacts described in EPA's proposed veto represent harm to an "aquatic or wetland ecosystem which is likely to result in significant degradation of municipal water supplies (including surface or ground water) or significant loss of or damage to fisheries, shellfishing, or wildlife habitat or recreation areas," under the Section 404(c) veto standard.²¹ Any one of these grounds would be sufficient for EPA to fully prohibit or deny the Spruce discharges. Further, no discharge may occur that will cause or contribute to significant degradation of waters under the Section 404(b)(1) Guidelines.²² Even the Corps has recognized that, absent mitigation, the Spruce permit would cause unacceptable adverse effects or significant degradation.²³ In addition to the valuable findings contained in EPA's proposed veto, commenters emphasize that it is essential to recognize and address all four types of unacceptable adverse effects at stake here, each of which supports a full veto by EPA.

(1) Direct impact of stream loss due to burial by mining waste

First, the discharges under the Spruce permit would cause significant degradation of those waters within the footprint of each proposed valley fill and that would be buried permanently under mining waste. The permit would bury or cause permanent harm to more than 36,814 linear feet of ephemeral and intermittent streams by allowing these waters to be used as a waste dump for about 100 million cubic yards of mining waste.²⁴ In addition, for approximately 15 years or more, the permit would also allow the destruction of the aquatic life within and other harm to 2,514 linear feet of intermittent streams and 165 linear feet of perennial streams, during the time in which the permittee impounds and uses these natural waters as a mining waste treatment system.²⁵ The streams directly at stake are Pigeonroost Branch, Seng Camp Creek, Oldhouse Branch, and unnamed tributaries of these waters. These streams flow into Spruce Fork, then into Little Coal River, and then into the Coal River itself. Once these streams are gone, they are gone forever. As Judge Haden explained in his prior ruling:

²⁰ 75 Fed. Reg. 16,797-804.

²¹ 40 C.F.R. § 231.2(e).

²² *Id.* §§ 230.10(c), 231.1.

²³ See Spruce Fork No. 1 Mine, Dep't of the Army, Individual Clean Water Act Section 404 Permit, Record of Decision, No. 199800436-3 at 31 (Jan. 2007) ("ROD") (40 C.F.R. § 230.12 finding is that the proposed discharge complies with the 404(b)(1) guidelines only "with the inclusion of the mitigation and monitoring conditions").

²⁴ See 75 Fed. Reg. at 16,792.

²⁵ As EPA has recognized, these totals represent a material underestimate because the permittee did not report and the Corps did not address the full physical size of the actual proposed project. 75 Fed. Reg. at 16,792.

When valley fills are permitted in intermittent and perennial streams, they destroy those stream segments. The normal flow and gradient of the stream is now buried under millions of cubic yards of excess spoil waste material, an extremely adverse effect. If there are fish, they cannot migrate. If there is any life form that cannot acclimate to life deep in a rubble pile, it is eliminated. No effect on related environmental values is more adverse than obliteration. Under a valley fill, the water quality of the stream becomes zero. Because there is no stream, there is no water quality.²⁶

The Clean Water Act's requirement to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," requires not only the preservation of the waters but also "extends to protection of the quality of the aquatic community itself," living within and dependent directly upon those waters.²⁷ Thus, even the so-called "temporary" impacts to streams are significant, as these impacts would destroy part of the biodiversity and ecosystem for years.

(2) Downstream impact of stream loss on water quality

Second, the discharges covered by the Spruce permit would cause significant degradation to the waters and watershed *downstream* from those waters buried and permanently destroyed, or used to treat mining waste for an extended period of time. As the Corps itself has previously recognized, "[i]t is well understood that the health of entire watersheds [is] dependent on functions provided by headwater streams."²⁸ Basic scientific principles direct that:

Ephemeral, intermittent or perennial streams that are buried beneath valley fills represent a significant natural resource loss. As headwater streams they represent the points "where rivers are born" (Meyer et al. 2003) because their flow and associated biota, sediment, and dissolved constituents feed all downstream waters. Any major changes affecting headwater tributaries or any activity that isolates or cuts off these tributaries from the lower part of the watershed will have profound consequences for hydrologic processes, sediment delivery, channel morphology, biogeochemistry, and stream ecology further downstream in the watershed which is why their loss due to mountain top mining is of such concern (Wipfli et al. 2007).²⁹

Appalachian high-gradient or headwater streams perform a broad range of functions,³⁰ or ecological services, for the lower-order streams and the watershed as a whole, such as "the

²⁶ *Bragg v. Robertson*, 72 F. Supp. 2d 642, 661-62 (S.D. W.Va. 1999), *rev'd sub. nom. Bragg v. W. Va. Coal Ass'n*, 248 F.3d 275 (4th Cir. 2001) (vacating injunction issued against the state on 11th Amendment immunity grounds but affirming district court's entry of consent decree).

²⁷ 33 U.S.C. § 1251(a); 75 Fed. Reg. at 16,797.

²⁸ *Ohio Valley Env'tl. Coal. v. Aracoma Coal Co.*, 567 F.3d 130, 134 (4th Cir. 2009) (Michael, J., dissenting from denial of reh'g en banc) (citing permit decision document on a similar mine, Black Castle), *pet. for cert. pending*, *Ohio Valley Env'tl. Coal. v. U.S. Army Corps of Eng'rs* (No. 09-247) (filed Aug. 26, 2009).

²⁹ MARGARET A. PALMER & EMILY S. BERNHARDT, MOUNTAINTOP MINING VALLEY FILLS AND AQUATIC ECOSYSTEMS: A SCIENTIFIC PRIMER ON IMPACTS AND MITIGATION APPROACHES 6 (2009) (Attached as Appendix 1).

³⁰ *See* 40 C.F.R. § 230.92 (defining functions as "the physical, chemical, and biological processes that occur in ecosystems" and defining "functional capacity" as "the degree to which an area of aquatic resource performs a specific function"); 33 C.F.R. § 332.2 (same).

purification of water, removal of excessive nutrients and sediments before they reach downstream waters, processing of organic material and primary and secondary productivity.”³¹ EPA has recognized that headwater streams perform a number of vital processes, including serving as “an important source of freshwater dilution.”³²

The loss of these core functions causes significant harm downstream and to the rest of the watershed. These streams provide nutrients, clean the water, break down and remove pollutants, contribute to flow, discharge, and habitat, and bring a wealth of aquatic resources to the downstream waters and aquatic life within them.³³ Once adversely affected by discharge and burial, the stream services or functions are lost or decimated, along with the streams’ aquatic organisms and structure. Thus, as EPA has recognized, wherever the discharge of fill material results in “physical modification and elimination of portions of headwater streams,” this discharge causes water quality impacts that a section 402 NPDES permit concerned with the level of downstream *pollution* is not equipped to address.³⁴ In other words, downstream impacts must be considered not just in terms of pollution or the addition of impairment to waterways, but also in terms of the loss of positive contributions that streams were previously providing to those waterways as part of the previously healthy water system. Preserving the functions for downstream health is critical to be able to “maintain” the waters under EPA’s care, as required by the CWA³⁵ – even if there were no additional mining pollutants being added into the ecosystem at the same time. Those additional pollutants create a distinct type of harm as discussed next.

(3) *Downstream impact of mining discharges on water quality*

A third category of harm would result from the discharges of mining waste and pollutants that move through the valley fills and travel down through the ecosystem, degrading water quality and violating water quality standards downstream. The Spruce discharges would likely lead to higher levels of conductivity, selenium, metals, and other contamination in the downstream waters and cause water quality standard violations similar to what EPA and scientists have documented from other surface and mountaintop removal mining operations.³⁶ In

³¹ PALMER & BERNHARDT (2009), *supra* note 29, at 3 (citing scientific studies).

³² 75 Fed. Reg. at 16,797-98.

³³ See, e.g., J. Craig Fischenich, *Functional Objectives for Stream Restoration* (ERDC TN-EMRRP SR-62) (Sept. 2006) (describing example important functions), available at <http://el.ercd.usace.army.mil/elpubs/pdf/sr52.pdf>; PALMER & BERNHARDT (2009), *supra* note 29, at 8 tbl. 2.2 (listing key functions). Notably, although this information is elementary ecology, the Corps has ignored these functions in its permit decision.

³⁴ See EPA, Detailed Guidance: Improving EPA Review of Appalachian Surface Coal Mining Operations under the Clean Water Act, National Environmental Policy Act, and the Environmental Justice Executive Order, at 20 (Apr. 1, 2010) (“EPA April 2010 Guidance”).

³⁵ 3 U.S.C. § 1251(a).

³⁶ See EPA, Proposed Determination; Spruce No. 1 Mine, Technical Support Document (EPA-R-03-OW-2009-0985); see also M. Palmer et al., *Mountaintop Mining Consequences*, SCI. MAG., Vol. 327, at 148 (Jan. 8, 2010) (Attached as Appendix 2); Pond et al., *Downstream effects of mountaintop coal mining: comparing biological conditions using family- and genus-level macroinvertebrate bioassessment tools*, J. N. AM. BENTHOL. SOC’Y, 2008, 27(3): 717-737, at p. 724; PALMER & BERNHARDT (2009), *supra* note 29, at 13-18 (citing scientific data).

West Virginia, wastewater discharges cannot violate numerical or narrative water quality standards.³⁷ In addition, that state's narrative water quality standards prohibit discharges of "[m]aterials in concentrations which are harmful, hazardous or toxic to man, animal or aquatic life" or that cause "significant adverse impacts to the chemical, physical, hydrologic, or biological components of aquatic ecosystems."³⁸ The Coal River Watershed already suffers substantial impairment, as EPA has recognized. There is significant evidence that the permitted discharges would likely cause additional violations of the West Virginia water quality standards for selenium and biological impairment due to the increased levels of TDS, sulfate, and conductivity to be expected from this project.³⁹ EPA's proposed veto also has documented selenium problems that already exist in the affected area, including from the Spruce operations already in place.⁴⁰

It is also a violation of 40 C.F.R. § 122.4(i) and the state's antidegradation policy under W. VA. CODE R. § 47-2-4 to allow new discharges of pollutants into streams that have been designated as impaired and for which a TMDL has been prepared. Spruce Fork, into which on-site streams flow, is listed as biologically impaired, but the West Virginia Department of Environmental Protection ("WVDEP") is not scheduled to develop a TMDL for this criterion until 2025; there are already TMDLs on Spruce Fork and other affected streams.⁴¹ Seng Camp Creek is recognized as biologically impaired by WVDEP, but WVDEP apparently does not plan to develop a TMDL addressing this impairment until 2013.⁴² Oldhouse Branch has a number of different TMDLs established to address impairment.⁴³

These kinds of downstream harm are the types of water pollution that both section 401 and section 402 of the CWA have given the state of West Virginia the opportunity and duty to address, in the first instance.⁴⁴ Yet, "EPA retains its responsibility for ensuring that neither numeric nor narrative water quality standards are exceeded due to discharges of fill material even if a state has issued a water quality certification under Section 401 of the CWA."⁴⁵ EPA also retains primary authority to oversee and ensure completion of all section 402 requirements, and

³⁷ W. VA. CODE R. § 47-30-5.1.f.

³⁸ *Id.* §§ 47-2-3.2.e & 47-2-3.2.i.

³⁹ 75 Fed. Reg. at 16,801-03 (citing Spruce Technical Support Document).

⁴⁰ *Id.* at 16,801.

⁴¹ See WVDEP, 2010 Draft 303(d) List at App. B-17, <http://www.dep.wv.gov/WWE/watershed/IR/Documents/DRAFT%202010%20303%28d%29%20Documents/303%28d%29%20Draft%20Complete%20Document.pdf>.

⁴² See WVDEP, 2010 Draft 303(d) List at List-17. See also West Virginia 2008 Integrated Water Quality Monitoring and Assessment Report, http://www.wvdep.org/Docs/16427_WV_2008_303dList_Supplements_Only_FINAL_20081202.pdf, and 2008 Integrated Report to Congress on Water Quality in Kentucky, <http://www.water.ky.gov/sw/swmonitor/305b/>. Seng Camp Creek also has a TMDL established for iron. *Id.* at App. B-19.

⁴³ *Id.* App. B-62.

⁴⁴ 33 U.S.C. §§ 1341, 1342.

⁴⁵ See EPA April 2010 Guidance at 18.

to withdraw the state program and enforce the CWA directly if necessary.⁴⁶ Therefore, the state's previous inaction to prevent or remedy water quality problems in no way undermines the need for EPA to veto this permit, but, if anything, provides additional reason for a veto.

(4) Cumulative degradation of the watershed

Finally, the cumulative impacts in the Little Coal River watershed and sub-basin to be affected by the Spruce permit have already surpassed any point that might be considered acceptable. The severity of the cumulative impacts is apparent whether considering them in terms of the loss of vital headwaters and downstream effects from that loss, or in terms of the level of downstream water quality impairment from mining waste discharges. Under the Section 404(b)(1) Guidelines:

Cumulative impacts are the changes in an aquatic ecosystem that are attributable to the collective effect of a number of individual discharges of dredged or fill material. Although the impact of a particular discharge may constitute a minor change, in itself, the cumulative effect of numerous such piecemeal changes can result in a major impairment of the water resources and interfere with the productivity and water quality of existing aquatic ecosystems.⁴⁷

In this case, the Little Coal River watershed and the Coal River sub-basin already have experienced substantial harm from surface mining and related impacts, as EPA has documented. Here, 33% of the streams in this watershed are impaired and 30% of the streams in the sub-basin are impaired. Mining permits alone have already occupied more than 33% of the land area in the Spruce Fork sub-watershed and more than 55% of the land area in other sub-watersheds in the Coal River sub-basin, causing substantial harm to the local ecosystem, including waterways.⁴⁸ Coal River is one of the most affected watersheds within the region of southern West Virginia, where there is already a large area harmed by mountaintop removal or surface mining. In that area of the state, a number of other local watersheds have already had between 9.5% and 37% of the first order streams destroyed or slated for destruction by valley fills.⁴⁹

To make matters worse, the level of cumulative impact in this area is only part of the extraordinary level of destruction of waters and ecosystems that has occurred and continues to increase in Southern West Virginia and Appalachia due to mountaintop removal mining. From 1985 to 2005, the Army Corps of Engineers authorized over 7,000 valley fills in central Appalachia for mountaintop removal and other surface mining operations.⁵⁰ EPA has recognized that the previous 254 permits in the Coal River sub-basin have already harmed 13% of the total

⁴⁶ *Id.* at 14-16; 33 U.S.C. § 1342(c)(3), (i).

⁴⁷ 40 C.F.R. § 230.11(g); *cf.* 40 C.F.R. § 1508.7 (NEPA definition of cumulative impact).

⁴⁸ 75 Fed. Reg. at 16,806-07.

⁴⁹ Douglas P. Pflugh, Summary of Cumulative Impacts from Surface Coal Mines: The Coal, Upper Guyandotte, and Kanawha River Watersheds (May 16, 2006) (Attached as Appendix 3).

⁵⁰ See Ofc. Surface Mining, Stream Buffer Zone Rule DEIS, OSM-EIS-34 at II-24 and III-61, OSM-2007-0008-0553 (2008), available at <http://www.regulations.gov/search/Regs/home.html#documentDetail?R=0900006480276fb4>.

land area.⁵¹ The cumulative impacts in the Appalachian region since 1992 alone have surpassed the extraordinary level of 2,000 miles of mountain streams.⁵²

The high level of cumulative impact already present in the proposed mining area provides another important basis on which EPA should veto this permit. Available science indicates that it is dangerous to allow mining to harm more than 5-10% of a watershed.⁵³ For example, the recent Bernhardt and Palmer paper states that “the single best predictor of stream water quality to date is what fraction of a watershed is impacted (Yuan and Norton 2003; Allan 2004),” and that “[m]any studies to date have shown that when impacts to watersheds exceed about 10% of the watershed area, there can be dramatic declines in aquatic biodiversity and water quality (Allan 2004; Booth et al. 2004; Morgan and Cushman 2005; Moore and Palmer 2005).”⁵⁴ Moreover, available watershed studies were based on activities generally causing less severe water quality impacts than the type of large-scale surface mining proposed under the Spruce permit.

Even if there were any safe level of impact from surface mining, the harm to waters and riparian areas that has occurred in this watershed is already well beyond any such level. EPA should veto the Spruce No. 1 permit before this project causes additional, unacceptable harm to an already greatly harmed watershed and aquatic ecosystem. In view of the primary antidegradation purpose of the Clean Water Act and EPA’s mandate to “restore and maintain” U.S. waters,⁵⁵ EPA must prevent further cumulative impact to this watershed and sub-basin.

b. Significant harm to fisheries and wildlife

EPA has provided a thorough account of the substantial harm to wildlife, fisheries, and habitat likely to occur if the permitted discharges were to go forward at the Spruce No. 1 Mine.⁵⁶ Commenters appreciate EPA’s substantial documentation of harm to fisheries and wildlife in the record and recognize that EPA’s findings have robust scientific support and provide a strong foundation for a full veto of the Spruce permit. Commenters also submit for the record a recently released WVDEP report documenting deformities among fish in waters with high selenium levels.⁵⁷ Other scientific studies confirm that selenium discharges and resulting

⁵¹ 75 Fed. Reg. at 16,807.

⁵² EPA April 2010 Guidance at 2.

⁵³ Palmer et al. (2010), *supra* note 36, at 148.

⁵⁴ PALMER & BERNHARDT (2009), *supra* note 29, at 6.

⁵⁵ 33 U.S.C. § 1251(a).

⁵⁶ 75 Fed. Reg. at 16,798-801.

⁵⁷ WV DEP’T OF ENVTL. PROT., SELENIUM-INDUCED DEVELOPMENTAL EFFECTS AMONG FISHES IN SELECT WEST VIRGINIA WATERS (Jan. 2010) (concluding that increased fish larval and adult deformity rates were associated with waterborne selenium exposure), *available at* <http://www.dep.wv.gov/WWE/watershed/wqmonitoring/Documents/Selenium/Se%20Larvae%202010%20final.pdf> (Attached as Appendix 4).

bioaccumulation harm fish and benthic organisms and have potential to cause harm to water quality and human health.⁵⁸

c. Significant harm to local communities and environmental justice impacts

In response to EPA's request for information on this issue, commenters describe some of the project's additional likely effects on local communities near or downstream from the proposed Spruce discharges, including impacts to human health connected to the types of environmental harm likely to result from the Spruce permit. Generally, the Spruce discharges have potential to cause adverse effects for residents of Logan County and Boone County as well as downstream residents along Spruce Fork and in the Little Coal River watershed and Coal-River sub-basin.

The nearby towns of Blair and Sharples were once vibrant local communities before mining operator practices occurred that drove many residents out of their homes.⁵⁹ Today, the area still has residents living in Blair, Sharples, and in other mountain hollow communities near the affected waters, such as in Spruce Valley, Pigeonroost Hollow, Five Block, and the surrounding hollows and ridges. Judge Haden's factual findings in his opinion on the earlier permitted version of this project illustrate some of the types of harm that local residents still are likely to face if the Spruce permit were allowed to proceed:

The harm to Plaintiffs in the absence of preliminary injunctive relief is actual, imminent and wholly irreparable. Not only would mining activity detrimentally affect [certain local residents] who live within the hollow where valley filling will occur, the valley fill would actually and detrimentally affect the stream and its flora and fauna near the [local residents'] home.⁶⁰

(1) Water supply

On the present record, as one indication of the closest nearby residents to the proposed Spruce project, there are approximately 58 occupied structures within the primary blasting zone of 1000 feet, and 81 in the secondary blasting zone (1/2 mile).⁶¹ These figures do not count any other residents just outside of the blasting zone and near the affected waters. As of the last report, there were approximately 288 people depending on water from wells in the Sharples area

⁵⁸ See, e.g., A. DENNIS LEMLY, AQUATIC HAZARD OF SELENIUM POLLUTION FROM MOUNTAINTOP REMOVAL COAL MINING (Apr. 2009) (Attached as Appendix 5); see also EPA, Mountaintop Mining/Valley Fill Draft Programmatic EIS, Ch. 3, Affected Environment and Consequences of MTM/VF, at III.D-6, available at <http://www.epa.gov/region03/mtntop/eis2003.htm> ("MTM/VF PEIS").

⁵⁹ See, e.g., Penny Loeb, *Shear Madness*, U.S. NEWS & WORLD REP. (Aug. 11, 1997) (Attached as Appendix 6); Patrick C. McGinley, *From Pick and Shovel to Mountaintop Removal: Environmental Injustice in the Appalachian Coalfields*, 34 ENVTL. L. 21, 85-101 (2004).

⁶⁰ *Bragg v. Robertson*, 54 F. Supp. 2d at 641.

⁶¹ See Community Impact Statement, Spruce Draft EIS, Appendix P at 5, available at www.lrh.usace.army.mil/_permits/Spruce%20No%201%20Mine%20Draft%20and%20Final%20EIS.

alone.⁶² The total number of local residents and people currently using home wells in the immediate geographical area is unknown. In addition to Blair, Sharples, and the nearby towns listed above, other local towns, such as Mifflin, Clothier, Ottawa, Jeffrey, Ramage, Hewett, Greenville, Low Gap, Powell Creek, and Washington Heights are also near enough to face potential impacts. The nearest public water line is within about one mile of the site, in an area formerly known as the Spruce Fork Public Service District now part of the Boone Raleigh Public Service District, which serves 1,317 customers.⁶³

In addition to these and other immediately affected communities, numerous residents of the Coal River sub-basin (some in the Kanawha Valley), including the downstream towns of Madison, Julian, Danville, Alum Creek, and St. Albans, either use the Little Coal River watershed and Coal River directly for their water supply, or their proximity to these waters suggests their water supply may be affected by harm to these waters.⁶⁴ The most recent Source Water Assessment Reports available for some affected local water systems show that the water supply is especially susceptible to contamination from mining impacts. As an indication of the harm to all local residents relying on wells, a report for the Logan County-Sharples area found a significant risk of well water contamination from mining-related impacts and “high sensitivity” to coal mining and similar impacts.⁶⁵ For waters downstream, the reports for St. Albans and Alum Creek, for example, showed that there is “high” susceptibility to any impacts caused to the Coal River Watershed.⁶⁶

(2) Recreation areas

These and other nearby local communities also use the Spruce-affected waters and connected waters in the Coal River sub-basin and Little Coal River watershed for many types of recreational uses. For example, the Coal River Group supports and organizes rafting and fishing trips along the Little Coal River and the rest of the Coal River Watershed. It has mapped an 88-

⁶² WV DEP'T OF HEALTH AND HUMAN RESOURCES, SOURCE WATER ASSESSMENT REPORT – LOGAN PSD (SHARPLES) – LOGAN COUNTY, 3 (2003), available at <http://www.wvdhhr.org/oehs/eed/swap/get.cfm?id=3302315> (Attached as Appendix 7).

⁶³ Community Impact Statement, Spruce DEIS, Appendix P, at 7. There are electric and natural gas lines on site. *Id.* State Route 17 is adjacent to the mining site.

⁶⁴ See 75 Fed. Reg. at 16,792 (waters to be harmed by the Spruce permit flow into Spruce Fork of the Little Coal River Watershed and then into the Coal River); see also EPA Determination on Coal River Watershed TMDLs. http://www.epa.gov/waters/tmdl/docs/wv_tmdl-Coal-Coal_DR.pdf.

⁶⁵ SOURCE WATER ASSESSMENT REPORT – LOGAN COUNTY-SHARPLES, *supra* note 62, at 3.

⁶⁶ See WV DEP'T OF HEALTH AND HUMAN RESOURCES, SOURCE WATER ASSESSMENT REPORT – ST. ALBANS WATER DEP'T, KANAWHA COUNTY at 7 (Feb. 2003), available at <http://www.wvdhhr.org/oehs/eed/swap/get.cfm?id=3302031> (stating “[c]urrent land use practices appear to be having an adverse impact on the ecological health of the Coal River Watershed,” and recommending increased coordination between agencies and officials to regulate, inspect, and protect the water supply from contamination) (Attached as Appendix 8); see also WV DEP'T OF HEALTH AND HUMAN RESOURCES, SOURCE WATER ASSESSMENT REPORT – LINCOLN PSD, LINCOLN COUNTY 1 (Feb. 2003) <http://www.wvdhhr.org/oehs/eed/swap/get.cfm?id=3302205> (Source Water Assessment Report for Alum Creek) (Attached as Appendix 9). For other local water reports, see: <http://www.wvdhhr.org/oehs/eed/swap/search.cfm> (searchable by County).

mile Walhonde Water Trail downstream from the Spruce-affected waters for recreational users.⁶⁷ People fish in the area downstream from the Spruce project for bass, West Virginia muskie, and brown trout fingerlings, among other types of fish. There are local campgrounds and public river access points along the Little Coal River and in the larger watershed, likely used by West Virginia residents.⁶⁸ As EPA has noted, the streams at stake here are healthier than many of the streams in the local watershed, and it is important to maintain their availability for local recreational use.⁶⁹ Reduced recreational use in recent years due to contamination or fear of contamination suggests that continued harm to local waters will make it even harder for these waters to recover, if possible to do so, for ongoing and future use.

(3) Related impacts

There is also growing scientific evidence of harm to local communities living near or downstream from projects like Spruce. For example, recent research by Hitt and Hendryx has documented a statistically significant relationship between residence in a high coal mining area or an area with decreased ecological integrity of local waterways and increased human cancer mortality.⁷⁰ The study found that a low level of stream ecological integrity is significantly correlated with digestive, breast, respiratory, and urinary cancer rates, and that a high coal mining index is significantly correlated with respiratory cancer and other types of cancer. Research has previously recognized lower levels of public health in areas of West Virginia with high rates of surface coal mining.⁷¹ The new Hitt and Hendryx study underscores the link between surface mining and degraded public health because it controlled for non-mining related factors such as poverty, smoking, and urbanization, and found impacts that could be isolated to living in the vicinity of coal mining and related ecological harm. Other new research shows a correlation between living in a coal mining area and a risk of lower birth weight (ranging from 13% to 16% more likely in low to high mining areas), with resulting potential for long-term adverse impacts on development and health in later life.⁷²

⁶⁷ See Rick Steelhammer, *DEP retiree launches new career on river he helped protect*, CHARLESTON GAZETTE, Apr. 10, 2010, wvgazette.com/Outdoors/Recreation/201004100338 (Attached as Appendix 10); see also Coal River Group, www.coalrivergroup.com; www.coalriverkayak.com; <http://www.coalrivergroup.com/P/2/Recreation.aspx> (describing history of recreational use). For information about the Walhonde Water Trail, see http://www.coalrivergroup.com/P/11/Walhonde_Water_Trail.aspx, and the river map at <http://www.coalrivergroup.com/files/finishedtrailmapoct.jpg>.

⁶⁸ For example, as part of the Hatfield-McCoy Trail system, there is a Little River Campground and Visitor's Center. <http://www.littlecoalrivercampground.com>.

⁶⁹ 75 Fed. Reg. at 16,794.

⁷⁰ See Nathaniel P. Hitt & Michael Hendryx, *Ecological Integrity of Streams Related to Human Cancer Mortality Rates*, ECOHEALTH (Apr. 2, 2010) (Attached as Appendix 11).

⁷¹ See, e.g., Michael Hendryx & Melissa M. Ahern, *Mortality in Appalachian Coal Mining Regions: The Value of Statistical Life Lost*, PUB. HEALTH REP., Vol. 124, 541-49, at 543 (July-Aug. 2009) (Attached as Appendix 12); Palmer et al. (2010), *supra* note 36, at 1.

⁷² M. Ahern et al., *Residence in Coal-Mining Areas and Low Birth-Weight Outcomes*, MATERN. CHILD HEALTH J. (Jan. 21, 2010) (Attached as Appendix 13).

WVDEP has issued fish consumption advisories due to selenium impacts, including recently at the stream level.⁷³ The selenium problems that EPA has recognized as grounds for veto due to wildlife impacts in connection with the Spruce permit⁷⁴ also have the potential to contribute to human health impacts from fish consumption in the local and downstream communities of the Little Coal and Coal River Watershed.

The WVDEP has also recently for the first time recognized a link between flooding downstream – which causes a broad range of harm to local residents – and specific surface mines, which is consistent with other scientific data available.⁷⁵

(4) Environmental justice impacts

The Spruce-affected region has disproportionately lower income levels than other parts of the United States and the state of West Virginia as a whole, and has a long history of a lack of economic opportunity, even though coal mining has come and gone in this area for years.⁷⁶ All of the impacts shown in the permit record therefore include an environmental justice dimension that would deepen the environmental harm inflicted because it would occur in low-income communities that have experienced a disproportionate share of this type of environmental devastation. This circumstance creates the major environmental justice concern that commenters commend EPA for recognizing.⁷⁷ “Appalachia has long been characterized by social inequalities and health disparities,” but even when compared to other parts of Appalachia, residents living near coal mining operations tend to have “poor socioeconomic conditions including higher levels of poverty and lower education rates.”⁷⁸

In Logan County, W. Va., nearly one-quarter of the local population lives below the poverty line. The percentage of the population living below the poverty line is therefore 195% of higher than the average percentage for the U.S. average, and 6 points higher than the percentage for West Virginia as a whole. Similarly, in Boone County, W. Va., one in five residents lives below the poverty line. That percentage is 4 points higher than West Virginia as a

⁷³ See W. Va. Dep't of Health and Human Resources, Fish Consumption Advisories Available for 2010, http://www.wvdhhr.org/fish/print_current.asp (last visited May 25, 2010).

⁷⁴ See, e.g., 75 Fed. Reg. at 16,791, 16,794, 16,799, 16,801, 16,805-06.

⁷⁵ See, e.g., Ken Ward, *Mines cited in Mingo flooding*, CHARLESTON GAZETTE, May 11, 2009, available at <http://wvgazette.com/News/MiningtheMountains/200905110610> (Attached as Appendix 14); see also MTM/VF DEIS Appendix H (2003), available at <http://www.epa.gov/Region3/mtntop/eis2003appendices.htm#apph>; see also Palmer et al. (2010), *supra* note 36, at 1 (citing sources that link mining with downstream flooding).

⁷⁶ See, e.g., McGinley, 34 ENVTL. L. at 25, 77-100.

⁷⁷ 75 Fed. Reg. at 16,805-06.

⁷⁸ Michael Hendryx, *Mortality Rates in Appalachian Coal Mining Counties: 24 Years Behind the Nation*, ENVTL. JUSTICE, Vol. 1, No. 1 (2008), pp. 5-11, at 5 (Attached as Appendix 15). Similarly, a recent study on the economics of coal in Kentucky, with analogies to southern West Virginia, found that “Kentucky’s coal-producing counties are among the poorest in the United States.” MOUNTAIN ASSOCIATION FOR COMMUNITY ECONOMIC DEVELOPMENT, THE ECONOMICS OF COAL IN KENTUCKY: CURRENT IMPACTS AND FUTURE PROSPECTS 1 (June 2009), available at <http://www.maced.org/coal>.

whole and 178% of the U.S. average. Each county is in the lowest economic quartile of all counties in the United States and exhibits other indicators of socioeconomic disadvantage.⁷⁹

We appreciate EPA's recognition of environmental justice concerns and impacts related to this permit.⁸⁰ We urge EPA to ensure that environmental justice impacts form a meaningful and appropriate component of its decision. For example, the Executive Order on Environmental Justice (E.O. 12898) reinforces EPA's obligation to veto this permit under the Clean Water Act. The Executive Order requires all federal agencies to ensure that low-income communities are not disproportionately affected or harmed by agency actions. It directs every Federal agency, "[t]o the greatest extent practicable and permitted by law" to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions."⁸¹ This includes EPA's responsibility to incorporate environmental justice considerations into the decision at hand, pursuant to section 404(c) of the Clean Water Act. Section 1-103(a)(1) of E.O. 12898 mandates that federal agencies enforce all health and environmental statutes in areas with low-income populations. Enforcing the law in connection with Clean Water Act section 404 permits for mountaintop removal coal mining should be at the very top of EPA's list of environmental justice issues to address in Appalachia. For the reasons stated above, EPA should begin to address these in the context of a full veto of the Spruce permit.

An environmental justice analysis that fully considers human impacts from the loss of waters and other effects of the Spruce permit is consistent with section 404(c) of the CWA. EPA has the authority to consider potential harm to the local community or human health "to the extent that it is implied by the factors listed."⁸² Thus, EPA can – and must – consider local public health and other potential human impacts related to the degradation of waters and water quality impacts, predicted by the best available science, including to water supplies, fisheries, and recreation areas. The Section 404(b)(1) Guidelines further require a consideration of the connection between the health of waters and the welfare of local communities.⁸³ Subpart F of

⁷⁹ See 2000 U.S. Census, county profiles available at <http://quickfacts.census.gov/qfd/states/54/54045.html> (Logan) and <http://quickfacts.census.gov/qfd/states/54/54005.html> (Boone); see also Appalachian Regional Commission, County Economic Status, Fiscal Year 2011: Appalachian West Virginia, http://www.arc.gov/reports/region_report.asp?FIPS=54999&REPORT_ID=36; *id.* at <http://www.arc.gov/data> (Appalachian Regional Commission Data).

⁸⁰ 75 Fed. Reg. at 16,805-06.

⁸¹ Exec. Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations § 1-101, 59 Fed. Reg. 7629 (Feb. 11, 1994) ("E.O. 12898").

⁸² 44 Fed. Reg. at 58,078.

⁸³ See, e.g., 40 C.F.R. § 230.10(c)(1) (findings of significant degradation that bar permitting of a discharge include consideration of "[s]ignificantly adverse effects of the discharge of pollutants on human health or welfare, including but not limited to effects on municipal water supplies, plankton, fish, shellfish, wildlife, and special aquatic sites"); *id.* § 230.10(c)(4) ("[s]ignificantly adverse effects of discharge of pollutants on recreational, aesthetic, and economic values").

the Guidelines includes a long list of potential effects on human use characteristics and provides criteria for EPA's consideration of local community impacts and environmental justice.⁸⁴

In addition to the harms discussed earlier in this subsection (Part II.A.1.c) which have environmental justice impacts in the Spruce-affected area, EPA also has recognized some additional such impacts, including the local residents' disproportionate experience of truck traffic, noise, fugitive dust, habitat loss, and harm to subsistence hunting, fishing, foraging, and gardening.⁸⁵ For example, the Spruce mining permit includes a plan to blast or explode parts of the mountaintop 3 to 4 times per day between the hours of 6:00 A.M. and 6:00 P.M. which will cause serious effects to people living nearby, not limited to the approximately 139 occupied structures within the blasting zone.⁸⁶ The higher potential for property harm, loss of property value, and loss of long-term local, sustainable economic development for this area are additional environmental justice impacts that should be considered.

The losses of mountains and mountain streams from projects like Spruce throughout the Appalachian region also cause cultural and personal harm to residents who value their natural environment in a unique and personal way. Many Appalachian residents of southern West Virginia, including in Logan and Boone Counties and other areas downstream from Spruce, whose families have lived in this area for generations, have a deep connection to their mountains and mountain streams. Their longstanding relationship with the local geography has shaped their family histories and local traditions, including their music, art, folklore, spiritual, and community life. Commenters' members and local residents have developed their personal and family identities alongside these mountains and local streams. Losing their natural mountain geography would cause deep personal and emotional harm to residents for whom the mountains are more than just a place to live, but are part of their heritage that can never be rebuilt or replaced. For example, the proposed Spruce permit area covers part of the area near and within observation distance of Spruce Fork Ridge, where the historic struggle known as the "Battle of Blair Mountain" occurred in 1921 between coal miners and coal company guards, as the miners sought to unionize and protect their rights as workers.⁸⁷ The Blair Mountain site and the areas within the observation and study zone of that site should be preserved for the cultural and historical benefit of local residents and the entire Southern West Virginia region. As explained by the president of the United Mine Workers:

⁸⁴ See, e.g., *id.* § 230.50 (municipal and private water supplies); § 230.51 (recreational and commercial fisheries); § 230.52 (water-related recreation); § 230.53 (aesthetics).

⁸⁵ 75 Fed. Reg. at 16,806

⁸⁶ See Community Impact Statement, Spruce Draft EIS, Appendix P at 5, 8, available at http://www.lrh.usace.army.mil/_permits/Spruce%20No%201%20Mine%20Draft%20and%20Final%20EIS. The permittee also intends to transport coal 24 hours a day from the mining site in approximately 350 *daily truckloads* across State Route 17. *Id.* at 8.

⁸⁷ Although originally listed on the National Register of Historic Places in early 2009, the Interior Department removed Blair Mountain from the register at the end of the prior Administration. 75 Fed. Reg. 1075 (Jan. 8, 2010). For more information, see Friends of Blair Mountain, <http://www.friendsofblairmountain.org/index.html>, or the WV Archives & History, <http://www.wvculture.org/History/labor/mwnews.html>; National Coal Heritage Area site, <http://www.coalheritage.org/page.aspx?id=20>.

[T]he Blair Mountain battle site should be preserved We believe a monument should be erected at the site explaining what happened there We support preserving the land immediately around the battle site, because we believe it's important for future generations to stand on that ground, and understand the importance of what happened there The events that took place on Blair Mountain are an important part of the history of the United Mine Workers of America (UMWA) and coal miners throughout Appalachia.⁸⁸

2. Mitigation conditions in the Spruce permit are inadequate to prevent or offset the unacceptable adverse effects.

A central, overarching problem with the Spruce permit is the lack of evidence in the record demonstrating that the types of mitigation proposed would succeed. Even if these techniques had ever worked in any similar context, the Spruce permit's standards and conditions would be insufficient to prevent the unacceptable adverse effects shown in this permit record.

a. The best available science suggests that the Spruce mitigation techniques will not succeed.

The Spruce permit relies on the future use of two proposed mitigation techniques as its main justification to destroy and cause permanent harm to existing waters naturally occurring on the mining site: (1) stream channel and riparian area "creation" (or "development," or "establishment"), on and off-site; and (2) stream channel "enhancement" (or "rehabilitation"), off-site.⁸⁹ Most of this relies on the use of drainage ditches. The first mitigation technique is supposed to ensure the creation of approximately 70,190 linear feet of new biologically sound stream channels. The "enhancement" technique is supposed to be able to improve 11,272 linear feet of stream channels or ditches. In addition, the permit relies on a third mitigation technique – stream channel "restoration" – to justify the use of an additional 6,307 linear feet of streams "temporarily" (meaning for all or most of the mine's 15-year lifespan) for the sole purpose of waste treatment, i.e., the "impoundment of fill material and sediment laden water."⁹⁰

The Spruce mitigation techniques have not worked in the past and are unlikely to succeed in fulfilling their purpose here.⁹¹ Rather, scientific research suggests that the permittee's concept of stream creation is unlikely to become able to establish lasting, permanent streams on the scale necessary to remedy and prevent the extreme, adverse impacts to Appalachian watersheds that have occurred and continue to occur. Similarly, enhancement of streams in a different part of a

⁸⁸ Statement of United Mine Workers of America President Cecil Roberts Regarding Preserving the Blair Mountain Battlefield (May 12, 2005), available at <http://www.umwa.org/?q=node/147>.

⁸⁹ Spruce ROD at 31-32.

⁹⁰ *Id.*

⁹¹ Palmer et al. (2010), *supra* note 36; PALMER & BERNHARDT (2009), *supra* note 29, at 18, 22 (citing research); see also *Compensatory Mitigation for Losses of Aquatic Resources*, 73 Fed. Reg. 19,594, 19,596 (2008) (recognizing the "limited" extent of both scientific literature and past project success on stream creation); MTM/VF PEIS at III.D-20 to D-21 (describing on-site mitigation: "to date functioning headwater streams have not been re-created on mined or filled areas as part of mine restoration or planned stream mitigation efforts"; and noting that "past efforts at off-site compensatory mitigation have not achieved a condition of no-net loss of stream area or functions").

watershed might improve the structure of such streams temporarily, but there is no evidence demonstrating that this technique can fully offset or compensate for the permanent loss of headwater streams to that ecosystem or watershed. Past litigation has documented the Corps' and mining industry's inability to come up with sound scientific evidence to support the type of mitigation techniques included in the Spruce permit.⁹² Without peer-reviewed data showing that stream creation has actually worked on a large scale for sufficient time to determine whether indeed it has been able to replace a fully functional Appalachian mountain stream, there is no rational basis in the record to allow the use of this mitigation technique to justify permanently destroying currently functional waterways.

Commenters have regularly provided the Corps with information on the complete inadequacy of stream creation and other mitigation techniques proposed in this permit. EPA and the U.S. Fish and Wildlife Service ("FWS") have regularly raised problems with the mitigation techniques used here. EPA called the ditches proposed to be used by Spruce "doubtful mitigation opportunities" and recommended that the Corps find meaningful examples where proposed techniques had actually been successful, which the record continues to lack.⁹³ EPA also called for "a compensatory mitigation plan that fully mitigates all adverse impacts of the [Spruce] proposal, including cumulative impacts . . . as part of the Clean Water Act review and permit process."⁹⁴ In EPA's final comments on Spruce, it reiterated that the mitigation plan was unacceptable in terms of its lack of functional assessment, headwater stream mitigation problems, and cumulative impact problems, stating that EPA "believe[s] that the important headwater stream functions will be lost and not mitigated by the ditch conversion."⁹⁵ Similarly, after reviewing other permits, FWS frequently has stated in comments that, "we continue to believe that it is not possible to fully replace the critical aquatic and terrestrial ecosystem functions of healthy headwater streams," and that FWS "[is] not aware of *any* scientific support for the concept that . . . ditches can be considered biologically equivalent to, or even rough approximations of, flowing streams."⁹⁶

The permittee's attempt to use SMCRA drainage or erosion control ditches as CWA mitigation is particularly problematic. Nearly 60% of the Spruce mitigation plan relies on such

⁹² *Ohio Valley Env'tl. Coal. v. Aracoma Coal*, 556 F.3d 177, 205 (4th Cir. 2009) ("The Corps' support for its claim that the proposed stream creation measures have good potential for success is admittedly limited."), *pet. for cert. pending*, *Ohio Valley Env'tl. Coal. v. U.S. Army Corps of Eng'rs* (No. 09-247) (filed Aug. 26, 2009); *see also id.* at 225 (Michael, J., dissenting) ("the Corps offers virtually no scientific support for the viability of creating working streams from scratch, particularly headwater streams").

⁹³ *See, e.g.*, EPA Spruce 404 Permit and DEIS Detailed Comments at 1-2 (June 16, 2006) ("we have concerns as to whether the on-site ditches will be functioning as ephemeral and intermittent streams. We are also concerned about whether these sediment control ditches can provide suitable stream mitigation opportunities").

⁹⁴ *Id.* (Letter at 3).

⁹⁵ EPA Comment Letter on Final Spruce EIS and Permit Application (Oct. 23, 2006).

⁹⁶ Letter from Thomas Chapman, U.S. Fish & Wildlife Serv., W. Va. Field Ofc., to Col. Bulen, Dist. Eng'r, U.S. Army Corps of Eng'rs, Huntington Dist. 3-4 (July 26, 2004) (emphasis added) (addressing the Laxare East surface mine; finding that ditches are "inadequate and unacceptable compensatory mitigation for losses of fully functioning intermittent or perennial streams") (Attached as Appendix 16).

ditches.⁹⁷ The permittee simply attached the same sheets to the Spruce No. 1 section 404 permit application for each ditch that it submitted with its SMCRA permit.⁹⁸ Yet, SMCRA ditches do not satisfy the CWA antidegradation or mitigation requirements. SMCRA requirements do not replace, satisfy, or supersede any CWA requirements.⁹⁹ For these reasons, “[n]o Section 404 compensation credit should be given for sediment, groin, or other water control ditches required for mining projects under SMCRA and CWA Section 402,” as EPA has recognized.¹⁰⁰ As explained by EPA, “creating streams using on-site drainage ditches, employing enhancement measures that include channel or habitat improvement and changing the classification of a stream from intermittent to perennial are insufficient to replace the quality of the streams impacted.”¹⁰¹ A ditch that drains wastewater is not a healthy, functional, naturally occurring, biological stream, and such a ditch or channel can in no way prevent significant degradation or compensate for the loss of a natural stream.

b. Due to the incomplete analysis of the Spruce permit’s effects, the mitigation techniques could not be designed appropriately.

Even if they could work in theory, which the record shows they cannot, EPA has correctly documented that the mitigation techniques in the Spruce permit would be inadequate because the record does not contain a complete analysis of the impacts of the permit on waters.¹⁰² There must be a full analysis of impacts before a project begins in order to have the potential ability to design a mitigation plan that might work, as EPA’s prior Spruce permit comments recognized.¹⁰³ This must include the necessary determination regarding “the nature and degree of effect that the proposed discharge will have, both individually and cumulatively, on the structure *and function* of the aquatic ecosystem and organisms,” as required by 40 C.F.R. § 230.11(e) (emphasis added). Instead, the Corps’ analysis of impact in the Spruce permit focused solely on the impact on stream “structure,” considered in terms of the amount of linear feet or acreage of streams to be lost, which in no way satisfies this requirement.¹⁰⁴ The term structure is used scientifically to describe how a waterway *looks* at a given moment in time, but it is function that addresses whether or not that stream actually *works* in a multi-dimensional way,

⁹⁷ See Spruce No. 1, Compensatory Mitigation Plan (“CMP”) at 26-30 (Mar. 2006), available as Appendix I to the Spruce Draft EIS, at www.lrh.usace.army.mil/_permits/Spruce%20No%201%20Mine%20Draft%20and%20Final%20EIS.

⁹⁸ *Id.* at 29 CMP App. E-I (listing on-site mitigation as erosion control channels).

⁹⁹ See SMCRA, 30 U.S.C. § 1292(a) (“Nothing in this chapter shall be construed as superseding, amending, modifying, or repealing. . . [applicable environmental laws, including the CWA]”).

¹⁰⁰ EPA April 2010 Guidance at 24; *id.* at 23 (explaining that drainageways or groin ditches “do not replace lost stream functions and are therefore not an acceptable form of compensatory mitigation”).

¹⁰¹ 75 Fed. Reg. at 16,804.

¹⁰² See 75 Fed. Reg. at 16,803-05.

¹⁰³ See EPA Spruce Comments at 2 (June 16, 2006) (“Since there was no functional assessment conducted for the streams in the project area, it is unclear how it will be confirmed that these modified sediment ditches will replace lost functions of impacted streams.”).

¹⁰⁴ See, e.g., Spruce ROD at 30-32; Spruce CMP at 43, 45.

over the course of time.¹⁰⁵ Because these concepts are different at their core, basic ecological principles bar the use of a determination of effects on structure as a substitute or proxy for a determination of effects on function, either for the stream lost or the watershed as a whole. The regulation uses both terms for scientific reasons. The Corps' failure to assess effects on stream function as part of the permit's overall impacts fatally undermines its permitting decision. Both determinations are essential and required and must follow valid scientific methodologies. This failure is particularly problematic here because considering impacts only in terms of the physical structure ignores most of the likely impacts (including the full direct loss, the functional losses downstream, the downstream water quality impacts from additional discharges, and the cumulative watershed impacts of the loss of critical headwater streams).¹⁰⁶ Yet, for downstream water quality, the Corps merely relied on the state's insufficient evaluation without looking at the criteria needed to assess the full impact of downstream pollution and related harm from these discharges.¹⁰⁷

In order to understand and address the full loss to waters from the Spruce proposed discharges, the Corps, at a minimum, was required to assess the pre-discharge status of the streams, and then determine whether the proposed mitigation would restore the full capacity of those streams to perform all relevant ecosystem functions.¹⁰⁸ "Without a thorough functional assessment prior to initiation of the project, it is impossible to determine when the mitigation is successful."¹⁰⁹ Mitigation requires a complete and scientifically valid understanding of the harm to be offset. The Spruce permit and its mitigation plan have no rational basis in the record and its mitigation techniques and conditions are based on speculation.

c. The Spruce permit's mitigation standards are insufficient to ensure that no unacceptable adverse effects will occur.

The Corps' parameters for mitigation success and monitoring mechanisms are insufficient to prevent or avoid significant degradation when mitigation fails. In particular, the Spruce permit does not require appropriate parameters to be measured in order to monitor and determine whether or not mitigation has worked. The Spruce permit contains a plan to monitor the success or failure of these mitigation techniques over a 10-year period. Monitoring methods include the use of the West Virginia Stream Condition Index (WVSCI), EPA Rapid Bioassessment Protocol scores (RBS), and water chemistry sampling. At the end of ten years,

¹⁰⁵ PALMER & BERNHARDT (2009), *supra* note 29, at 22 ("How a stream looks (its form) is simply not the same as how it processes (its function) material and supports life (primary producers, invertebrates, etc.); see also *supra* note 30 and surrounding text (Section 404(b)(1) Guidelines definition of functions and functional capacity).

¹⁰⁶ See Part II.A.1.a, above; 75 Fed. Reg. at 16,797 ("[a]n understanding of the adverse impacts of the proposed project requires an understanding of the nature and importance of headwater streams and their contribution to the overall health of the watershed and to wildlife living in the watershed," particularly "in the ecology of the Appalachian region").

¹⁰⁷ See, e.g., Spruce ROD at 24 (citing WVDEP § 401 certification).

¹⁰⁸ See 40 C.F.R. § 230.11(e); *id.* §§ 230.1(c), 230.10(c).

¹⁰⁹ 75 Fed. Reg. at 16,804. In addition to the streams themselves, riparian areas to be destroyed by the Spruce project similarly "provide a variety of ecological functions and services and help improve or maintain local water quality," *id.* at 16,797, and yet, the Corps' analysis also fails to assess these losses or their impacts on the watershed.

the mitigation sites are supposed to meet certain performance standards that also are ineffective.¹¹⁰

The Spruce mitigation plan purports to address the first category of harm described in Part II.A.1.a, above, the permanent and temporary losses of the streams, purely in terms of structural measures, i.e., linear feet or acre size.¹¹¹ The performance standards require the creation of a specific number of "Stream Habitat Units" (SHUs), which measure only the physical length of a stream channel and whether water is present within that channel.¹¹² Even though it used this method to develop the compensatory mitigation plan for the Spruce permit, the Corps previously had disavowed the SHU method and recognized that it does not address function.¹¹³

There is no valid mitigation in the Spruce permit to address downstream water quality harm or cumulative impacts. The performance standard that the 26,625 feet of drainage ditches have to meet after ten years is an RBS score of 110-120.¹¹⁴ There is no minimum standard for conductivity, sulfate, selenium or for a WVSCI score. As a result, the site could have high conductivity, sulfate, and selenium and a low WVSCI score showing stream impairment and still be treated as a success. In view of the scientific research demonstrating the downstream harm, including biological impairment, caused by high levels of these pollutants, the Spruce mitigation plan is likely to fail, and the Corps' limited performance standard is likely to hide that failure.

The permit also does not require monitoring, reporting, or public disclosure of monitoring data for a sufficient period to allow a real-time assessment of whether mitigation is working. Ten years of monitoring and reporting is insufficient. As the Pond study demonstrates, biological impairment and elevated conductivity has persisted at old mines for fifteen years or longer.¹¹⁵ In addition, current reclamation practices by the industry cannot feasibly alter or reduce the conductivity levels in streams below valley fills to comply with water quality standards that prohibit biological impairment. Furthermore, as currently required, the Spruce permit monitoring would consider only stream channel enhancement and construction, erosion control and bank stability, and riparian vegetation, using cross-sectional surveys and photographs.¹¹⁶ Even positive monitoring results in the short-term could not justify the use of such tenuous mitigation techniques when the damage to U.S. waters is permanent. Any serious

¹¹⁰ Spruce Permit, Special Conditions 12-19.

¹¹¹ Spruce CMP at 10-11.

¹¹² See Spruce CMP at 43; *id.* at 45 ("At the end of the monitoring period project success will be determined based upon the SHU units created.").

¹¹³ See Corps' official court statements in volume 3 of the transcript at 70-74, *OVEC v. U.S. Army Corps of Eng'rs*, Civ. Action No. 3:05-0784 (S.D. W.Va.) (testimony of Mark Sudol, Chief of the Regulatory Program at the U.S. Army Corps of Eng'rs Headquarters, Oct. 5, 2006), available at http://palmerlab.umd.edu/MTM/US_District_Court_Civil_Action_Official_transcript_Volume_III.pdf (Attached as Appendix 17).

¹¹⁴ Spruce Permit, Special Condition 19 and attached table.

¹¹⁵ Pond et al. (2008), *supra* note 36, at 731.

¹¹⁶ ROD at 47.

effort at mitigation must be required to ensure, prove and maintain success over a sufficiently long time period, of at least 30 years.¹¹⁷

Finally, the permit contains no meaningful consequences for a mitigation failure, which creates only a low incentive to ensure it succeeds. For example, the CMP merely states:

If the mitigation activities proposed . . . are found to be unsuccessful, the company would submit to the USACE a revised mitigation plan based on technologies and philosophies current at that time. This revised mitigation plan may include a different method of on-site restoration or a proposal to reconstruct/restore/enhance other waters of the U.S. in the area.¹¹⁸

In other words, if these techniques fail, the permittee is merely required to submit a new plan, even though the original streams will have been destroyed permanently in reliance on the original mitigation plan. This provides no protection for the waters or the communities affected by the stream destruction that the Corps would allow in reliance on the failed plan. Even aside from the enforcement problems for mitigation years later, a penalty that might accrue could do nothing to bring back the waters, the wildlife, the ecosystem, or the downstream water quality once destroyed, buried, or turned into a waste treatment system. Based on this record, EPA should veto the permit to prevent all unacceptable adverse impacts from happening *before they occur*.

d. The Corps' record for similar permits suggests that the Spruce permit conditions will be inadequate.

Recent mitigation monitoring reports for similar mines in operation provide further evidence that the mitigation techniques proposed in this permit simply do not work. These reports also demonstrate that, even if there were effective mitigation techniques available, the types of monitoring and remedial conditions included in Spruce are insufficient to satisfy the CWA requirements.

As a first example, the Spruce mitigation plan relies on the use of on-site drainage ditches for 58.9% of the total mitigated stream length. The December 2009 mitigation monitoring report for Mingo Logan Coal Company's Mountain Laurel Complex in the Seng Camp watershed just north of Pigeonroost Branch – another project with similar discharges that attempts to rely on similar mitigation – provides additional evidence that such mitigation does not work in Appalachia. During the mining and operations phase at that Complex, Mingo Logan constructed 4,660 linear feet of intermittent channels within two clear water diversion ditches that drained into Seng Camp Creek at two different locations. The company has reported that only ten feet of that channel has developed consistent flow, and “a continuous channel has not naturally developed.”¹¹⁹ In addition, the riparian plantings of trees and shrubs showed “no evidence of

¹¹⁷ PALMER & BERNHARDT (2009), *supra* note 29, at 25.

¹¹⁸ Spruce CMP at 46 (“Re-Design of the Mitigation”).

¹¹⁹ 4th Annual Update & Status Report for Mingo Logan Coal Company's Mountain Laurel Complex, WV DEP NO. U-5031-97, USACE ID# 199700093, at 2 (“Mountain Laurel report”) (Attached as Appendix 18).

survival or growth since the 2008 plantings.”¹²⁰ The habitat scores for the two channels were 71 and 62, while the required performance standard is 150-200.¹²¹ Finally, and importantly, there is no indication that the vital functions of a healthy stream are present in the ditches, even if the Corps were requiring monitoring of functional replacement. If these elements are not even present in the short-term, it is unclear how these methods could replace or compensate for the lost functions and other harm caused by the permanent destruction of functional, healthy streams in this watershed.

The inadequacy of the Spruce permit’s mitigation performance standards is also shown by a recently filed fourth-year mitigation monitoring report at a different West Virginia mining site—the Rush Creek Surface Mine. There the mine operator tried unsuccessfully to enhance two streams to provide mitigation credit. The report shows that even though the RBS score for one of the streams was 120, the WVSCI score was only 29.9, well below the minimum score of 60 for no stream impairment.¹²² In addition, the stream chemistry for that mitigation site showed specific conductance at 1840 mg/l, sulfate at 1050 mg/l, and total dissolved solids of 1480 mg/l.¹²³ In this report as well there is no indication that the necessary functional elements of a healthy stream are present in the ditches. The lack of mitigation success even in the short-term is highly problematic because the mitigation techniques must have a lasting, positive impact over a long period of time in order to satisfy CWA requirements.

Reports from other valley fills at prior mining sites that have been supposedly “reclaimed” also continue to show lasting harm downstream. Downstream from “reclaimed” valley fills, ion concentrations have either remained constant or increased over time, as measured from three to fifteen years after reclamation was completed.¹²⁴ To make matters worse, the Corps has a dismal record of oversight under section 404 over the years.¹²⁵

These are examples from mining permits similar to Spruce that provide further reason why EPA should not allow this project to proceed. In view of its similarity to these other

¹²⁰ *Id.* at 3.

¹²¹ *Id.* at 5.

¹²² Tom Scholl, Fourth Year Mitigation Monitoring Report, Rush Creek Surface Mine Loudon District, Kanawha County, at 4, Permit No. S-3004-99 (attached as Appendix 19).

¹²³ Benthic, Habitat and Water Chemistry Surveys of Rush Creek, Laboratory Analysis Report for M-1 site, at 2 (Attached as Appendix 20).

¹²⁴ See, e.g., Pond et al. (2008), *supra* note 36, at 731 (finding that there was “little sign of biological recovery after 6 to 7 y” and noting that another study found “impacts to ecosystem structure and function . . . remained after 15 years of recovery of a coal-mined watershed . . . and the oldest VF site in the data set . . . still had downstream specific conductance values > 1200 uS/cm and no mayflies after 15 y.”) (citing Simmons et al. 2008, Merricks et al. 2007).

¹²⁵ See GAO-10-206, FINANCIAL ASSURANCES FOR, AND LONG-TERM OVERSIGHT OF, MINES WITH VALLEY FILLS IN FOUR APPALACHIAN STATES 23 (Jan. 2010) (finding a lack of long-term Corps’ oversight to ensure mitigation remains viable after 5-10 years), available at <http://www.gao.gov/new.items/d10206.pdf>; GAO, WETLANDS PROTECTION: CORPS OF ENGINEERS DOES NOT HAVE AN EFFECTIVE OVERSIGHT APPROACH TO ENSURE THAT COMPENSATORY MITIGATION IS OCCURRING 2 (2005) (concluding that the Corps districts visited by the GAO “performed limited oversight to determine the status of compensatory mitigation.”), available at <http://www.gao.gov/new.items/d05898.pdf>.

permits, monitoring reports suggest that the Spruce permit is unlikely to be sufficient to prevent or offset unacceptable adverse effects to waters. The mitigation proposed for the Spruce No. 1 Mine simply will not compensate for the loss of vital streams, will not protect the watershed from downstream harm due to the loss of those streams, and will not protect the chemical, physical, and biological integrity downstream.

3. The Spruce permit does not satisfy the Section 404(b)(1) Guidelines.

EPA's Section 404(c) regulations require EPA to evaluate whether a proposed discharge or site specification is inconsistent with "relevant portions of the section 404(b)(1) guidelines."¹²⁶ "The section 404(b)(1) guidelines provide the substantive criteria by which the acceptability of a proposed discharge is to be judged."¹²⁷ The fact that the Spruce permit does not comport with the Section 404(b)(1) Guidelines as discussed by EPA provides additional evidence of the "unacceptability" of this permit and the impacts it would cause.¹²⁸

In particular, the permit record demonstrates that the Corps has not met the following important requirements of the Guidelines for reasons discussed in EPA's proposed veto: (1) No discharge may occur if there is a less environmentally damaging practicable alternative, 40 C.F.R. § 230.10(a); (2) No discharge may occur if it is likely to cause or contribute to violations of any state water quality standard, *id.* § 230.10(b); (3) No discharge may occur if it is likely to cause or contribute to significant degradation of waters, *id.* § 230.10(c); *see also id.* § 230.1(c); (4) No discharge may occur if appropriate and practicable steps have not been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem, *id.* § 230.10(d); (5) No discharge may occur if the Corps has not assessed and prevented individual and cumulative impacts to indigenous aquatic ecosystems, organisms, and communities, *id.* § 230.11(e);¹²⁹ (6) No discharge may occur if the Corps has not assessed and prevented cumulative effects on the aquatic ecosystem, including its productivity and water quality, *id.* § 230.11(g); (7) No discharge may occur if the Corps has not assessed and avoided secondary effects on the aquatic ecosystem, *id.* § 230.11(h). The high level of cumulative impacts already present in this watershed and to which the Spruce permit would add, *i.e.*, "the persistence and permanence of effects, both individually and cumulatively," from the permit, provides an especially strong indication that the permit would cause unacceptable harm.¹³⁰

The permit further violates the Section 404(b)(1) Guidelines in other ways that are relevant under section 404(c), including as discussed in Part II.A.1.c.4, above. EPA should also consider the following additional problems as part of its decision to veto this permit.

¹²⁶ 40 C.F.R. § 231.2(e) (citing 40 C.F.R. part 230).

¹²⁷ 44 Fed. Reg. at 58,078.

¹²⁸ 75 Fed. Reg. at 16,804-05.

¹²⁹ Note that the proposed Spruce veto refers on this point to 40 C.F.R. § 230.10(e), 75 Fed. Reg. at 16,797, but commenters respectfully observe that the appropriate citation appears to be 40 C.F.R. § 230.11(e) (Aquatic ecosystem and organism determinations).

¹³⁰ 75 Fed. Reg. at 16,806 (addressing cumulative impacts).

First, the Corps has not fully evaluated and the Spruce permit is not based on the required determination of environmental impacts, including individual and cumulative *effects on the function* of the aquatic ecosystem and organisms under 40 C.F.R. § 230.11(e).¹³¹ Without a full evaluation of impact and loss to streams and the watershed, the Corps cannot know how much mitigation needs to occur or whether the proposed mitigation will fully compensate for the loss. Failing to satisfy the threshold requirement to evaluate all impacts for the Spruce project – including impacts on stream function – meant that no conditions the Corps placed on this permit could make it lawful under the Section 404(b)(1) Guidelines. Given this failure, there was no way for the Corps to satisfy the antidegradation requirements of 40 C.F.R. § 230.10(c), or to reach any rational compliance determination under 40 C.F.R. § 230.12.

Second, the Spruce permit violates the core mitigation requirements of the Section 404(b)(1) Guidelines for reasons in addition to those already discussed. The Corps' determination that the Spruce permit complies with the Guidelines relies completely on "the inclusion of the mitigation and monitoring conditions."¹³² Because of the likely failure of the mitigation techniques proposed for the Spruce permit, the Corps' Guidelines compliance determination is unlawful under 40 C.F.R. § 230.12(c).

As one example, the Guidelines generally prohibit the reliance on unproven mitigation to authorize harm that, absent mitigation, would constitute significant degradation. For any mitigation that is likely to affect plant and animal populations, the regulations require the use of mitigation techniques "that have been demonstrated to be effective in circumstances similar to those under consideration wherever possible."¹³³ But, the mitigation techniques in the Spruce permit have never been demonstrated to be effective, and thus the permit violates 40 C.F.R. § 230.75(d). Importantly, there is no scientific demonstration that they have ever been practicable or effective in Appalachia or in the area to be affected by the Spruce permit which is already experiencing grave ecological distress due to the cumulative impacts of past and other current mining.¹³⁴ The regulation provides a limited exception for techniques that have not been demonstrated to be successful in similar circumstances, allowing their use to occur only "on a small scale to allow corrective action if unanticipated adverse impacts occur."¹³⁵ This exception could not possibly apply to justify a massive project of mountain and waterway destruction as that proposed for the Spruce No. 1 Mine. EPA has already recognized that at least one mile of stream loss or one valley fill is generally enough to create significant impact under the NEPA standard,¹³⁶ which should be a clear indication that substantive section 404 action is therefore needed. The "small scale" exception simply has no place in the context of high-impact surface mining in Appalachia. Even if the Corps might have used this for a single project years ago to see if it would work, now that the destructive impacts of this practice are so well-documented and the lack of mitigation success thoroughly demonstrated, there can be no justification for

¹³¹ See Part II.A.2.a, above.

¹³² Spruce ROD at 31 (stating the Corps' § 230.12(c) compliance finding).

¹³³ 40 C.F.R. § 230.75(d).

¹³⁴ See, e.g., Part II.A.2.b-c, above.

¹³⁵ *Id.*

¹³⁶ EPA April 2010 Guidance at 30.

applying this exception to swallow the rest of the Guidelines. EPA may not allow Spruce to go forward based on methods that are not only unproven but also have a demonstrated record of failure on similar projects.

As a further mitigation problem, Spruce permit also violates 40 C.F.R. § 230.93 (general compensatory mitigation requirements). As the use of the Corps' chosen mitigation techniques is unlikely to be effective, they are not "practicable" or likely to "offset environmental losses resulting from unavoidable impacts to waters of the United States" to be caused by the Spruce permit.¹³⁷ Commenters therefore urge EPA to retract or revise its suggestion that "a ratio substantially greater than 1:1 ratio" might somehow compensate for the loss of streams,¹³⁸ because no ratio using a structural or linear feet measurement could be sufficient. The ratio used is arbitrary, speculative, and lacks evidentiary support, and, as such, it provides no valid justification by either EPA or the Corps for permitting mitigation techniques that have no demonstrated record of success at *any* ratio. No matter how many extra linear feet of ditch channels a permittee might promise to build up and try to populate with aquatic life, and no matter how many feet of stream banks somewhere else a permittee might try to plant with trees, this could not possibly make up for the loss of streams unless these mechanisms worked on any scale that could be translated to the Appalachian mountain setting. The reality in this record, as EPA has recognized, is that the planned mitigation structures "are waste treatment systems designed to control poor quality waters and then convey those waters offsite," not functional streams.¹³⁹ And, more importantly, the science is clear that stream replacement remains "frequently unsuccessful," it is not an effective or practicable mitigation method, and "there is no evidence in the peer-reviewed literature that the type of stream creation proposed in the CMP will successfully replace lost biological function and comparable stream chemistry."¹⁴⁰

As an additional example, the Spruce permit also violates the Section 404(b)(1) Guidelines requirement that mitigation used must be "directly related to the impacts of the proposal, appropriate to the scope and degree of those impacts" and also "reasonably enforceable."¹⁴¹ The record here does not demonstrate that techniques performed on ditches or streams different from headwater streams and located somewhere else in the watershed will be in any way "directly related to" the Spruce project's impacts. Because of the high level of impact at stake here, it is unclear how the permit's reliance on unproven mitigation techniques could be considered "appropriate." Further, the lack of any meaningful monitoring or remediation conditions and the failed mitigation for other similar permits demonstrate that the mitigation techniques used will be completely unenforceable by the Corps, EPA, or concerned citizens.

¹³⁷ 40 C.F.R. § 230.93(a)(1), (e)(3).

¹³⁸ 75 Fed. Reg. at 16,804.

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ 33 C.F.R. § 320.4(r).

B. It would be arbitrary and capricious for EPA not to finalize a complete veto of the Spruce permit.

1. EPA has the necessary authority to prohibit or deny this permit.

EPA's veto power is paramount under 33 U.S.C. § 1344(c). "[EPA's] authority to veto to protect the environment is practically unadorned."¹⁴² As EPA explained in promulgating the Section 404(c) veto regulations: "While Congress had faith in the Corps' administrative experience, it recognized EPA as the 'environmental conscience' of the Clean Water Act."¹⁴³ This is logical in view of the fact that EPA is the administrator of the Clean Water Act and also has both primary regulatory authority under the Act and ultimate oversight of all permitting programs.¹⁴⁴ In any dispute with the Corps regarding CWA jurisdiction or interpretation of section 404 of the CWA, EPA's view prevails.¹⁴⁵

EPA's authority under section 404(c) is therefore designed to be used in just the type of case at hand: where the Corps might believe that it has satisfied applicable requirements or that it may engage in an economic balancing test, even though unacceptable adverse impacts are likely to result. Where necessary to prevent environmental harm, "Congress wanted EPA to have an opportunity to have the final say to prevent significant adverse effects."¹⁴⁶

As section 404(c) makes clear, EPA may veto either the specification or use of a disposal site at any time – before, during, or after a permit has issued.¹⁴⁷ EPA is authorized to issue a veto whenever a discharge "is having or will have an 'unacceptable adverse effect.'"¹⁴⁸ EPA's section 404(c) regulations explicitly apply to the type of situation at hand, where a permit has already issued, and even provide for particular procedures that EPA may use in this instance if necessary to prevent an imminent, or already occurring, discharge by a permittee. Specifically, "[w]here a permit has already been issued," EPA may request that the Corps suspend the permit to prevent discharges under it, and allow EPA sufficient time to complete proceedings under 40 C.F.R. Part 231.¹⁴⁹ EPA also may go to court to seek a preliminary injunction if necessary to prevent an emergency, where the Corps refuses to suspend the permit and the permittee intends to discharge under it.

¹⁴² *James City County, Va. v. EPA*, 12 F.3d 1330, 1336 (4th Cir. 1993).

¹⁴³ 44 Fed. Reg. at 58,081.

¹⁴⁴ 33 U.S.C. §§ 1251(d), 1313, 1342, 1344(b), 1361(a).

¹⁴⁵ Benjamin R. Civiletti, Administrative Authority to Construe § 404 of the Federal Water Pollution Control Act, 43 Op. Att'y Gen. 197, 202 (1979).

¹⁴⁶ 44 Fed. Reg. at 58,078; *see James City County*, 12 F.3d at 335-36 (citing CWA legislative history).

¹⁴⁷ 44 Fed. Reg. at 58,076-77 ("The statute on its face clearly allows EPA to act after the Corps has issued a permit; it refers twice to the 'withdrawal of specification,' which clearly refers to action by EPA after the Corps has specified a site").

¹⁴⁸ 40 C.F.R. § 231.1(a).

¹⁴⁹ *Id.* § 231.7.

Permittees and potential permittees, including the Spruce operator, have long been on notice of EPA's authority and available procedures. Indeed, during the process of promulgating its Section 404(c) regulations, industry commenters requested that EPA not establish procedures that would allow it to use its enumerated Section 404(c) authority after a permit was issued, but EPA decided it was important not to limit its discretion to do so.¹⁵⁰ As EPA explained, "one can anticipate that there will be circumstances where it may be necessary to act after issuance in order to carry out EPA's responsibilities under the Clean Water Act," and therefore decided it was important not to "restrict EPA's right to act after a permit has been issued."¹⁵¹

The fact that EPA could have vetoed the Spruce permit earlier in no way undermines EPA's ability and responsibility to veto now that it has the present record and available science before the agency. EPA is not proposing to use its 404(c) veto regarding the discharges that have already occurred under the permit. Where, as here, EPA has received relevant scientific and environmental impact information and has recognized its responsibility to act, its prior delay poses no bar to appropriate action now.¹⁵² As long as EPA may still protect waters from destruction or significant harm, it is never too late to step in and enforce the Clean Water Act.¹⁵³

2. Prohibiting this mine will be consistent with EPA's prior 404(c) veto decisions.

A veto would be consistent with the ways in which EPA has used its section 404(c) authority in the past. EPA has previously reached the final stage of a veto determination on twelve projects.¹⁵⁴ On additional occasions the mere initiation of a Section 404(c) proceeding led to withdrawal or modification of a permit that made a final determination unnecessary, so the specific number of final vetoes issued underrepresents the full impact of EPA's prior exercise of its Section 404(c) veto authority.¹⁵⁵ Generally, where an EPA veto has been challenged in court, EPA has established a track record of securing a positive result in which the court has upheld its decision to veto.¹⁵⁶

¹⁵⁰ 44 Fed. Reg. at 58,077.

¹⁵¹ *Id.* In addition to the clear notice provided by section 404(c) and EPA's accompanying regulations, 40 C.F.R. Part 231, the Corps also retains full ability under the permit's own terms to "reevaluate its decision on this permit at any time the circumstances warrant." Spruce Permit at 3; *see also* 33 C.F.R. § 325.7.

¹⁵² *See, e.g., City of Alma v. United States*, 744 F. Supp. 1546, 1556 (S.D. Ga. 1990) (upholding EPA § 404 veto, after Corps had issued a § 404 permit to construct a lake and the agency re-evaluated the project and refusing to "estop the Agency from enforcing the law").

¹⁵³ *See* 44 Fed. Reg. at 58,081.

¹⁵⁴ *See* EPA, Section 404(c) Veto List, <http://www.epa.gov/owow/wetlands/regs/404c.html> (last visited May 25, 2010).

¹⁵⁵ *See* Robert W. Adler, *The Two Lost Books in the Water Quality Trilogy: The Elusive Objectives of Physical and Biological Integrity*, 33 ENVTL. L. 29, 69 n.222 (2003) (citing Ann Williams, Senior Associate Regional Counsel, EPA Region I, remarks at Lewis & Clark Law School (Oct. 18, 2002)).

¹⁵⁶ *See, e.g., James City County, Va. v. EPA*, 12 F.3d 1330 (4th Cir. 1993); *Bersani v. EPA*, 850 F.2d 36 (2d Cir. 1988); *Alameda Water & Sanitation Dist. v. Reilly*, 930 F. Supp. 486 (D. Colo. 1996); *City of Alma v. United States*, 744 F. Supp. 1546 (S.D. Ga. 1990).

As authorized under Section 404(c), EPA has used the veto both to bar discrete, unacceptable impacts and also to address harm that was likely to be repeated in similarly problematic Corps permits, thereby deterring even greater harm to waters. As is true here, cumulative impacts have featured prominently in EPA's past vetoes, as in EPA's veto to protect a significant portion of the Everglades from development.¹⁵⁷ Also similar to Spruce, EPA has previously considered not just the direct harm to waters but also the downstream harm due to water quality impacts and functional ecosystem losses when deciding whether to veto.¹⁵⁸ As here, EPA also has vetoed due to the unlikelihood or insufficiency of mitigation measures.¹⁵⁹ For example, EPA explained in the Big River Proposed Veto Determination that a veto was necessary due to the uncertainty regarding mitigation measures:

EPA does not believe the adverse environmental impacts of the reservoir proposal can be mitigated. To even attempt meaningful replacement of the full spectrum of existing wetland values would require a mitigation plan so complex as to be infeasible from both a scientific and practical standpoint. Even if a plan could be devised which theoretically replaced wetlands values, EPA doubts it could be relied upon to prevent the potentially unacceptable adverse environmental impacts of this project given the inherent risks associated with mitigation.¹⁶⁰

A number of the previously vetoed projects involved controversies that the Corps, EPA, and permittee had been unable to resolve, and ultimately resulted in the Corps' refusal to take corrective action required to prevent unacceptable adverse effects. This is consistent with EPA's recognition that "one of the basic functions of Section 404(c) is to police the application of the Section 404(b)(1) Guidelines."¹⁶¹ In prior veto decisions, EPA has recognized that the veto should be used "not only to prevent adverse environmental impacts but also to protect the integrity of the Section 404(b)(1) Guidelines and to insure their proper application."¹⁶² Thus,

¹⁵⁷ See, e.g., Everglades (Rem, Becker & Senior Corp.) Veto, 53 Fed. Reg. 30,093, 30,094 (Aug. 10, 1988) (veto based in part on cumulative impacts as described at 52 Fed. Reg. 38,519 (Oct. 16, 1987)); see also Jack Maybank Veto, 50 Fed. Reg. 20,291 (May 15, 1985) (veto based in part on cumulative impacts to the area, including functional losses in the St. Helena Sound ecosystem, as described at 49 Fed. Reg. 30,112, 30,114 (July 26, 1984)).

¹⁵⁸ See, e.g., M.A. Norden Veto, 29 Fed. Reg. 29,142 (July 18, 1984) (based in part on impacts downstream in Mobile Bay) (later modified to allow a small access road without similar downstream harm); Big River Veto, 55 Fed. Reg. 10,666 (Mar. 22, 1990) (issuing veto of Big River Reservoir impoundment due in part to broader downstream groundwater and surface water impacts, as described at 54 Fed. Reg. 5133 (Feb. 1, 1989)); Everglades Veto, 53 Fed. Reg. 30,093 (Aug. 10, 1988) (based in part on effects on downstream and hydrologically connected waters discussed at 52 Fed. Reg. at 38,522).

¹⁵⁹ See, e.g., Sweedens Swamp Veto, reported at 51 Fed. Reg. 22,977, 22,978 (June 24, 1988) (describing veto as based in part on uncertainties regarding the proposed mitigation plan including the fact that "the risks involved are unacceptably high for a non water-dependent project which would unnecessarily destroy natural wetlands of proven environmental value"); *Alameda Water & Sanitation District v. Reilly*, 930 F. Supp. 486, 492 (D. Colo. 1996) (describing record support for conclusion that impacts would occur even after mitigation due to mitigation's "emphasis on quantity rather than quality in substitutions of aquatic and recreational results").

¹⁶⁰ Big River Proposed Veto, 54 Fed. Reg. at 5133, 5137 (Feb. 1, 1989), finalized at 55 Fed. Reg. 10,666.

¹⁶¹ Everglades Veto, Recommended Determination at 32, <http://www.epa.gov/owow/wetlands/pdf/RemRD.pdf>, finalized at 53 Fed. Reg. 30,093.

¹⁶² M.A. Norden Veto, Recommended Determination at 14, <http://www.epa.gov/owow/wetlands/pdf/NordenCoRD.pdf>, finalized at 29 Fed. Reg. 29,142.

EPA has long recognized that a veto is especially appropriate as a last resort where, as is true here, the Corps had full opportunity to satisfy all section 404 requirements, but has not done so. EPA should take action to prevent impending unacceptable adverse impacts to waters whenever it discovers these impacts. As the Spruce permit record shows, that time has now arrived.

3. EPA may not balance temporary economic costs of a veto against the Spruce permit's permanent environmental impacts and related harm to the local communities.

EPA must base its section 404(c) veto decision solely on environmental factors and should ignore the permittee's self-interested calls for EPA to consider its short-term profit and any temporary economic benefit for the 15 years before the mine closes and leaves town.¹⁶³ A decision under section 404(c) must be based solely on environmental criteria and related harm.¹⁶⁴ EPA has full authority to veto "solely on the basis that it would cause unacceptable adverse effects on the environment," and indeed, "the only requirement placed on [EPA] by Congress is to consider the project's potential adverse impacts on the environment."¹⁶⁵ Where there is significant degradation of waters, section 404(c) does not allow EPA to consider economic effects or to engage in an economic cost-benefit analysis, but only to decide whether the discharge will have an "unacceptable adverse effect" on waters and environmental resources.¹⁶⁶ Thus, where EPA failed to veto a prior permit after addressing factors other than the adverse environmental impacts that Section 404(c) requires it to address, its failure to veto was found unlawful.¹⁶⁷

Moreover, the harm to the local community's environment will remain long after any temporary jobs and local profits have vanished. Recent economic analyses have recognized that industry's requests, as in this permit, to be able to destroy local waters in the interest of their short-term profit would come at a net economic cost to Appalachian states and local communities, without long-term economic development benefits.¹⁶⁸ The environmental harm, combined with environmental justice impacts to local residents, far outweighs any potential short-term economic benefit or profit that the permittee might attribute to the Spruce project.

4. There is no rational basis for EPA to allow any part of the Spruce project to proceed.

Based on the permit and Section 404(c) record, it would be arbitrary and capricious for EPA to decide to do anything other than permanently prohibit the Spruce permit and underlying discharges. No new information received during the comment period or new conditions that

¹⁶³ See Community Impact Statement, Spruce Draft EIS, Appendix P, at 6.

¹⁶⁴ 44 Fed. Reg. at 58,078, 58,081.

¹⁶⁵ *James City County*, 12 F.3d at 1335-36 (citing CWA legislative history).

¹⁶⁶ 33 U.S.C. § 1344(c); 40 C.F.R. § 231.2(e).

¹⁶⁷ See, e.g., *Alliance to Save the Mattaponi v. U.S. Army Corps of Eng'rs*, 606 F. Supp. 2d 121 (D.D.C. 2009).

¹⁶⁸ See, e.g., MACED (2009), *supra* note 78; MELISSA F. KONTY, M.F. & JASON BAILEY, THE IMPACT OF COAL ON THE KENTUCKY STATE BUDGET (prepared for MACED) (June 2009), available at <http://www.maced.org/coal>.

might be proposed could lead EPA to take any action other than prohibiting the disposal site specification and denying the permittee's use of this site for its mining waste discharges. Commenters therefore urge the Regional Administrator and EPA to base their decisions solely on the applicable scientific data, and not allow the Spruce-affected waters to be harmed in this watershed and sub-basin that are already so devastated by mining.

a. It would not be appropriate on the basis of this permit record for EPA merely to restrict the size or modify the project, rather than veto in full.

The proposed veto and record provide no information on any potential mitigation techniques that "have been identified to or by EPA as means by which impacts from this project or other similar projects may be reduced to an acceptable level."¹⁶⁹ There is no information in the record demonstrating how this might be possible. There also is no peer-reviewed scientific research that demonstrates that the mitigation techniques to be used here – stream creation and enhancement – would indeed fully satisfy the CWA requirements, as already discussed. To the contrary, the scientific record indicates the Spruce permit's mitigation is likely to fail after the project has filled and destroyed the streams.¹⁷⁰ Should the permittee attempt to propose a novel, untested approach, EPA should reject this and make a clean break from the previous Administration's reliance on questionable science. EPA should veto this permit because the permittee's promises of mitigation effectiveness are illusory.

If EPA were to discover any new potential mitigation techniques, it must require a demonstration of their long-term effectiveness before they could be used here.¹⁷¹ Spruce, one of the largest projects of its kind ever considered by EPA or authorized by the Corps, could by no means ever fall into the limited, "small scale" exception for novel mitigation techniques. It also is unclear how any new mitigation techniques might satisfy the requirements to be "directly related to the impacts of the proposal, appropriate to the scope and degree of those impacts, and reasonably enforceable."¹⁷²

b. The theory of permitting and only monitoring "sequential" valley fills is neither lawful nor scientifically justifiable.

The proposed veto also refers to EPA's past letter to the Corps regarding the Spruce permit in which EPA briefly suggested that the permittee might "construct the project sequentially to allow monitoring data from each portion of the project to inform decisions regarding how and whether the remainder of the project should be constructed."¹⁷³ EPA should

¹⁶⁹ 75 Fed. Reg. at 16,807.

¹⁷⁰ Palmer et al. (2010), *supra* note 36, at 149.

¹⁷¹ *See, e.g.*, 40 C.F.R. § 230.75(d).

¹⁷² 33 C.F.R. § 320.4(r).

¹⁷³ Letter from William C. Early, EPA Region III, Acting Regional Administrator to Col. Robert D. Peterson, Dist. Engineer for the Huntington Dist., U.S. Army Corps of Engineers, 5 (Oct. 16, 2009), http://www.epa.gov/region03/mtntop/pdf/Mining_COE_Spruce1_Ltr_16Oct09.pdf.

not employ that type of approach for Spruce. Authorizing “sequential” valley fills with downstream monitoring would be neither lawful nor scientifically valid.¹⁷⁴

The Spruce permit comes before EPA for review under section 404(c) as a single, unified package. As the agency has already noted, neither the Corps nor the permittee has revised the permit application or the permit itself in order to satisfy the Clean Water Act, although each has had full opportunity to attempt to do so.¹⁷⁵ Instead, the multiple revisions that the permittee has made to the project have *not* succeeded in satisfying all applicable environmental requirements.¹⁷⁶ EPA must not divide the project up into smaller and smaller parts in order to find a single valley fill that EPA deems somehow not to cause a significant level of degradation, and then allow the project to move forward in small pieces. For example, under NEPA, it is generally not appropriate to separate or segment closely related or connected portions of a project when analyzing impacts.¹⁷⁷ For similar reasons, EPA may not segment the Spruce permit into different valley fills either to assess environmental impact or to make a final decision under section 404(c).

It would violate section 404(c) for EPA to use a sequential approach or allow any portion of the Spruce permit to proceed (such as by deciding not to veto it in full, or to merely restrict it, but not prohibit or deny it) when each element of the project does not satisfy the legal standard. The record demonstrates that the Spruce permit in its entirety requires EPA’s veto. There is no information in the record that suggests, much less shows, that any single valley fill alone would not cause unacceptable adverse impacts and thus could somehow evade the veto standard. Rather, each of the individual valley fills at issue in this project would likely cause significant unacceptable adverse effects both individually and cumulatively. Available information indicates that a single valley fill generally is sufficient to cause significant degradation of waters and to harm downstream water quality.¹⁷⁸

¹⁷⁴ EPA has released no information regarding what a “sequential” approach might entail for the Spruce permit. Therefore, commenters have no meaningful way of evaluating or commenting on this possibility. If EPA is seriously considering this type of approach, commenters request a full opportunity for notice and comment as required by section 404 and applicable regulations. *See* Part II.B.4.c (below).

¹⁷⁵ *See* Oct. 16, 2009 Letter from EPA to the Corps; *see also* Letter from William C. Early, EPA Region III, Acting Regional Administrator to Col. Robert D. Peterson, U.S. Army Corps of Eng’rs Dist. Eng’r for the Huntington Dist. (Sept. 3, 2009), http://www.epa.gov/region03/mtntop/pdf/Mining_COE_Spruce1_Ltr_3Sep09.pdf.

¹⁷⁶ 75 Fed. Reg. at 16,791.

¹⁷⁷ *Cf., e.g., Thomas v. Peterson*, 753 F.2d 754, 759-60 (9th Cir. 1985) (requiring full assessment of impacts of the project before approval because first stage of development “swings the balance decidedly in favor” of next stages) (citation omitted); *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1214-15 (9th Cir. 1998); *see also* 40 C.F.R. § 1508.25 (describing factors for connected, cumulative, and similar actions which should be considered together); *id.* § 1508.27(b)(7) (“Significance cannot be avoided by . . . breaking [an action] down into small component parts.”).

¹⁷⁸ For example, one valley fill at the Fola Mine No. 3 project has caused acute and chronic toxicity in the Boardtree Branch watershed in Clay County, W. Va., that the WVDEP has found to result in ionic stress-based biological impairment and in which EPA has documented high conductivity levels. *See* Notice of Citizen Suit Letter from J. Hecker & D. Teaney to J. Goroncy, Fola Coal Co., LLC at 1-3 (May 24, 2010) (Attached as Appendix 21). As another example, outfalls coming mainly from a single valley fill at the Catenary’s Kayford and Orgas mines in Boone County showed consistent selenium effluent limitation violations. Notice of Citizen Suit Letter from D. Teaney to T. Chapman, Catenary Coal LLC, at 3-11 (Mar. 19, 2008) (Attached as Appendix 22).

The only scientifically proven way to prevent significant degradation is to prevent a valley fill. Even if one small valley fill might somehow cause insignificant harm directly, that would not address the cumulative impact problem, in which “piecemeal changes can result in a major impairment of the water resources.”¹⁷⁹ On this record, authorizing the Spruce project to proceed, one valley fill at a time, would violate section 404(c) and applicable requirements.

Further, such an approach would turn the section 404 requirements on their head. Monitoring is not a form of mitigation and cannot make up for the lack of mitigation techniques. Monitoring based on a few one-time samples would provide merely a snapshot of the health of downstream waters, ecosystem, and watershed, and could not satisfy the requirements of the Section 404(b)(1) Guidelines. Monitoring only for conductivity, selenium, metals, or other downstream water quality problems would not address in any way the first two major types of harm that will occur if the Spruce discharges proceed: the direct stream loss and the downstream harm due to that stream loss, as previously discussed.¹⁸⁰ Single samples downstream could not assess the status of stream functions, or give confidence that the valley fill was not causing unacceptable adverse impacts. The only value that might come from monitoring a single valley fill is a more full assessment of the downstream harm that occurs as a result, at a given point in time. Once a fill is in place, better understanding the extent of the harm will not help the people, wildlife, aquatic ecosystem, and waterways downstream from that fill. The valley fill cannot be undone, the stream cannot be unburied and brought back to its pre-filled state as a functional contributor to the watershed.

Once a discharge has occurred that buries an Appalachian stream, there is no reliable way to mitigate the loss of that stream. There can be no valid justification for allowing unacceptable adverse impacts to occur today without proven mitigation available today. Section 404 therefore requires both the assessment and action necessary to prevent and mitigate such harm to occur *before* the approval of a project. Monitoring after the fact will be unable to make up for the lack of a full analysis of the impact of the mining discharge, and thus may not serve as a substitute for the action required to prevent or mitigate the significant degradation that discharge causes.

Not vetoing the Spruce permit in full now and proceeding instead with some type of time-delay or sequential approach would have the effect of authorizing the entire project to proceed *de facto* before satisfying legal requirements. EPA may not lawfully divide the project up into smaller parts, and hold off the rest, in order to try to delay its veto decision.¹⁸¹ Delay of a full decision with post-hoc monitoring would make it difficult for concerned citizens to

¹⁷⁹ 40 C.F.R. § 230.11(g).

¹⁸⁰ See Part II.A.1, *supra*; see, e.g., 75 Fed. Reg. at 16,798 (describing each type of harm).

¹⁸¹ Cf. *Chlorine Chemistry Council v. EPA*, 206 F.3d 1286, 1291 (D.C. Cir. 2000) (agency cannot avoid applicable statutory requirements “by dubbing its action ‘interim’” as “[w]hat is significant is Congress’s requirement that the action be taken on the basis of the best available evidence at the time of the rulemaking”).

participate and submit comments regarding whether any additional valley fills should proceed.¹⁸² EPA should now veto the Spruce project in its entirety, based on the present record, within the timeline and procedures that its own regulations establish. If the mining industry some day comes up with new techniques that satisfy the CWA, then it must re-apply at that time for a permit. EPA could not justify the use of a sequential approach for the Spruce No. 1 Mine due to the substantial adverse impacts in this record. EPA has sufficient information to veto now and must not wait and see what harm will happen after the fact. Section 404(c) requires EPA to prevent the type of harm shown in this record from happening now.

c. Section 404's public participation requirements bar the addition of new permit conditions without notice and comment

Section 404(c) of the CWA creates a right for the public to participate in a veto decision through notice and comment.¹⁸³ EPA has a particular responsibility to encourage and assist public participation in CWA programs under 33 U.S.C. § 1251(e). The 404 permitting framework generally also requires meaningful notice.¹⁸⁴ In particular, notice is critical regarding mitigation under section 404 and “the notice must . . . provide enough information to enable the public to provide meaningful comment on the proposed mitigation.”¹⁸⁵

If EPA were considering the use of any additional mitigation techniques for this permit or any particular sequential approach, EPA and the Corps must satisfy all of section 404's notice and comment requirements for any such techniques and relevant information. Commenters and other community members likely to be affected by Spruce would experience substantial prejudice if EPA were to make a surprise decision in this case based on secret mitigation techniques that come out of nowhere and have not been scientifically tested or subjected to public notice and comment. Without a full opportunity to review such techniques and any other data that might ground EPA's decision that has not been released for review with the proposed veto, commenters are unable to provide meaningful comment that speak directly to potential concerns or questions these techniques would likely raise. Further, if EPA were to consider adding heretofore unknown mitigation measures or restricting the Spruce permit but not vetoing

¹⁸² A potential example of one type of sequential approach cautions against its use here. Consol Permit No. 2006-2294-KAN (Signed by Corps Dist. Eng'r, Aug. 6, 2009) (“Peg Fork Permit”). The permit allows two of the proposed valley fills and sediment ponds to proceed immediately and establishes monitoring and reporting conditions. It also states that no discharges may occur on the remaining valley fills “until the permittee receives written notification from the Corps” which the Corps may only issue if EPA does not initiate action to veto the remaining valley fills under Section 404(c). *Id.*, Special Condition 1, 1.a, 1.b, 1.c.i-vii, 1.c.ii.. The Corps issued the Consol Peg Fork Permit in August of 2009, with EPA delaying its decision whether or not to object or veto until it assesses “at least three samples” of downstream water pollution and “any additional information it believes is relevant.” *Id.* Such minimal, snapshot sampling, after major harm has already occurred from the initial valley fills, will not give EPA the ability to consider or prevent the full impacts of the project.

¹⁸³ 33 U.S.C. § 1344(c); *see* 40 C.F.R. §§ 231.3, 231.4.

¹⁸⁴ 33 U.S.C. § 1344(a); 33 C.F.R. §§ 325.3, 325.2(a)(2), 320.4(r)(1)(iii); 40 C.F.R. § 230.94; *see also* 40 C.F.R. § 1500.1(b), 1506.6(a)(d) (NEPA requirements for public scrutiny and involvement).

¹⁸⁵ 40 C.F.R. § 230.94(b)(1); *see also* 33 C.F.R. §§ 325.1(d)(7), 332.4(b); *Ohio Valley Env'tl. Coal. v. U.S. Army Corps of Eng'rs*, 674 F. Supp. 2d 783, 804 (S.D. W. Va. 2009) (The public's “right to comment intelligently” requires disclosure of mitigation information when “[c]ompensatory mitigation is the single most important ‘material issue[] related to the justification’ of such a permit”).

it in full – which it is unclear how EPA could do from the proposed veto – the failure to submit the key information relevant to such a decision for public review and comment would also pose an environmental justice problem under E.O. 12898 § 5-5. The time when public comment and participation most matters is before final action.

III. CONCLUSION

EPA has fully supported its proposed veto of the Spruce No. 1 permit with valid findings and scientific evidence. The record demonstrates the grave environmental and related community impacts that hang in the balance. EPA must now follow the science and the Clean Water Act by ensuring that the Spruce No. 1 Mine cannot proceed to cause irreversible and unacceptable adverse effects in an area of West Virginia that has already seen much more than its fair share of harm from mountaintop removal mining.

Commenters call on EPA to fulfill its fundamental duty as “the environmental conscience of the Clean Water Act” by prohibiting and denying this permit and all discharges under it. Thank you for your attention to this critical matter.

Sincerely,

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APPENDIX LIST OF ATTACHMENTS

1. MARGARET A. PALMER & EMILY S. BERNHARDT, MOUNTAINTOP MINING VALLEY FILLS AND AQUATIC ECOSYSTEMS: A SCIENTIFIC PRIMER ON IMPACTS AND MITIGATION APPROACHES (2009).
2. M. Palmer et al., *Mountaintop Mining Consequences*, SCI. MAG., Vol. 327 (Jan. 8, 2010).
3. Douglas P. Pflugh, Summary of Cumulative Impacts from Surface Coal Mines: The Coal, Upper Guyandotte, and Kanawha River Watersheds (May 16, 2006).
4. WV DEP'T OF ENVTL. PROT., SELENIUM-INDUCED DEVELOPMENTAL EFFECTS AMONG FISHES IN SELECT WEST VIRGINIA WATERS (Jan. 2010), *available at* <http://www.dep.wv.gov/WWE/watershed/wqmonitoring/Documents/Selenium/Se%20Larvae%202010%20final.pdf>.
5. A. DENNIS LEMLY, AQUATIC HAZARD OF SELENIUM POLLUTION FROM MOUNTAINTOP REMOVAL COAL MINING (Apr. 2009).
6. Penny Loeb, *Shear Madness*, U.S. NEWS & WORLD REP. (Aug. 11, 1997).
7. WV DEP'T OF HEALTH AND HUMAN RESOURCES, SOURCE WATER ASSESSMENT REPORT – LOGAN PSD (SHARPLES) – LOGAN COUNTY (2003), *available at* <http://www.wvdhhr.org/oehs/eed/swap/get.cfm?id=3302315>.
8. See WV DEP'T OF HEALTH AND HUMAN RESOURCES, SOURCE WATER ASSESSMENT REPORT – ST. ALBANS WATER DEP'T, KANAWHA COUNTY (Feb. 2003), *available at* <http://www.wvdhhr.org/oehs/eed/swap/get.cfm?id=3302031>.
9. WV DEP'T OF HEALTH AND HUMAN RESOURCES, SOURCE WATER ASSESSMENT REPORT – LINCOLN PSD, LINCOLN COUNTY (Feb. 2003), *available at* <http://www.wvdhhr.org/oehs/eed/swap/get.cfm?id=3302205> (Source Water Assessment Report for Alum Creek).
10. Rick Steelhammer, *DEP retiree launches new career on river he helped protect*, CHARLESTON GAZETTE, Apr. 10, 2010, wvgazette.com/Outdoors/Recreation/201004100338
11. Nathaniel P. Hitt & Michael Hendryx, *Ecological Integrity of Streams Related to Human Cancer Mortality Rates*, ECOHEALTH (Apr. 2, 2010).
12. Michael Hendryx & Melissa M. Ahern, *Mortality in Appalachian Coal Mining Regions: The Value of Statistical Life Lost*, PUB. HEALTH REP., Vol. 124, 541-49 (July-Aug. 2009).
13. M. Ahern et al., *Residence in Coal-Mining Areas and Low Birth-Weight Outcomes*, MATERN. CHILD HEALTH J. (Jan. 21, 2010).
14. Ken Ward, *Mines cited in Mingo flooding*, CHARLESTON GAZETTE, May 11, 2009, *available at* <http://wvgazette.com/News/MiningtheMountains/200905110610>.
15. Michael Hendryx, *Mortality Rates in Appalachian Coal Mining Counties: 24 Years Behind the Nation*, ENVTL. JUSTICE, Vol. 1, No. 1, 2008.

16. Letter from Thomas Chapman, U.S. Fish & Wildlife Serv., W. Va. Field Ofc., to Col. Bulen, Dist. Eng'r, U.S. Army Corps of Eng'rs, Huntington Dist. (July 26, 2004).

17. Excerpt from Corps' official court statements in Volume III of the transcript, *OVEC v. U.S. Army Corps of Eng'rs*, Civ. Action No. 3:05-0784 (S.D. W.Va.) (testimony of Mark Sudol, Chief of the Regulatory Program at the U.S. Army Corps of Eng'rs Headquarters, Oct. 5, 2006), available at http://palmerlab.umd.edu/MTM/US_District_Court_Civil_Action_Official_transcript_Volume_I_II.pdf.

18. 4th Annual Update & Status Report for Mingo Logan Coal Company's Mountain Laurel Complex, WV DEP No. U-5031-97, USACE ID# 199700093 ("Mountain Laurel report").

19. Excerpts from Tom Scholl, Fourth Year Mitigation Monitoring Report, Rush Creek Surface Mine Loudon District, Kanawha County, Permit No. S-3004-99 ("Rush Creek report").

20. Excerpts from Benthic, Habitat and Water Chemistry Surveys of Rush Creek, Laboratory Analysis Report for M-1 site.

21. Notice of Citizen Suit Letter from J. Hecker & D. Teaney to J. Goroncy, Fola Coal Co., LLC (May 24, 2010).

22. Notice of Citizen Suit Letter from D. Teaney to T. Chapman, Catenary Coal LLC, (Mar. 19, 2008).