

US EPA ARCHIVE DOCUMENT



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029**

SEP 3 2009

Colonel Robert Peterson
District Engineer
U.S. Army Corps of Engineers, Huntington District
502 Eighth Street
Huntington, West Virginia 25701-2070

Re: PN 199800436-3; Mingo Logan Coal Company; Spruce No. 1 Surface Mine

Dear Colonel Peterson:

The U.S. Environmental Protection Agency (EPA) requests that the Huntington District use its discretionary authority provided by 33 CFR 325.7 to suspend, revoke or modify the permit issued authorizing Mingo Logan Coal Company to discharge dredged and/or fill material into waters of the United States in conjunction with the construction, operation, and reclamation of the Spruce Fork No. 1 Surface Mine located in Logan County, West Virginia. The project as permitted encompasses approximately 2,278 acres with six valley fills and associated sediment control structures directly impacting 10,630 linear feet of ephemeral stream channels, 32,491 linear feet of intermittent stream channels, 825 linear feet of perennial channels and 0.12 acres of wetland within tributaries to Spruce Fork of the Little Coal River. EPA believes that reevaluation of the circumstances and conditions of the permit is in the public interest.

Since issuance of the permit in January 2007, new information and circumstances have arisen which justify reconsideration of the permit. Based upon prior research and confirmed in 2008 by research conducted by EPA, we are concerned data were available and was not evaluated as part of the review for the 2007 permit which is directly relevant to the Corps determination of whether or not the project would comply with the requirements of the Clean Water Act (CWA) and the National Environmental Policy Act (NEPA). In particular, we are concerned about the project's potential to degrade downstream water quality, and to cause or contribute to potential excursions of West Virginia's narrative water quality standards. Also, there is additional information which demonstrates the project's potential contribution to cumulative impacts within the Coal River Watershed. Additional valley fill minimization techniques such as further backstacking material on-site where appropriate, inclusion of sidehill fills with stream relocations, or other design modifications to ameliorate water quality impacts need serious consideration for the Mingo Logan Coal Company facility. Scientific and field observations strongly suggest that compensatory mitigation measures heretofore accepted by the U. S. Army Corps of Engineers, such as on-site stream creation, may not result in functional replacement with specific observable performance criteria.

Recent data and analyses have revealed that downstream water quality impacts have not been adequately addressed by the permit especially in light of clear evidence that effluent from valley fill sedimentation ponds is very likely to elevate conductivity and thus negatively affect healthy aquatic communities. The Little Coal River watershed contains the largest number of impaired stream miles in the Central Appalachian Ecoregion in West Virginia. Both Spruce Fork and the Little Coal River have approved total maximum daily loads (TMDLs) for iron, aluminum, selenium (Spruce Fork TMDL), pH, sediment and fecal coliform bacteria. The TMDLs identified mining as a source for many of these impairments and this project will likely discharge these same pollutants into these watersheds. The Spruce Fork watershed has 26 impaired streams, including Seng Camp Creek. Seng Camp Creek is listed on the CWA 303(d) list as biologically impaired. Both Pigeonroost Branch and Oldhouse Branch are not listed for water quality impairments and may be providing clean freshwater dilution to Spruce Fork which has measured conductivity readings above 500 $\mu\text{S}/\text{cm}$. This should be considered in a re-evaluation of the permit. West Virginia Stream Condition Index scores indicate that the stream is already in poor condition.

The CWA Section 404(b)(1) Guidelines (230.10(b)(1)) state that “no discharge of dredged or fill material shall be permitted if it causes or contributes, after consideration of disposal site dilution and dispersion, to violation of any applicable State water quality standard.” In addition, the Guidelines prohibit any discharge of dredged or fill material which would cause or contribute to significant degradation of the aquatic ecosystem, with special emphasis placed on the persistence and permanence of effects, both individually and cumulatively. The Final Environmental Impact Statement (EIS) for this project states, that “[A]n increase in total dissolved solids is expected in the early stages of the project when clearing and filling of each valley fill site begins. This temporary increase would be expected to return to pre-mining conditions as areas are regraded and revegetated.” The scientific literature as well as many State watershed reports have consistently shown that this assertion is not technically supportable. These studies and reports indicate that surface mining with valley fills in Central Appalachia is strongly related to downstream biological impairment. They also show that surface mining impacts on aquatic life are strongly correlated with ionic strength (conductivity) in the Central Appalachian stream networks. This increase in conductivity impairs aquatic life use, is persistent over time, and cannot be easily mitigated or removed from stream channels.

EPA is concerned that the permit decision document and the EIS prepared pursuant to NEPA do not reflect the data and analyses included in the studies referenced above and attached, and their implications regarding water quality impacts associated with surface coal mining. These studies together with information currently available regarding impairments of streams within the Spruce No. 1 mine project area strongly suggest that further water quality degradation and water quality exceedences may occur as a result of new mining activities at Spruce No. 1 Mine. EPA also believes that this project’s consistency with the data and assumptions underlying the existing TMDLs approved in 2006 requires further investigation. Based on information available, EPA is concerned about the likelihood that the project may cause or contribute to a violation of the State’s water quality standards or antidegradation policy.

As stated above, the Guidelines require consideration of impacts individually and cumulatively. There is new evidence of potential significant cumulative impacts within the sub-

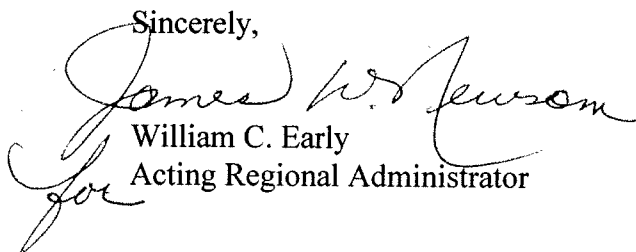
watershed, and even within the larger 8-digit HUC sub-basin, due to mining activities. In addition to historic and ongoing mining, there are 11 additional mining projects proposed within the Coal River Sub-basin. These include four pending projects under consideration within the enhanced coordination review process established in the *Memorandum of Understanding Among the U.S. Department of the Army, U.S. Department of the Interior, and the U.S. Environmental Protection Agency Implementing the Interagency Action Plan on Appalachian Surface Coal Mining* signed June 11, 2009. Furthermore, there are six other permits which have been issued by the Corps, but for which work has not yet commenced due to ongoing litigation, and one new proposal issued on Public Notice. These 11 additional proposed projects in the Coal River Sub-basin, if constructed as proposed, would impact approximately 33.7 miles (178,122 linear feet) of stream channels. Given the past, present, and proposed future mining activities within the Coal River Sub-basin, EPA believes that a more comprehensive and robust cumulative impacts analysis should be undertaken consistent with the requirements of the Guidelines and NEPA.

In light of these potential significant cumulative impacts to the watershed and latest information about water quality impacts associated with surface mining with valley fill operations, the mitigation plan should be re-evaluated to ensure that we are achieving functional replacement of the lost aquatic resources. The mitigation plan included the creation of on-site stream channels through the use of sediment ditches. EPA has consistently objected to the use of these ditches as compensation for lost headwater stream channels. These channels are often only evaluated for success utilizing structural performance criteria and not incorporating biological and chemical performance criteria to ensure success. Without monitoring to ensure restored or created streams provide chemical, physical and ecological functional replacement for streams being destroyed by mining activities, these channels will only serve as a conduit for pollutants from the site to downstream waters. It is unlikely that the proposal as permitted will achieve functional replacement.

Given our concerns regarding this project in light of potential water quality excursions, significant degradation of aquatic resources and inadequate mitigation, EPA recommends that the Corps use its discretionary authority provided by 33 CFR 325.7 to suspend, revoke or modify the permit after re-evaluating the project to ensure protection of the aquatic communities on site and downstream. In addition, we believe that because of the new information and circumstances the COE should prepare a supplemental EIS under CFR 1502.9(c)(1)(ii).

Should you have any questions please feel free to contact me, or have your staff contact Mr. Jeffrey Lapp, Associate Director, Office of Environmental Programs, at 215-814-2717 or by email at lapp.jeffrey@epa.gov.

Sincerely,



William C. Early
Acting Regional Administrator

Enclosure

Literature Citations

- Bryant, G., S. McPhilliamy, and H. Childers. 2002. A Survey of the Water Quality of Streams in the Primary Region of Mountaintop / Valley Fill Coal Mining. Mountaintop Mining/Valley Fill Programmatic Environmental Impact Statement. USEPA Region 3. Wheeling, WV
- Fulk, F., B. Autrey, J. Hutchens, J. Gerritsen, J. Burton, C. Cresswell and B. Jessup. 2003. Ecological assessment of streams in the coal mining region of West Virginia using data collected by the U.S. EPA and environmental consulting firms. U.S. Environmental Protection Agency, National Exposure Research Laboratory, Cincinnati, OH.
- Green, J., M. Passmore, and H. Childers. 2000. A survey of the condition of streams in the primary region of mountaintop mining/valley fill coal mining. Mountaintop Mining/Valley Fill Programmatic Environmental Impact Statement. U.S. Environmental Protection Agency, Region III. Wheeling, WV.
<http://www.epa.gov/region3/mtntop/index.htm>
- Hartman K.J., M.D. Kaller, J.W. Howell and J.A. Sweka. 2005. How much do valley fills influence headwater streams? *Hydrobiologia* 532: 91–102.
- Howard, H.S., B. Berrang, M. Flexner, G. Pond, S. Call. 2000. Kentucky mountaintop mining benthic macroinvertebrate survey. October 2001. U.S. Environmental Protection Agency, Science and Ecosystem Support Division, Ecological Assessment Branch, Athens, Georgia.
- Merricks, T.C., D.S. Cherry, C.E. Zipper, R.J. Currie, T.W. Valenti. 2007. Coal mine hollow fill and settling pond influences on headwater streams in southern West Virginia, USA. *Environmental Monitoring and Assessment* 129:359-378.
- Paybins, K.S., Messinger, Terence, Eychaner, J.H., Chambers, D.B., and Kozar, M.D., 2000, Water Quality in the Kanawha–New River Basin West Virginia, Virginia, and North Carolina, 1996–98: U.S. Geological Survey Circular 1204, 32 p., on-line at <http://pubs.water.usgs.gov/circ1204/>
- Pond, G.J. 2004. Effects of surface mining and residential land use on headwater stream biotic integrity in the eastern Kentucky coalfield region. Kentucky Department for Environmental Protection, Division of Water, Frankfort, Ky.
http://www.water.ky.gov/NR/rdonlyres/ED76CE4E-F46A-4509-8937-1A5DA40F3838/0/coal_mining1.pdf and
http://www.water.ky.gov/NR/rdonlyres/5EE3130F-8837-4B9F-8638-42BD0E015925/0/coal_mining2.pdf
- U.S. Geological Survey. 2001a. Benthic invertebrate communities and their responses to selected environmental factors in the Kanawha River Basin, West Virginia, Virginia, and North Carolina. Water-Resources Investigations Report 01-4021.
- West Virginia Department of Environmental Protection (WV DEP). 2007. West Virginia Integrated Water Quality Monitoring and Assessment Report 2006. Charleston, WV.
<http://www.wvdep.org/item.cfm?ssid=11&sslid=720>
- West Virginia Department of Environmental Protection (WV DEP). 2008. West Virginia Integrated Water Quality Monitoring and Assessment Report 2008. Charleston, WV.
[http://www.wvdep.org/Docs/16495_WV_2008_IR_Supplements_Complete_Version_EP A_Approved.pdf](http://www.wvdep.org/Docs/16495_WV_2008_IR_Supplements_Complete_Version_EP_A_Approved.pdf)

C. R. Ziegler, G.W. Suter II, B.J. Kefford, K.A. Schofield and G.J. Pond. 2007. Common Candidate Cause: Ionic Strength. In: U.S. EPA Causal Analysis and Diagnosis Decision Information System.
http://cfpub.epa.gov/caddis/candidate.cfm?section=138&step=24&parent_section=132

WVDEP Watershed Reports. For Examples (these are not all the reports available):

- WVDEP. 2007. Tug Fork Watershed: A Summary of the Watershed Assessment Section's 1998 and 2003 Monitoring Efforts. Charleston, WV
http://www.wvdep.org/Docs/13229_Tug_printed_June_2007.pdf
- WVDEP. 1997. An Ecological Assessment of the Elk River Watershed. Charleston, WV.
http://www.wvdep.org/Docs/474_EAoftheElkRvrWatershed.pdf
- WVDEP. 1997. An Ecological Assessment of the Coal River Watershed. Charleston, WV.
http://www.wvdep.org/Docs/5094_Coal%20Eco%20Assessment.pdf
- WVDEP. 1997. An Ecological Assessment of the Upper Kanawha River Watershed. Charleston, WV.
http://www.wvdep.org/Docs/529_upperkanrpt.pdf
- WVDEP 303(d) lists. <http://www.wvdep.org/item.cfm?ssid=11&sslid=720>
- WVDEP TMDL Reports. For Example:
Total Maximum Daily Loads for Selected Streams in the Gauley River Watershed, West Virginia. 2008. Prepared for: West Virginia Department of Environmental Protection Division of Water and Waste Management Watershed Branch, TMDL Section Prepared by: Water Resources and TMDL Center Tetra Tech, Inc. 405 Capitol Street, Suite 608 Charleston, WV 25301
http://www.wvdep.org/Docs/14836_Final_Gauley_Final_TMDL_Report_03_27_08.pdf
including specific watershed appendices, for example, Twentymile Creek:
http://www.wvdep.org/Docs/14842_Final_Twentymile_Appendix_09_11_07.pdf