UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
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REPLY TO THE ATTENTION OF
WW-16J

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FISH & WILDLIFE SERVICES
BFO ECOLOGICAL SERVICES

U.S. Army Corps of Engineers, Louisville District
ATTN: Mr. George DeLancey, CELRL-OP-FW
P.O. Box 489
Newburgh, Indiana 47629-0489

Re: United Minerals Company, LLC-Seven Hills Mine, LRL-2013-635-GJD

Dear Mr. DeLancey:

The U. S. Environmental Protection Agency has reviewed the preliminary Clean Water Act (CWA) Section 404 permit application (permit application) for the subject project. Under United Minerals Company, LLC's preliminary proposal, approximately 458.2 acres of wetlands (of which 401.5 acres are forested) and 31,762 linear feet of streams, would be impacted for the construction of the 2,351.2-acre Seven Hills Mine in the Pigeon Creek watershed southeast of Elberfeld in Warrick County, Indiana. Approximately 1,370.3 acres of the site has been previously mined. Two distinct previously mined areas lie in the eastern and southern portions of the permit area. We offer the following comments based on our review of the preliminary permit application.

Land Use/Existing Conditions

A November 2010 letter from the United States Fish and Wildlife Service (USFWS) to the Indiana Department of Natural Resources (IN DNR) commenting on the Surface Mining Control and Reclamation Act (SMCRA) permit application for the Seven Hills Mine, conveyed serious concerns about proposed impacts to wetlands and other bottomland forest along Pigeon Creek that provide abundant habitat for numerous and significant wildlife species, including migratory birds, the Copperbelly water snake *(Nerodia erythrogaster neglecta)*, and the federally endangered Indiana bat (*Myotis sodalis*). In addition to the habitat value of these natural areas, bottomland hardwoods serve a critical role in the watershed by reducing the risk and severity of flooding to downstream communities by providing areas to store floodwater. These wetlands improve water quality by filtering and flushing nutrients, processing organic material, and reducing sediment before it reaches open water.[1] Forested wetlands are ecologically important systems and represent some of the most diverse, complex, and productive freshwater wetlands in the Nation. In spite of their high value, these systems have experienced significant decline in

[1] http://water.epa.gov/type/wetlands/bottomland.cfm

area throughout the United States. Between 2004 and 2009, forested wetlands declined by an estimated 633,100 acres. This trend in forested wetlands loss only heightens the significance of any additional loss of these resources.[2]

United Minerals Company, LLC (UMC) asserts that the additional range of habitat types that would result from reclamation at the Seven Hills Mine site will be an improvement over existing conditions; however, this assertion is not supportable given the high acreage of forested wetlands that would be lost.

Alternatives Analysis

The preliminary application information does not provide an adequate range of alternatives that avoid and minimize impacts to aquatic resources at the project site to the maximum extent practicable under the CWA Section 404(b)(1) Guidelines (Guidelines). The amount of effort and level of detail included in the analysis must be commensurate with the level of aquatic resources impacted, which EPA believes to be significant in this case. EPA strongly recommends the applicant provide alternatives that include considerable avoidance of valuable bottomland wetland habitat. For example, UMC should consider alternatives that include mining from the eastern portion of the site (which includes previously mined areas) towards the west, up to the bottomland wetland areas (leaving a sufficient buffer), and augering under the wetlands. UMC makes a general statement in the permit application that "historically augering activities have proven to not be cost effective in most circumstances."

EPA understands that more coal can be extracted using the open pit method than the augering method; however, no information is provided to demonstrate that augering is cost prohibitive specific to this project. The practicability of each alternative should be considered in light of cost, logistics, and available technology and evaluated at a level that reflects the significance of the resources to be impacted.

Cumulative Impacts

In order to fully analyze the past, present, and reasonable foreseeable impacts as required under the National Environmental Policy Act (NEPA) and the Guidelines, the applicant should prepare a cumulative impacts analysis that details changes in hydrology, drainage patterns, and channel composition in the watershed. Impact assessments for wetlands should include direct and indirect impacts from previous and current actions as well as impacts from future actions as a result of changes in surface and groundwater hydrology.

The cumulative impacts analysis should also discuss potential ecological impacts associated with the loss of forest cover and forest fragmentation along the Pigeon Creek bottomlands. As mentioned above, USFWS expressed this as a serious concern in its November 2010 letter to IN DNR. The mining activity would temporarily or permanently eliminate at least 600 acres of summer habitat for the endangered Indiana bat (*Myotis sodalis*) and valuable habitat for other

[2] United States Fish and Wildlife Service. 2011. *Status and Trends of Wetlands in the Conterminous United States 2004 to 2009.*

species such as the Copperbelly water snake *(Nerodia erythrogaster neglecta)*. EPA understands that listing of this species in southern Indiana was precluded due to development of a *Copperbelly Water Snake Conservation Agreement and Strategy* (Agreement) endorsed by the USFWS, IN DNR, and the Indiana Coal Council, which is now expired. According to the USFWS, since the expiration of the Agreement, all parties have continued to implement the goals of the Agreement voluntarily, to avoid and conserve Copperbelly water snake habitat. This permit application is the first USFWS is aware of that would not follow the tenants of the Agreement.

A Clean Water Act Section 404 permit was issued for the nearby Liberty Mine, LRL-2010-218-gjd, in April 2012. The permit authorized impacts to 8,948 feet of perennial streams, 5,183 linear feet of intermittent streams, 6,212 linear feet of ephemeral streams, 35.3 acres of forested wetlands, 63.3 acres of emergent wetlands, and 0.8 acre of scrub-shrub wetlands. In addition, the recently proposed High Point Mine (LRL-2013-444-rjb) is approximately 3084.6 acres in size and abuts the proposed site. According to Robert Brown of your office, the proposed High Point Mine would impact approximately 27 acres of wetlands and 63,000 linear feet of streams. This mine would also be operated by UMC. EPA requests that the Corps treat the proposed High Point Mine and proposed Seven Hills Mine as a single project. They are abutting UMC mines, appear to be at similar stages of development in the permitting process, and the preparation plant serving both operations would be constructed on the High Point Mine site.

Environmental Justice Concerns

Based on the limited information provided in the permit application and other environmental and demographic data, EPA believes the proposed mine may raise environmental justice concerns. Demographic data indicate there are both high percentages of low-income individuals and children under the age of five, who are particularly vulnerable to impacts from mining operations. Environmental data shows high levels of particulate matter ($PM_{2.5}$) and a high number of major water dischargers in the area. EPA is concerned that communities would potentially be disproportionately impacted by the proposed mine. Further, EPA is concerned about cumulative impacts to the surrounding communities, given that the proposed mine would be located near an operating mine, further exacerbating existing exposures to sensitive populations.

Preparation of an Environmental Impact Statement

Section 102(2)(C) of NEPA identifies major federal actions that "significantly" affect the quality of the human environment requiring an environmental impact statement (EIS). In regulations the Council on Environmental Quality promulgated under NEPA, 'significantly' is defined by two criteria: context and intensity of impacts of the proposed project.[3] 'Context' refers to the affected environment in which a proposed action would occur and 'intensity' means the degree to which the proposed action would include one or more of the factors listed below, among others. The Seven Hills Mine, as currently proposed, appears to exceed thresholds for significance based on the context and intensity of the project. Therefore, EPA strongly recommends that the Corps prepare an EIS for this project for the following reasons:

[3] 40 CFR § 1508.27

- **Unique characteristics of the geographic area:** The Seven Hills Mine would impact approximately 458.2 acres of wetlands and 31,562 linear feet of streams. The impacted subwatershed is a candidate for protection per Indiana Department of Environmental Management (IDEM) watershed management plans.[4] According to the Indiana Wetlands Conservation Plan, wetlands serve important functions, both in human benefits such as maintaining the quality of the water we drink and controlling flooding, and in environmental benefits, such as providing habitat for endangered species of wildlife and plants. The fact that the majority of the wetland resources once present in Indiana have been lost or altered makes wetlands especially critical resources for conservation.[5] Because of the scale of the proposed project's impacts to ecologically critical areas, EPA views the preparation of an EIS as appropriate.[6]

- **Public Health or Safety:** As discussed above, the proposed mine may raise environmental justice concerns. Adjacent communities include a high number of low-income individuals and a high number of children under the age of five. These populations are more sensitive to impacts and potentially experience unique exposure pathways. Communities may be exposed to multiple mine-related impacts, including fugitive dust, noise, and water discharge. Based on this, the potential for public health and safety risks are increased and an EIS should be prepared.[7]

- **Cumulative Impacts:** As mentioned in the comments on Cumulative Activity, Seven Hills Mine would be located near an active mine and abutting a proposed mine. Additional mining activities would likely lead to impacts that are cumulatively significant.[8] The cumulative impacts from the Seven Hills Mine and other proposed mines could potentially have significant impacts on human health and the environment, and would be grounds for the preparation of an EIS.

- **Threatened and Endangered Species:** As discussed above, the proposed Seven Hills Mine is within the range of Indiana bat (*Myotis sodalis*) maternity roosting habitat (endangered) and the Copperbelly watersnake, which has been previously proposed for inclusion on the federal threatened species list for this area. Potential impacts to threatened or endangered species are considered grounds for the preparation of an EIS.[9]

As discussed above, EPA believes the proposed project should be analyzed in conjunction with other similarly proposed projects in the area, including the High Point Mine. The operation of both mines relies on shared infrastructure, including the preparation plant, which is located within the proposed footprint of High Point Mine. This qualifies the permitting of both mines as connected actions,[10] which should be analyzed in one NEPA document.

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[4] http://ai.org/idem/nps/3241.htm
[5] Indiana Department of Natural Resources. 1996. *Indiana Wetlands Conservation Plan.*
[6] 40 CFR § 1508.27(b)(3)
[7] 40 CFR § 1508.27(b)(2)
[8] 40 CFR § 1508.27(b)(7)
[9] 40 CFR § 1508.27(b)(9)
[10] 40 CFR 1508.25(a)(1)

Mitigation and Monitoring

Compensatory mitigation is the last step in the sequence during a CWA Section 404 permit review.[11] An in-depth discussion regarding mitigation is premature given the applicant first needs to adequately address avoidance and minimization. However, per the Corps' request, EPA has reviewed the proposed on-site and off-site compensatory mitigation plans and offers the following general comments at this time to help improve the mitigation plan.

- The applicant needs to document how avoided stream reaches will be preserved or affected during mining and what that will mean for reconstructed stream reaches in terms of flow regime.
- The applicant needs to explain the rationale behind selecting the proposed performance goals of EPA Rapid Bioassessment Protocol (RBP) scores of at least 115 for intermittent stream mitigation reaches and at least 110 for ephemeral stream mitigation reaches. EPA recommends that the applicant locate reference reaches in the area to use as a guide to develop stream mitigation goals. As you know, reference conditions in the region can be used to scale the assessment to the "best attainable" condition for mitigation reaches.
- The mitigation ratio proposed for forested wetland is 2:1. The proposed mitigation ratio is too low given the valuable functions of the resources proposed to be impacted, the temporal loss of function between the time the wetlands are impacted and the maturation of the mitigation site, and the risk associated with establishing forested wetlands. EPA recommends that the applicant be expected to mitigate for bottomland hardwood forest at a ratio of 4:1.
- The off-site wetland mitigation proposal is in need of significant improvement. More detail on the existing conditions of the mitigation areas, especially those proposed for preservation and enhancement, is necessary to determine the merit of the proposal.
- The applicant needs to address financial assurances in a CWA Section 404 context and provide a long-term management strategy/plan for mitigation areas.
- As part of the monitoring program for affected and reconstructed streams, biological monitoring should be required to ensure there is no degradation to the communities that inhabit the streams. Biological monitoring, along with water chemistry and physical assessments, should occur: 1) prior to the initiation of mining activities to establish baseline conditions; 2) during the mining activities to assist in determining potential impacts to aquatic habitat and water quality downstream of the impacts; and 3) for at least five years after the completion of stream restoration and site reclamation activities at the mine site where appropriate to determine mitigation success. The applicant has not proposed sampling during mining.

In conclusion, we strongly recommend that the Corps consider our recommendation to prepare an EIS for this project and our comments above to protect the significant resources within the Pigeon Creek bottomlands. Thank you for the opportunity to review the preliminary application for the Seven Hills Mine. We look forward to discussing these comments with you. Please

[11] 40 CFR 230.91(c)

contact Melissa Blankenship of our office at (312) 886-6833 or (503) 326-5020 with any questions.

Sincerely,

Peter Swenson, Chief
Watersheds and Wetlands Branch

cc: David Carr, IDEM
Scott Pruitt, USFWS-Bloomington
James Townsend, USACE-Louisville District