WATER SUPPLY REPLACEMENT ISSUES/RESOLUTIONS

There are a number of issues related to the water supply replacement obligation that are not specifically addressed by the coal mining statutes, regulations or case law. In response to citizens and industry, the Department committed to resolving these matters through the promulgation of regulations. A list of the issues and proposed resolutions follows. Please provide your comments and advice.

NOTE: Resolution of water supply replacement issues through written agreement between the operator and the water supply owner or waiver of water supply replacement in accordance with regulatory requirements do not necessarily require Department intervention.

1. **ISSUE: How should the operator's obligation to permanently pay the increased operation and maintenance (O&M) costs of the replacement supply be applied? Should this obligation be a personal right limited to the current property owners, or a right that runs with the land and applies to current and future owners or be based on the use of the water supply and the type of replacement supply?**

   RESOLUTION: The obligation to permanently pay the increased O&M costs is tailored to the use of the water supply and the type of replacement chosen as specified below:

   (a) If a domestic water supply, serving a residence or residences, were replaced with public water, the O&M costs would run with the property owner. Thus, if the property should change ownership the operator would no longer be responsible for continuing to pay O&M costs. In many instances the public water supply will result in an increase in property value, or at least not decrease the value of the property.

   (b) If an agricultural water supply is replaced with a public water supply the O&M costs will run with the land until such time that the land is no longer used for agricultural production. The reason for this is that the cost of public water for agriculture could be large due to the amount of water needed for agricultural purposes. The cost of buying public water for agricultural purposes could adversely affect the economics of the agricultural business. This could be a detriment to the current owner and to future owners who wish to use the land for agricultural production. At such time that the land would cease to be used for agricultural purposes the mine operator would no longer be responsible for payment of the O&M costs.

   (c) If a water supply is replaced with a well or spring that costs more to operate due to required treatment or maintenance costs than the original water supply, the payment of the increased O&M costs will run with the land. Without

payment of the increased O&M costs, there is a decrease in the value of the property because the property would be served by a water supply that was a lesser supply than was present before mining.

2. **ISSUE: How should the payment of the O&M costs be resolved when an operator and water supply owner cannot reach a financial agreement?**

RESOLUTION: Where a mine operator and a water supply owner cannot reach an agreement, and the Department determines that the operator has proposed an adequate settlement to permanently pay the increased O&M costs, the operator is to establish a financial mechanism approved by the Department that provides for the permanent payment of the increased O&M costs. For domestic water supplies replaced with public water the "multiplier" for permanent replacement is to be based upon actuarial tables of the life expectancy of the current owners. For replacement of water supplies that require treatment or that are used for agriculture the "multiplier" is to be "36."

The type of financial mechanism would be dependent on mechanisms that are deemed acceptable, as provided for in Issue 3 of this document. If the Department determines that the amount proposed by the operator is unacceptable, the Department may determine that the replacement supply is not adequate and may issue an appropriate order to the operator.

3. **ISSUE: What types of financial mechanisms are acceptable to provide for the permanent payment of increased O&M costs of replacement water supplies once the annual increased O&M costs have been determined, and an amount has been calculated to cover future O&M costs?**

RESOLUTION: The most common technique (by far) at present is a one-time cash settlement between the mine operator and the water supply owner. Other financial mechanisms that have been explored and may be used are: financial trust funds, annuities, letters of credit, certificates of deposit, cash payment agreements with public water supply companies, U.S. Treasury Bills and water supply replacement bonds. Trust funds are typically not practical due to the high costs required by financial institutions to administer the fund. Costs of maintaining the trust can exceed the amount needed for O&M payout on a yearly basis.

Additionally, financial mechanisms are to be administered by third party financial providers. Funds used to guarantee payment are to become available to the water supply owner upon default of payment of O&M costs by the operator.

4. **ISSUE: What quantity of water is to be provided by the replacement supply where no accurate pre-mining information is available?**

RESOLUTION: Quantity of a replacement water supply must be adequate for the current and reasonably foreseeable uses of the supply. The Department has required a

5-gpm-water yield for domestic water supply in situations where no accurate pre-mining water quantity information is available. An extensive explanation of adequate quantity of a replacement water supply and the basis for the 5-gpm yield is found in Appendix B of TGD # 563-2112-605. Replacement quantity for agricultural use will be considered on a site-specific basis for establishing quantities of water for an agricultural water supply replacement. Water yields required for agricultural purposes vary based on the type of agricultural operation. EPA's manual of individual water systems will be used as a guide for determining minimum quantities of water required.

Although waivers for replacement of a water supply may be accepted where the supply is not needed for the proposed post-mining land use, an alternate water supply source must be available. (OSM's position as expressed in evaluation of the Acts 173 and 43 program amendment is that waivers should only be granted when the water supply is not needed to achieve the postmining land use and when a suitable alternative water supply is available and can be feasibly developed.)

The Department will provide increased emphasis on ensuring that accurate pre-mining water supply information is provided in the permit application. To that end, the seasonal variation of a water supply needs to be determined by providing background water data from a low-flow month (i.e. August, September or October) and a high-flow month (i.e. March, April or May).

5. ISSUE: What quality of water is to be provided where pre-mining quality (e.g., springs) was better than drinking water standards and where the replacement supply meets drinking water standards?

RESOLUTION: Section 4.2 (f) of SMCRA and the regulations at §§ 87.119 and 88.107 require that a replacement water supply must be adequate in quality for the purposes served by the supply. The Subsidence Act, as amended in 1994, includes similar language, which was submitted to OSM for approval. During the review of the Subsidence Act amendments, the issue of adequate versus equivalent was raised and resolved (between DEP and OSM) with language that affected water supplies must be replaced with a permanent alternate source of water which adequately serves the pre-mining uses of the water supply and reasonably foreseeable uses of the water supply. OSM advised it would apply the same standards in its review of the pending changes to §§ 87.119(a) and 88.107(a) which are awaiting OSM action.

The Department's intent is to ensure that affected property owners are provided with the highest water quality mandated by law. For water supplies affected by surface mining operations, coal preparation plant operations and coal refuse disposal operations, the replacement water supplies are to meet either documented pre-mining water quality or drinking water standards taking into consideration uses of the water supply and requiring water quality better than drinking water standards if the pre-mining water quality was better than drinking water standards and the better quality water is needed for current uses.

[For water supplies affected by underground mining operations, statutory requirements are somewhat different. The replacement water supplies are to meet either documented pre-mining water quality or drinking water standards. There is no requirement for replacement of a water supply above drinking water standards.]

6. ISSUE: How is water supply replacement to be handled where an operator is found to be only partially responsible for the water supply diminution?

RESOLUTION: Mine operators will be held 100% responsible for diminution that is at least partly caused by the mine operator. Precedent exists for this approach and it is the most practical approach to an inexact science.

This approach is consistent with the "joint and several liability" argument used by the Department in Elwood Yoder et al. v. PBS Coals, Inc. and Fetterolf Mining, Inc. In this case the Department maintained that both PBS and Fetterolf could each have been responsible for pollution of several wells. Each coal company was held totally responsible for the pollution of each well. Commonwealth Court upheld the Department's decision on December 15, 1987, and concluded that the damages to the water supplies were "indivisible."

This is also the approach more recently taken by the Department for water loss that occurred as a result of drought and dewatering by a quarry. The mine operator was held 100% responsible for replacement of a well if it had caused any diminution to that supply. It was recognized throughout the investigation that drought had also contributed to the water loss in most, if not all cases.

From a hydrogeologic standpoint, the 100% responsible approach is the only reasonable approach. Hydrogeology is not a science that can provide exact percentages of causation. Additionally, in cases such as the case cited above, although drought certainly contributed, it is impossible in many instances to determine whether the water table, in the absence of mining, would have been high enough to sustain the uses of the water supply.