

US EPA ARCHIVE DOCUMENT



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

April 3rd, 2009

Colonel Dionysios Anninos  
District Commander  
U.S. Army Corps of Engineers, Norfolk District  
803 Front Street  
Norfolk, Virginia 23510

03 APR 2009

Re: PCN NAO-2007-1351, Ison Rock Ridge Surface Mine, Wise County, Virginia

Dear Colonel Anninos:

The U.S. Environmental Protection Agency (EPA) has reviewed the preconstruction notification for A & G Coal Corporation surface mining project involving discharges of fill material into approximately 14,640 linear feet (approximately 3 miles) of waters of the United States in conjunction with the construction, operation, and reclamation of the Ison Rock Ridge surface mine. EPA is requesting that the Norfolk District use its discretionary authority provided by 33 C.F.R. 330.1(d) & 330.5(d) to revoke the previously verified Nationwide Permit 21, and the project be reviewed through the Individual Permit process. EPA is concerned that this project's proposed impacts may have more than a minimal individual or cumulative adverse effect on the environment and, therefore, EPA has concerns for the aquatic environment under the Clean Water Act Section 404(b)(1) Guidelines. EPA believes that further avoidance and minimization efforts are needed, that the proposed project may cause or contribute to an impairment of the aquatic life use in downstream receiving waters, and that the direct and cumulative impacts from this proposal as well as past and future mines will be persistent and permanent and may not be sufficiently or effectively compensated through the proposed mitigation.

The Ison Rock Ridge project area is located upstream of, and in close proximity to, the town of Appalachia in Wise County, Virginia. The site is within watersheds of tributaries to Looney Creek, Preacher Creek, and Callahan Creek, all of which are within the Powell River watershed. The surface mine site comprises of approximately 1,291 acres. The aquatic resource impacts are associated with hollow fills, construction of sediment ponds, and associated reclamation activities. Aquatic resource impacts from the operation will occur in five tributaries to Looney Creek, two tributaries to Preacher Creek, and one tributary to Callahan Creek. All proposed impacted streams are intermittent. Preacher Creek, Callahan Creek, and Looney Creek are all perennial streams. Preacher Creek is a tributary to Callahan Creek, which is a tributary to Powell River. Looney Creek is a tributary to Pigeon Creek, which is a tributary to Powell River. Total impacts are approximately 14,640 linear feet stream. Offsite mitigation has been proposed by the applicant.



Callahan Creek has been identified as impaired stream for aquatic life use. EPA approved a Total Maximum Daily Load (TMDL) for total suspended solids (TSS) and total dissolved solids (TDS) in 2006. The aquatic life impairment of Callahan Creek extends 1.68 miles from the confluence with Preacher Creek to its mouth at the Powell River. As this downstream system is impaired it is important to protect the headwater streams in the project area so as to continue to offer clean, freshwater dilution to downstream receiving waters to maintain the overall health and vitality of the larger watershed. As currently proposed, however, the mining activities will occur upstream of Callahan Creek. EPA believes that these mining activities may increase the TDS and TSS impairments.

Section 404(e) of the CWA states that a general permit may be issued where the activity will cause only minimal adverse environmental impacts either, individually or cumulatively. The general permit issuance must be based on the section 404(b)(1) Guidelines (Guidelines). The Guidelines, in part, require an analysis to determine if significant degradation of the aquatic ecosystem will occur, with special emphasis on the persistence and permanence of effects, both individually and cumulatively. EPA is concerned that this proposed project along with past and future mining projects in the watershed may have a cumulative impact on the watershed. The most current science and data provides evidence of the cumulative effects of these activities in the watershed.

EPA Region III has extensively investigated the downstream effects of surface mining and associated valley fills. These published findings indicate the type of activities proposed by the applicant are strongly related to downstream biological impairment, as indicated by raw taxonomic data, individual metrics that represent important components of the macroinvertebrate assemblage, or when multi-metric indices are considered. EPA's findings confirm earlier studies that surface mining impacts on aquatic life are strongly correlated with ionic strength in the Central Appalachians. In EPA's dataset, all streams below mined sites with a specific conductance greater than 500 $\mu$ S/cm were impaired using a genus-level multi-metric index (GLIMPSS). Undisturbed streams in the Central Appalachians are naturally very dilute, with background conductivities generally less than 75  $\mu$ S/cm. Downstream of mine sites, specific conductance and component ions can be elevated 20-30 times over the background levels observed at un-mined sites. This increase in conductivity impairs aquatic life use and is persistent over time, which cannot be easily mitigated or removed from stream channels.

EPA's findings also indicate that there may be significant degradation of the waters of the United States and a violation of the antidegradation policy, which is part of the water quality standards [40 C.F.R. 131.12(a)(1)]. EPA has interpreted the antidegradation policy as not precluding physical modifications otherwise authorized pursuant to Section 404, provided the discharge does not result in "significant degradation" to the aquatic ecosystem as defined under section 230.10(c) of the Guidelines [See EPA, *Water Quality Standards Handbook: Second Edition*, Section 4.4.3 (August 1994)]. The Section 404(b)(1) Guidelines define significant degradation as including, among other things, significant adverse effects "on life stages of aquatic life and other wildlife dependent on aquatic ecosystems, including the transfer, concentration, and spread of pollutants or their byproducts outside of the disposal site through biological, physical, and chemical process."



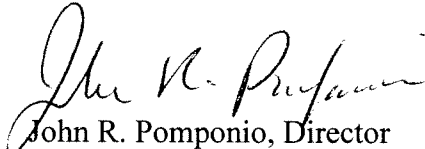
For these reasons, EPA is concerned with the direct impacts associated with this project. Headwater streams are vital components of the ecosystem. These ephemeral and intermittent streams collectively provide high levels of water quality and quantity, sediment control, nutrients, and organic matter, and as a result, are largely responsible for maintaining the quality of downstream riverine systems. Even though ephemeral and intermittent streams may go dry during a portion of the year, they continue to provide habitat for macroinvertebrates and amphibians that utilize the interstitial water flows in the substrate below the stream. Such aquatic resources have been significantly impacted by mining in the region. In light of the potential for cumulative adverse effects, based on the above information, EPA believes the applicant's alternatives analysis must examine a full range of alternatives that would avoid and minimize impacts to the maximum extent practicable. Such an analysis is more appropriately considered under an individual permit evaluation.

EPA also believes that impacts to these systems may not be sufficiently compensated by the proposed mitigation. The project proponent is proposing offsite intermittent stream mitigation in the Kelly Branch sub-watershed. The Kelly Branch is within the Callahan Creek watershed. This section of the Kelly Branch was subject to previous surface mining and reclaimed conventional mine reclamation. The mitigation includes stream channel design and planting of riparian zones for 10,790 linear feet. EPA is concerned that the proposed stream restoration is not adequate to compensate for the loss of 14,640 linear feet of stream. The proposed mitigation will provide only a small uplift of ecology integrity units (EIUs) and the enhancement of downstream channels do not adequately replace the functions of aquatic resources affected by the direct loss of the headwaters streams. EPA believes the mitigation should be reconsidered and modified.

EPA believes that additional avoidance and minimization efforts should be considered to reduce the adverse impacts of this proposal, that the anticipated impacts may cause or contribute to an impairment of downstream aquatic life use, and that the direct and cumulative impacts from past, present, and future mines will be persistent and permanent and can not be sufficiently or effectively compensated through the proposed mitigation. For these reasons, EPA requests that the District use its discretionary authority under 33 C.F.R. 330.1(d) & 330.5(d) to revoke the authorization of the use of Nationwide Permit 21 for surface coal mining activities and request that the proposal be applied for as an individual permit.

Thank you for the opportunity to provide comments regarding this proposal. Should you have any questions please feel free to contact Mr. Mark Douglas at 215-814-2767 or by email at [douglas.mark@epa.gov](mailto:douglas.mark@epa.gov).

Sincerely,



John R. Pomponio, Director

Environmental Assessment and Innovation Division

