UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JUL 29 2010

REPLY TO THE ATTENTION OF:

WW-16J

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

Re: Public Notice No. LRL-2008-913 / Triad Mining-Augusta Mine

Dear Ms. Hill:

The United States Environmental Protection Agency has reviewed the subject public notice issued on July 1, 2010. The applicant, Triad Mining (Triad) in conjunction with the Indiana Department of Natural Resources (IDNR), proposes a combination of new mining and reclamation of two (2) abandon mine land (AML) areas, Sites 309 and 130 in Pike County, Indiana west of the town of Augusta. The project area is 474.8 acres and lies within the Patoka River Watershed. The proposed mining activity would impact 1.28 acres of wetland, 5,690 feet of intermittent stream, and 8,728 feet of ephemeral stream. The AML projects would impact 6.69 acres of wetlands. We offer the following comments and questions based on our review.

Permit Application – General Comments

In general it is important to point out that the permit requirements under Section 404 of the Clean Water Act (CWA) are separate from those covered in the Surface and Coal Mining Reclamation Act (SMCRA). While EPA supports IDNR's actions proposed to address AML sites 130 and 309 which are known sources of pollutants, this project also includes surface coal mining operations. The pairing of these projects does not forgo the need for the applicants to a comply with the Section 404(b)(1) Guidelines and the 2008 Compensatory Mitigation Rule.

As you know, the 404 (b)(1) Guidelines (the Guidelines) require that the applicant demonstrate there are no practicable alternatives available that would have a less adverse impact on the aquatic environment for non-water dependant activities. The Guidelines presume that less damaging upland alternatives are available for these activities unless demonstrated otherwise by the applicant. The applicant must follow a sequence of steps to be in compliance with the 404 (b)(1) Guidelines that include avoidance, minimization, and compensation for unavoidable impacts. There is no discussion of alternative mine

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locations, design (location of basins, haul roads, other attendant features), or mining methods (*i.e.* pod, auger) within the application.

Further, page 4 of the application references uncertainties of impacts to jurisdictional waters; "the AML reclamation plan is still being finalized and these projects may affect[ed] additional areas of emergent type wetlands (cattail vegetation) for installation of the AMD abatement system." A review for compliance with the Guidelines cannot be completed until all impacts are identified. IDNR must provide the final design and impacts so that the Corps can review the project. Further, EPA recommends that the applicant provide better documentation of avoidance and minimization efforts so that we may evaluate compliance with the 404(b)(1) Guidelines.

As there is little detail provided on the specific design of the mine, EPA requests that the applicant include the following maps and information from the Surface Coal Mining Reclaimation Act (SCMRA) application:

General Operations Information
Most recent Operations Map
Land Use and Soils Information
Pre-Mining Land Use Map
Post-Mining Land Use Map
Environmental Resource and Property Control Map

Likewise, EPA requests the design of the AML projects. Aside from a few general details in the 404 report and some difficult to read graphics on the Impact Map, there are no specific details on the AML design. EPA acknowledges that IDNR has built several projects to address AML within the watershed and has documented improvements in the water quality which highlighted the general locations and photographs of various AML projects. The plan should detail and explain the mechanisms proposed to treat the water and their anticipated results. It should also highlight the anticipated environmental benefits of reclaiming AML compared to the environmental cost of impacting wetlands (*i.e.* benefit to downstream waters).

Throughout the application, attachments, and maps, the project area is referenced as 1112.4 acres. However, the public notice references the project area as 474.8 acres. If 474.8 acres is the correct permit area, the maps and the report should be revised to include only areas to be affected and then only those resources within the 474.8 acre project area evaluated under the 404(b)(1) Guidelines for avoidance and minimization.

The applicant must classify streams as ephemeral, intermittent, or perennial and wetlands as emergent, scrub/shrub, and forested. As previously discussed with the applicant and the Corp, flow regimes should not be classified in any other manner. The report and all associated documents should be updated to reflect this change.

Also as previously agreed to by the Corps and Triad, EPA will not consider the "foot-points methodology" for calculation of mitigation. The report, appendices, attachments, and tables should be revised to remove any reference to this method.

404 Permit Application - Specific Comments:

- EPA requests labels on water resources to include surface waters and lakes on the maps included.
- EPA requests the identification and labeling of the waters and culverts (*i.e.* ditch 27, and culverts under State Route 64). These connections are detailed within the report on page 6 but not reflected on the maps.
- As stream AL1S was previously impacted by mining operations, EPA requests the information from the original 404 permit including the type and quality of resources that were onsite in the 1980s, as well as any requirements for mitigation within this permit.
- As detailed on page 18, the South Fork Patoka River, Mill Creek and various other tributaries are listed for factors which include impaired biotic communities, sulfates, and total dissolved solids due to past mining practices in the watershed. Any proposed project must not cause or contribute to further impairment to the river.
- There is a surface water lake near the western edge of the permit boundary and just south of State Route 64 that is apparent on aerial photography and the USGS map. This feature should be included on the maps.
- Page 20 of the application references permanent sediment ponds as part of the reclamation plan. The applicant must avoid placement of sediment ponds in stream channels to the maximum extent practicable. The applicant must thoroughly document the rationale for any unavoidable impacts.

Physical Stream Evaluations – EPA RBP and Rosgen Level II and III Evaluations

EPA appreciates Triad's efforts to use the EPA's RPB and the Rosgen Stream assessments. However there are some questions on the some of the stream characterization and apparent inconsistencies between the results of these assessments.

- The applicant should revise the RPB sheets to remove the references to water quality data if no water quality data was taken for that reach. Conversely, if the water chemistry was taken please provide it. Currently, EPA only has water quality data on streams AL1S and AL1E.
- The applicant must show the slope and sinuosity in order to evaluate the proper Rosgen stream classification. This information was not provided in the tables showing the Rosgen scores. While some parallels could be drawn on the channel materials based on the RPB data sheets, it would be useful to list all the parameters on one table.
- The applicant must revise the Rosgen classifications where the measured parameters do not fit the stream type. If the applicant does not revise the classification, a narrative justification which explains the departure must be included. Without the slope and sinuosity data, a full review was not possible of the Rosgen II and III Evaluations. Based on the information provided, GF01,

AL1E03E1S, AL1E (1+14) do not meet one of the parameters for the Rosgen stream class they were placed in.

- For stream AL1E03E the applicant must explain the difference in the Rosgen Classification of "C6" and the EPA RBP score. This stream is rated on the RPB rating of 1 for channel sinuosity while "C" type streams exhibit high sinuosity.

Biological Stream Evaluations – EPA mIBI and fIBI

The intent of a biological study is to provide baseline information for the streams within the proposed permit area. However, this report only contained two sampling locations near Augusta Lake to characterize waters in multiple sub-watersheds. There are no details in the report or application which discuss the quality of any other water resources onsite. Biological monitoring, along with water chemistry and physical assessments, must occur prior to the initiation of mining activities to establish baseline conditions and during the mining activities to assist in determining potential impacts to aquatic habitat.

The applicant must explain why no data for biology was taken for the remaining streams onsite (*i.e.* low pH or no water in channel at time biotic sampling). This could be listed as a table with all streams on site and the results of the sampling and a note explaining why no data was taken. At present, the application lacks the information to evaluate the biologic value of the streams proposed to be impacted.

Mitigation Plan

The ratio for mitigation streams and wetlands for this proposed project is adequate. However, the Mitigation Plan does not meet the minimum requirements set forth in the 2008 Compensatory Mitigation Rule and has multiple deficiencies. Please see the detailed comments below in regards to the proposed mitigation plan:

- Triad needs to include the following items in a clear, organized table: the name/identification of each proposed mitigation feature (wetlands and streams), its location, responsible party (Triad or IDNR), type of mitigation proposed (wetland or stream), proposed flow regime or plant community, size (linear foot, acreage), buffer width, and plant community/land use of the buffer.
- The applicant should provide a conceptual mitigation schedule. This should detail the extent of temporal losses and provide information about the timing of mitigation construction and monitoring.
- The current proposal does not include protection of mitigation streams in perpetuity. As stated on page 16 of the 404 Application, "no permanent deed restrictions(s), drainage easement(s), or conservation easement(s) are proposed for any of the affected properties that contain the restored post-mine drainage channels/streams." In order to receive mitigation credit for proposed stream restoration, the areas must be protected by a conservation easement or environmental covenant as required by the 2008 Compensatory Mitigation Rule.

Triad must amend the proposal to include the type of protective measure proposed and adjust the remainder of the document with the proposed protective measures.

- The adaptive management plan should be expanded to include any anticipated response to potential shortcomings of the mitigation design. This requires more detail than hiring hunters, trappers, exterminators, *etc.* (*i.e.* additional plantings would be installed if survival rate drops below required threshold).
- Financial assurances are required to ensure the success of mitigation in addition to those required for reclamation by the SMCRA performance bond. Provide financial assurances that will be in place to specifically ensure the success of the mitigation. Triad must include details on the dollar amount, type(s) of assurance (ex. performance bond) and release conditions. The account must be payable to a designee of the Corps or a standby trust agreement. Estimates of the construction, monitoring, and maintenance costs of mitigation activities will be necessary. Without this information, the Corps cannot evaluate whether the financial assurances are sufficient to cover any potential mitigation deficiencies.
- Page 17 of the application states that "buffer zones will consist of grass-legume vegetation and/or tree and shrub plantings." EPA maintains that a minimum 50 foot buffer zone be established on each side of the stream and be vegetated with trees and shrubs. The survival rate of this planted area should be monitored and achieve 80% aerial coverage of native vegetation appropriate for stream buffer areas.
- No mitigation credit for intermittent stream mitigation will be granted if the restored channel flow regime is not restored (*i.e.* the flow is less than seasonal).
- Also on page 17, reference is made to restored perennial streams, however, according to information provided in the application, no impacts are proposed to perennial streams, in fact no perennial streams were noted onsite. Triad needs to remove all language regarding perennial stream impacts if there are not perennial streams on site.
- On page 25, it is stated that "clean concrete rubble and bricks are allowable for placement in restored stream." These materials constitute construction debris. Only natural non-acidic rocks and substrate should be used in the stream reconstruction using natural stream design.
- On Page 29, Triad needs to remove the condition "(when allowed by farmers/landowners)" as the waters included as mitigation must be permanently protected through an appropriate legal instrument as previously mentioned.
- It is not appropriate to use the EPA's macroinvertebrate or fish indices for streams to evaluate the biological health of a forested wetland. The wetlands biological success would be more appropriately measured with combinations of some of the following tools: aerial coverage, percent aerial coverage of invasive species, or percent survival of planted trees.
- Biological monitoring should begin as soon as the mitigation is complete this includes all grading and plantings. There should not be a delay until the third year to begin monitoring biology.
- The Monitoring Plan should increase the sampling of macroinvertebrates biannually (if no water is present during sampling the applicant would simply state this reach specific information reason for the lack of data either in a table or

within the discussion section of the monitoring report). If the restored stream, reached its ecological performance goal (based pre-established IBI/ICI and physical scores), then the biological monitoring could be reduced to an annual monitoring requirement until the completion of monitoring.

- Additionally, water chemistry data should be collected at the macroinvertebrate sampling locations. At a minimum, the applicant should fill out the RBP for each reach including the chemical data. Any lack of data should be appropriately annotated.
- The monitoring period should be10 years. The applicant proposed a ten year monitoring period on page 4 of Attachment 3-I-D. However, they discuss a five year plan on page 1 of Attachment 6-11. These inconstancies should be addressed in the revision.
- The applicant must explain why the proposed channel designs were selected and appropriate given the changes post mining. For example, explain why no Rosgen "E" streams were found onsite pre-mining but will be included in the restoration plan. Then discuss why this "E" stream will be successful or why would it be beneficial to mitigate with a stream that has higher entrenchment ratios.
- Also Rosgen "B" type stream are proposed to be restored with very low sinuosity of 1.01. EPA recommends that these streams be redesigned with higher sinuosity.

Cumulative Impacts Assessment

The application did detail the amount and extent of past mining. The application did list current mining within the watershed and did acknowledge the impairments in the watershed. This section must include information about the reasonably foreseeable future impacts to the receiving watersheds in regard to the resulting cumulative impacts. The applicant should discuss how the proposed operation, in conjunction with previous, current and future operations within the watershed may affect the physical, chemical and biological integrity of the Patoka and South Fork Patoka River watersheds.

Environmental Justice

The U.S. Environmental Protection Agency is committed to protecting human health and the environment for everyone and ensuring that all people are treated fairly and given the opportunity to participate meaningfully in EPA's decision-making process. In addressing the existing statutory provisions set forth under Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," (February 11, 1994) [1] EPA continues to focus our attention on the adverse environmental and human health effects of federal actions, such as surface coal mine permitting under the Clean Water Act, on minority and low-income communities with the goal of achieving environmental protection as well as promoting nondiscrimination.

[1] http://www.epa.gov/fedreg/eo/eo12898.htm

An EPA analysis which incorporates environmental, human health, compliance and social demographics metrics revealed that the Augusta Mine site is located within a potential environmental justice area of concern. E.O. 12898 directs all federal agencies, to the greatest extent practicable, to conduct programs, policies, and activities in a manner that ensures (1) communities in and around the proposed site are not being subject to disproportionately high and adverse human health or environmental impacts and (2) such activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under, such programs, policies, and activities, because of their race, color, or national origin.

Several actions beneficial to addressing key environmental justice issues associated with surface coal mining include: conducting research, data collection, and analysis on direct, indirect and cumulative impacts; identifying patterns of subsistence consumption of fish and wildlife; and providing effective public participation and access to information[2]. In implementing the E.O., EPA requests the proposed mine Environmental Justice area of concern designation be considered by the Army Corps of Engineers prior to a permit decision and steps be taken to avoid or mitigate any adverse human health or environmental effects this mine may have on low-income and minority populations.

In conclusion, EPA objects to the issuance of a permit for this project as proposed because it does not meet the 404(b)(1) Guidelines and the 2008 Mitigation Rule. Additional information is needed to assess the project's impacts and determine if those impacts are appropriately mitigated. Please notify us of Triad's and IDNR's response to the comments outlined above and any subsequent changes to the permit application. Thank you for the opportunity to provide comments on the public notice and permit documents. If you have any questions please contact Andrea Schaller at (312)866-0746.

Sincerely,

Peter Swenson

Peter Swenson, Chief
Watersheds and Wetlands Branch

cc: Marylou Poppa Renshaw, Chief
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[2] http://www.epa.gov/owow/wetlands/guidance/pdf/appalachian_mtntop_mining_detailed.pdf

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