UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 15 1991

OFFICE OF
WATER

Honorable Nancy P. Dorn
Assistant Secretary (Civil Works)
Department of the Army
Washington, D.C. 20310-0103

Dear Ms. Dorn:

In accordance with the provisions of the Memorandum of Agreement (MOA) between the U.S. Environmental Protection Agency (EPA) and the Department of the Army under Section 404(q) of the Clean Water Act (CWA), I am formally requesting your review of the decision by Colonel David E. Peixotto, District Engineer (DE), Louisville District (District), to issue a Section 404 permit to Andalex Resources, Inc. (Public Notice No. 89-KY-433) for the Newcoal site. Colonel Peixotto's Notice of Intent (NOI) to issue a permit for this project was transmitted by facsimile, dated July 18, 1991, to Mr. Greer C. Tidwell, Regional Administrator (RA), EPA, Region IV. Issuance of the permit to Andalex Resources, Inc. (Andalex) would authorize the discharge of fill material in conjunction with a surface coal mining operation in approximately 478 acres of bottomland hardwood wetlands adjacent to the Pond River, in Hopkins County, Kentucky.

Summary of Concerns

After a thorough review of available information, EPA has determined that this case warrants elevation in accordance with the criteria in the MOA for elevation under Sections 5.b.1, 5.b.2, and 5.b.3. This referral meets the criteria in Section 5.b.1 based upon our finding that there has been a failure to resolve stated EPA concerns regarding compliance with the Section 404(b)(1) Guidelines (Guidelines). EPA believes that important questions remain as to whether the potential adverse impacts of the project have been adequately reviewed to determine compliance with the Guidelines [230.10(c)]. In particular, EPA believes that the District has not acquired or adequately considered site-specific information, including data regarding indigenous fish and wildlife populations, to support its findings and conclusions regarding environmental impacts to important resource functions and values at the Newcoal site. Moreover, based on existing information on the Newcoal site and information resulting from the Wetland Evaluation Technique (WET) analysis performed by the U.S. Army Engineers Waterways Experiment Station (WES) on the Newcoal site and new data collected

during the West Kentucky Advanced Identification effort (WKYADID) in the Pond River watershed, EPA believes that the direct, indirect, and cumulative adverse impacts to approximately 478 acres of bottomland hardwood wetlands and its associated functions and values would be profound, but were not adequately evaluated during the Newcoal permit review process. Finally, EPA believes the District failed to adequately assess the individual and cumulative environmental impacts of this project on the Pond River watershed.

This case further meets the criteria of the MOA for elevation under Section 5.b.1. based upon our finding that the proposed compensatory mitigation for impacts to the Newcoal site has not been adequately developed and may not result in replacement of functions and values lost as a result of the mining operations. EPA believes that in reaching its conclusion regarding the significance of adverse environmental impacts, the District has accepted uncertain mitigation proposals as compensation for resource losses which EPA (and other state and federal resource agencies) considers significant from an individual and cumulative standpoint [Section 230.10(d)]. The District's decision has relied, in part, on the applicant's expressed intention to replace bottomland hardwood wetland functions in order to adequately compensate for the loss of functions associated with the Newcoal site. Attempts to create bottomland hardwood systems have demonstrated that successful replacement of the complete suite of functions and values is difficult and that historically these efforts have been inconsistent. Our concern that the proposed mitigation plan has not been shown to fully compensate for the loss of wetland resources at the Newcoal site and the uncertain nature of the permit conditions related to mitigation raises significant questions about the soundness of the mitigation as proposed.

Finally, EPA believes that in accepting the mitigation plan as proposed by the applicant, the District has not fully considered the precedential effect of their permit decision on future projects involving the destruction and replacement of bottomland hardwood wetlands. The review of future Section 404 applications involving the destruction of bottomland hardwood wetlands must recognize the likelihood of successful replacement of functions and values achieved by compensatory mitigation for bottomland hardwood ecosystems.

This referral also meets the criteria of Section 5.b.2. of the MOA. Analyses of data collected from the WKYADID confirms that the Newcoal area is of exceptional habitat quality. In addition, water quality data collected for the WKYADID effort indicate that remaining wetlands in the study area play a critical role in water quality maintenance and enhancement in the Pond River watershed. This new information is significant because it documents wetland and water quality characteristics of the Pond

River watershed where the proposed project is located and therefore is directly relevant to the District's decision regarding issuance of this permit.

We have also determined that this referral meets the criteria in Section 5.b.3. regarding environmental issues of national importance requiring policy level review. Specifically, EPA believes that the District has inappropriately differentiated between the terms "basic" and "overall" in defining project purpose and has inappropriately deferred to the applicant's stated project purpose. This deference resulted in a narrowly defined basic project purpose and has precluded an adequate analysis of practicable, less environmentally damaging alternatives. As a result of this reliance on a limited definition of basic project purpose, it is uncertain whether or not other less damaging practicable alternatives to this non-water dependent project exist or have been adequately explored by the District [230.10(a)]. In the following sections, we outline each of the above points in detail.

Section 5.b.1. Criteria

Implementation of the Andalex surface mining project as proposed and the attendant loss (temporary and permanent) of 478 acres of forested bottomland hardwood wetlands will adversely affect current important water quality functions except to the extent to which they can be mitigated. These functions include storage of floodwater, sediment stabilization, nutrient and toxicant retention and transformation, and detrital export functions of this wetland area. Additionally, information currently available indicates that the project may adversely impact significant wildlife habitat at the Newcoal site.

The importance of the water quality functions performed by wetlands at the Newcoal site is clearly documented. The Annual Performance Report for the Kentucky Statewide Fisheries Management Project indicates that water quality in Pond River is greatly affected by acid mine drainage, and that this condition is severe enough at times to result in fish mortality. A State Report entitled "The Effects of Coal Mining Activities on the Water Quality of Streams in the Western and Eastern Coalfields of Kentucky" (1981) states that the Pond River sub-basin has been reported to be one of the most severely impacted streams in the area, being continuously affected by low pH, extreme acidity, and high iron and sulfate concentrations and high sediment loads. The State of Kentucky's Section 319 non-point source pollution report has targeted the Pond River for non-point source pollution management. Additional onsite impacts to physical hydrology may occur as a result of the construction of a levee around the mine site to remain in place during the entire period in which the site is mined. This feature, which will constrict the floodplain, and the removal of nearly 500 acres of wetlands from the

Pond River floodplain could be expected to cause increased flood elevations and durations upstream of the site and adversely affect adjacent wetland communities. The change in post-mining elevations and grade at the site will eliminate existing topographic diversity and substantially alter the soil profile and underlying substrate, and will thus affect the hydrology of the site (frequency and duration of flooding) and ultimately the establishment of a functioning bottomland hardwood wetland. It does not appear that this information was adequately considered in the District's review of this application.

The Newcoal bottomland hardwood wetland system currently supports valuable fish and wildlife habitat functions and values. EPA estimates that 57 percent of the wetlands in the Pond River floodplain have been destroyed. The enclosed list of fish and wildlife which are known to or are likely to utilize the Newcoal site indicates the diverse and numerous fauna dependent upon wetland habitat provided by bottomland hardwood systems in this watershed. Further, information generated as a result of the WET analysis performed by WES, also enclosed, indicates that the Newcoal site is rated high for both wildlife habitat and ecological significance. Based on this information, and information contained in studies identified under the Section 5.b.2 elevation criteria, we have concluded that the District's review of the Newcoal application has neglected to adequately consider the adverse impacts associated with the proposed mining activities.

Finally, the Newcoal bottomland hardwood system represents important functions and values from a landscape perspective. Cumulative and secondary impacts resulting from the loss of the site could contribute to the adverse impacts to aquatic environments removed from the immediate area of impact. EPA's concerns are based on findings that, from an ecological standpoint, the functional integrity of the forest ecosystem is in large part directly dependent on the extent of forested area remaining intact. The size, contiguity with Pond River and connectivity with other bottomland hardwood sites make the Newcoal site a valuable forested wetland resource. As noted previously, the Pond River watershed has been cumulatively impacted to the point where water quality and habitat problems already exist. Additional indicators of the degradation of the watershed, such as targeting of the watershed as needing non-point source management and the documented decline of wetland dependent bird species, reflect a high degree of cumulative impact. The extent of cumulative impacts further emphasizes the importance of existing wetlands in the watershed in maintaining water quality benefits and ecological stability and productivity of the area and reinforces the clear need to fully consider cumulative impacts to this bottomland hardwood system during the permit review process.

Mitigation

In the Statement of Findings, the District concluded that the mining project, including consideration of fully functional mitigation, will result in an environmental gain to the area and therefore the project is justifiable under relevant Sections of the Guidelines. EPA is concerned that information available to the District does not support this conclusion.

The existing bottomland hardwood wetland at the Newcoal site is mature from an ecosystem perspective, and performs significant water quality and wildlife habitat functions. If the area is mined as proposed, the benefit of these functions will be lost for a significant span of time, on the order of decades. The success of compensatory mitigation for losses of bottomland hardwood systems is far from certain. Even assuming that the proposed off-site mitigation successfully resulted in forested wetland ecosystem diversity, productivity, and stability, it has not been demonstrated that the reforestation of the "off-site" area will effectively compensate for the loss of wetlands at the proposed mining site. At a minimum, explicit permit conditions clearly establishing monitoring requirements are necessary to satisfy the need to assure success of proposed mitigation efforts.

With regard to the proposed onsite mitigation plans, EPA believes that establishment of a mature, functioning bottomland hardwood ecosystem on the areas to be mined may prove even more difficult to achieve than the proposed offsite mitigation. It is clear that the restored mine site would not display the same hydrologic characteristics as the original site since the proposed levee will remain in place and the post-mining surface elevations will be significantly higher. These factors would result in altered frequency and duration of flooding and would limit the success of the mitigation efforts to restore the area to its prior condition. The District has not fully assessed how this alteration in hydrology will affect wetland functions, nor how the applicant must modify its mitigation proposal to adequately monitor the success of the onsite creation. Given the importance of hydrology to the maintenance of wetland functions and consequently to wetland restoration efforts, EPA believes that a more complete hydrologic analysis should be completed. Based upon onsite meetings with the applicant, permit application materials, and hydrologic information supplied by the District, EPA believes the hydrology of the Newcoal site has not been adequately evaluated to assure successful wetland restoration.

It should be noted that even if the proposed mitigation is fully successful, and a mature bottomland hardwood wetland exhibiting equivalent functions and values found at the Newcoal site can be achieved at the offsite mitigation area, such replacement of

lost functions will occur only after a substantial period of time. This mitigation would provide comparable functions only after more than 50 years of uninterrupted succession. The temporal loss of functions associated with this delay will significantly impact wildlife resources and water quality functions associated with the current Newcoal site.

Finally, the areas where mitigation will be performed may not be protected from mineral extraction in the future because the mineral rights have not been secured. This issue raises further doubt about the success and long-term future of the offsite mitigation. This matter is of national interest and needs to be further addressed by the District.

Section 5.b.2. Criteria

Information collected during the WKYADID should be fully considered in the Corps permitting decision. The preliminary results of the WKYADID indicate that the Newcoal site is of exceptional habitat quality.

An example of the relevance of the WKYADID information to this individual permit review is found in the background information generated for advanced identification area, including the Newcoal site. The applicant and the District have asserted that the Newcoal site is of reduced functional value because it has been selectively logged in the past. Preliminary results of the WKYADID study indicate, however, that even though the area has been selectively logged, the Newcoal site is highly functional and provides significant wildlife habitat, particularly in relation to other wetlands in the watershed. The advanced identification reveals that the Newcoal site exhibits a dominance of valuable hard mast tree species (e.g., oaks and hickory) uncharacteristic in the remainder of the watershed today. The study also indicates that wetlands in the watershed are extremely effective in alleviating water quality impacts brought about by acid mine drainage and non-point source pollution. This type of information is vital to permitting decisions for the study region and should be considered in review of the Andalex application.

Section 5.b.3. Criteria

Definition of Project Purpose

The District has stated that the "basic project purpose" is to mine coal and that this activity is non-water dependent. However, the District also states that the "overall project purpose" is to develop the Newcoal site and maintain the future economic viability of Andalex's Cimarron Division. This definition of overall project purpose is virtually identical to the applicant's formulation of "basic purpose" which reads, "The

basic purpose of the proposed activity is to develop the Newcoal reserve so that Andalex can fulfill its obligations under existing coal supply agreements and maintain the future economic viability of the Cimarron Division."

EPA is concerned with the District's approach to project purpose for several reasons. First, we are concerned that the District's definition of project purpose inappropriately differentiates between the terms "basic" and "overall" project purpose. Within the context of the Guidelines, the terms "basic project purpose" and "overall project purpose" are interchangeable. We believe that when examined in the context of the regulations, it is clear that the two terms are not intended to have distinct meanings. The term "basic purpose" is used not only in Section 230.10(a)(3), regarding water dependency, but also in Section 230.10(a)(2), which describes what would be a practicable alternative. Moreover, the latter section uses the phrases "basic purpose" and "overall project purposes" together in a manner that clearly suggests that the two phrases are not to be used for distinct tests. Further, the preamble language explaining the practicability requirement also uses the terms interchangeably. In addition, we believe it would make little sense to draw a distinction between the terms, thereby establishing a rebuttable presumption that practicable alternatives exist based on a definition of project purpose that differs from the definition used for determining practicability of alternatives. Such a distinction would only cause confusion and administrative difficulties in applying the Guidelines. Additionally, there is clear evidence that the Corps and EPA have consistently considered project purpose in only a single context in other cases, defining it generically so that the determination of practicability is not unduly constrained by applicant preferences. Finally, we do not believe that there is an important distinction between the singular "basic purpose" and the plural "overall project purposes." Both the Corps and EPA have used the singular "basic purpose" or "project purpose" to include more than one concept (e.g., residential housing with recreational amenities). As such, we have read both phrases to have the same meaning, which is a generic, basic purpose test.

Furthermore, even if it were appropriate to differentiate these terms, the District has unduly deferred to the applicant in defining the project purpose. EPA agrees with Corps findings on the Hartz Mountain case (Memorandum from Brigadier General Patrick J. Kelly dated August 17, 1989) that the alternatives analysis must use a "basic project purpose" which cannot be defined so narrowly by the applicant as to preclude the existence of practicable alternatives, as it did in this particular case. EPA believes that a more appropriate definition of basic project purpose for the instant case is "to develop a coal reserve to allow Andalex to fulfill its contractual obligations." In this case, instead of independently determining the basic project purpose, the District has apparently deferred to the applicant's definition of project purpose. EPA believes that

this undue deference has resulted in an inappropriately narrow definition of project purpose and thereby improperly limits the analysis of practicable less damaging alternatives for the purpose of determining compliance with the Guidelines.

Practicable Alternatives

As a result of the narrow basic project purpose as defined by the Corps, the applicant has stated, and the District has accepted, that alternative sites outside of a 10-mile radius from the coal processing plant are not economically viable due to the cost of transporting coal to the processing plant. Economic details necessary to fully address the review of practicable alternatives and justify this limitation on alternatives was not sufficiently detailed or explained during the permit review process. At present, EPA does not believe the possible existence of other alternative mining sites located outside of the limits set by the District, which would otherwise be practicable, has been properly addressed. It should be noted that the applicant evaluated two potential alternatives which are within the 10-mile radius and which could meet the company's contractual needs.

The Peabody site has coal reserves of similar quality and quantity to the Newcoal area (and therefore would supply coal to meet contractual obligations), but has been characterized by the applicant and District as being "unavailable" due to Peabody's reluctance to sell the property. Although EPA Region IV has requested information to substantiate this assertion, no information has been provided to document Andalex's offer to buy or lease the rights to mine the Peabody site. The area has also been characterized by the applicant as a wetland similar to the Newcoal site, the loss of which would represent a loss as damaging as the loss of the Newcoal site. EPA believes that since the Peabody site is hydrologically separated from Pond River by a levee, it is highly questionable that it is functionally equivalent to the Newcoal site in terms of its wetlands functions and values. If the environmental attributes of the Peabody site are impaired by the site's hydrological condition, this area would represent a less environmentally damaging alternative location for mining.

EPA also believes that the practicability of the Lakeview site has not been adequately rebutted. Andalex already owns and is currently mining the site and has conceded that the site could be expanded to fulfill contractual obligations. Because of its location in the landscape, mining the Lakeview site minimizes wetland impacts in comparison to Newcoal. Andalex submits that coal quality at the Lakeview site is not sufficient to satisfy the project purpose and that logistical constraints exist. However, the District's Statement of Findings indicates that although blending of the coal would meet contract specifications, and mining the Lakeview site is technically feasible, it is

not logistically efficient. While EPA Region IV requested a detailed justification of this characterization, such documentation was not provided. Therefore, EPA believes it has not been adequately shown that less environmentally damaging alternatives to the Newcoal site do not exist at sites outside the 10-mile radius, at the Peabody site, the Lakeview site, and/or any combination of the above. Based on information provided, even under the inappropriately narrow scope of analysis, EPA believes that the process used to evaluate the availability of practicable less environmentally damaging alternatives has been misapplied in the decision to issue a permit.

I hope you will carefully review the record on this permit case and agree to provide additional guidance to the Louisville District. I look forward to your response to our concerns. If my staff can be of further assistance during your evaluation of our request, please have your staff direct their questions to Mr. Joseph DaVia in the Office of Wetlands, Oceans, and Watersheds at 245-3902. Data which we used to reach our decision in this matter are available for review through Mr. DaVia. You should also, of course, feel free to contact me, or Robert Wayland, Director of the Office of Wetlands, Oceans, and Watersheds at 382-7166.

Sincerely yours,

Martha G. Prothro

Martha G. Prothro
Acting Assistant Administrator

Enclosures

WILDLIFE SPECIES OCCURRING IN BOTTOMLAND HARDWOOD WETLANDS IN HOPKINS COUNTY, KENTUCKY

KENTUCKY DEPARTMENT OF FISH AND WILDLIFE RESOURCES DATA

Spotted salamander
Marbled salamander
Smallmouth salamander
Slimy salamander
Eastern newt
Lesser siren
Woodhouses toad
Northern cricket frog
Bird-voiced treefrog
Copes gray treefrog
Spring peeper
Striped chorus frog
Bullfrog
Green frog
Southern leopard frog

Fox squirrel
Eastern chipmunk
Meadow jumping mouse
Coyote
Gray fox
Bobcat
River otter
Striped skunk
Long-tailed weasel
Mink
Raccoon
White-tailed deer
Pied-billed grebe

Great blue heron
Green-backed heron [visual observation by EPA Regional staff]
Yellow-crowned night heron
Blue-winged teal
Wood duck
Sharp-shinned hawk
Coopers hawk
Red-shouldered hawk

Bobwhite quail
Turkey
American woodcock

Virginia opossum
Short-tailed shrew
Eastern mole
Eastern pipistrelle
Swamp rabbit
Beaver
Prairie vole
Golden mouse
Muskrat
White-footed mouse
Deer mouse
Prairie deer mouse
Southern flying squirrel
Gray squirrel

Spotted gar
Lake chubsucker
Flier
Snapping turtle
Common snapping turtle
Midland painted turtle
Red-eared slider
Eastern box turtle
Five-lined skink

Racer
Ringneck snake
Rat snake
Black rat snake
Western mud snake
Black kingsnake
Plainbelly water snake
Copperbelly water snake
Diamondback water snake
Northern water snake
Rough green snake
Eastern garter snake
Copperhead
Western cottonmouth

Indiana bat
Northern long-eared bat
Red bat
Southeastern bat
Big brown bat
Little brown bat
Rafinesque big-eared bat

Enclosure 2

ANDALEX NEWCOAL SITE WETLAND FUNCTIONS AND VALUES RATINGS: WETLANDS EVALUATION TECHNIQUE CONCLUSIONS

High for wildlife habitat
High for ecological significance
High for floodflow alteration
High for sediment stabilization-opportunity
High for sediment and toxicant retention
High for nutrient removal and transformation
High for recreational and cultural significance
High for social significance, effectiveness and opportunity

Moderate for economic significance
Moderate for sediment stabilization-effectiveness
Moderate for production export-effectiveness
Moderate for finfish habitat

Low for crayfish habitat

Ground water was rated as *uncertain*