MRAB ORPHAN MINE DISCHARGE TASK FORCE
DRAFT
Suggested Rewording and Comments on Draft Resolutions

Technology:

- **DEP prepare and issue an RFP for the demonstration of new or improved technology related to mine pool water. Categories to be considered include, but are not limited to:**

  - **In-situ treatment**
  - **In-situ abatement**
  - **Ex-situ treatment**
  - **Infiltration reduction**
  - **Economical metals recovery**

  (Discussion: Grants generally go to non-profits, whereas an RFP is more open to researchers and industry. An RFP can be as flexible or as specific as one wants to make it and scoring criteria allow for the selection of the best, not necessarily the cheapest, proposals.)

- **DEP to invest in modern Geotechnology, such as airborne geophysics, to map underground mine pools where existing mine maps are insufficient to determine mine extents and where there is a need to determine the underground extent of a given mine pool.** (*Discussion: As an example, for the Mon River study, the existing mine maps, structural geology information, and monitoring wells provided sufficient information to determine the extent of mine pools in probably 95% of the cases. In other areas of the state this information before 1966, during an era of questionable mine maps, most of the underground mines were developed in an up-dip direction so they would be free draining. These mines tend to have minimal mine pools associated with them. With passage of the clean streams law in 1966 there was an incentive to develop mines in a down-dip direction and mine maps became increasingly reliable. By knowing the extent of the mining, the structural geology of the area, the discharge elevation or elevation of the mine pool determined from a monitoring well, the extent of the mine pool can be reasonably estimated. From the standpoint of the Department's available manpower, the mine maps, etc. can be pulled together in a relatively short period of time. Time would be best spent waiting until there was an interest in a potential mine discharge to compile the mapping rather than attempt to map all of the underground mines just for the sake of having a complete data set).*

- **DEP to develop a database to track the on-going status of existing or potential surface mine or mine pool discharges. This will include discharges currently being treated by public and private parties, discharges that are not being treated or discharges that are likely to occur as mine pools fill. Emphasis and priority is to be placed on those discharges that have the potential for recycling and reuse (i.e. high volume) and those that have the potential for third party treatment or abatement**

using waste or co-product materials. The database should include information such as location, elevation, flow and chemistry of the discharge. Where appropriate, mine maps indicating the extent of mining and mine pool levels will be included. This information to be prepared in a GIS format suitable for distribution.

- **DEP to articulate its strategy for anticipating and addressing mine pool discharges that may occur**. (*Discussion: Although the Department may not have a formal emergency response plan in place, we have responded in short fashion to both mine blowouts and take over of treatment facilities as the various situations dictate. The MonView/Mathies mine is a good example. A "one size fits all" formal plan may not work very well as each case presents a specific set of criteria that must be reacted to. Historically, the Department has reacted appropriately to these situations).*

- **DEP to coordinate the assimilation of mine discharge data with other federal, state and local agencies.** (*Discussion: Much of the information necessary to build a database already exists within various agencies. For instance, watershed assessments have been completed by various watershed associations funded by Growing Greener Grants. It is much more efficient to incorporate this information into a database than to go out and collect it all over again).*

- **DEP assemble a database of waste materials or co-products that may be beneficial in the treatment or abatement of mine discharges.** (*Discussion: Many manufacturing plants end up with waste products that may be very beneficial in the treatment or abatement of mine drainage. Historically, there has been a communications disconnect between the manufacturing and mining industries. By knowing the nature of the waste material, its availability, location etc., both mining and manufacturing stand to benefit).*

<u>Outreach:</u>

- **DEP to form partnerships with other state and local agencies as well as the mining industry to assist in the marketing of mine pool discharges where the opportunity exists for recycling and reuse.** (*Discussion: If an industry is interested in locating within a given geographical location within the state, it is common for them to go to Pa Site Finders to see what is available. On a local level, a county industrial development authority may attempt to recruit a specific industry to locate within their county. The mining related information is only a small part of the equation. Therefore, the most effective use of the data developed by the Department would be to provide it to the agencies that communicate with industry on a routine basis. It is possible that a mining company who is legally liable for a discharge would play an active role in the marketing of their water).*
- **DEP develop a public relations plan to inform the public and, where appropriate, seek input. The plan should address available media approaches, target audiences and message development.**

Financial:

- **DEP assemble a database on orphan and abandoned mines and estimate cost of treatment of same.** *(Discussion*: *This one could probably be deleted. Building the database is covered under the technical resolution. Also, determining the cost of treatment would be specific to the requirements of the end user. AMD Treat, a program developed primarily by OSM, is available to estimate treatment costs using both chemical and passive treatment).*

- **DEP to seek partnerships with other state, local, and federal agencies and the private sector to secure adequate funding for demonstration projects.**

- **DEP to partner with DCED and conduct a market study on a market based approach to mine water treatment and sale of cleaned water.**

- **DEP to study revenue sources to subsidize water treatment where market users need assistance to ensure treatment.**

- **DEP to partner with local government, non-profits, and authorities in ownership at treatment plants for economic development.**

- **Request DEP to properly fund and staff the effort needed to carry out these recommendations.**

Legal and Legislative:

- **DEP to prepare a legal opinion to evaluate impediments to the use of alternative criteria, including best professional judgment standards for manganese on a case by case basis, to allow passive treatment where a higher manganese limit could be feasibly attained without compromising the use of surface waters, aquatic life or human health.** (*Discussion: A briefing paper is needed and a legal opinion on the impediments and possible fixes for adjusting the manganese standard for certain discharges, while focusing on how this could be done while still ensuring that water uses and aquatic life are protected).*

- **DEP to request legal opinions on ownership of mine water, access rights and liability issues.** (*Discussion: Liability issues arising out of treatment or pumping along with ownership and access should be included).*

- **DEP evaluate, solicit and develop a pilot project on mine discharge effluent trading.** *(Discussion: EPA appears to be the bottleneck here. Perhaps a pilot program similar to Project XL might be acceptable to EPA for demonstration purposes.)*

- **DEP should promote and assist agriculture and energy industries in taking advantage of carbon, effluent trading or other credit trading opportunities that**

could enhance incentives for projects that reduce the risk from or magnitude of mine pool discharges. (*Discussion: Is this targeted sharply enough on this issue. Recommend the promotion of revegetation and reforestation and take advantage of opportunities for credits, if they are made available, as a means to reducing hydrologic problems, erosion and sediment, etc. A lot more information will be needed about how carbon credits help with the mine pool problem. Link not there yet).*

- **DEP promote federal legislation to establish Good Samaritan protection in federal regulations.**