

A Cooperative Approach to Land Reclamation

by

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I am pleased to be here today and introduce myself to those of you who don't know me. I have recently filled the Extension Specialist - Land Reclamation position at WVU. The position was created through a cooperative agreement between the West Virginia Department of Energy, West Virginia Mining and Reclamation Association, College of Agriculture and Forestry, and the Cooperative Extension Service. In some ways it is nice to have 4 bosses - when one questions we a-q to what I've been doing, I can say the other boss told me to do it. I'D! ok until they start talking to each other. On the other hand, it places some responsibility and pressure on me to do my job effectively and to see that the needs of the 4 organizations are met.

In a discussion with Ken Faerber and Ben Greene (2 of the 4 bosses) several weeks ago, they expressed that my first 3 priority issues were: acid mine drainage, 2) acid mine drainage, and 3) acid mine drainage. Consequently, I have concentrated on becoming familiar with pyrite oxidation, at-source methods to inhibit acid formation, and treatment techniques to control acid mine drainage.

During the past 3 months, I've been involved in revising the 1979 Task Force Bulletin with Dr. Richard Smith and Dr. John Sencindiver. This has been a great opportunity for me to search the literature and condense it into several pages. It is amazing to see such innovative approaches and techniques that have been invented to stop acid mine drainage. The fact that acid mine drainage continues to plague us indicates that the problem is complex and elusive. There is seldom a single answer to a complex problem. Generally, complex situations require minimizing or manipulating a set of interrelated factors in, order to achieve the greatest amount of success. As the old saying goes, "Man knows a little about a lot of things, but alot about only a few things". We know of several techniques that inhibit acid formation in some cases, but show no effect on a site over the bill. We know of other treatments that reduce acid mine drainage in some situations, but application of the same treatments at a different site (even though the conditions appear very similar) shows Do reduction at all. This is indeed a problem.

So what can this position or I as an individual filling this position offer which may enhance acid mine drainage control and abatement. First, there is a need to pool together the information that has been written and is being developed by research groups across the country. The results and findings of these research groups must be evaluated, condensed, and written in a form that is accessible to lawmakers, regulation writers, enforcement agencies, coal operators, consultants and the public. All the research in the world and the funds spent in support of research projects will be wasted unless the results are applied to the specific problem. Principles discovered in the laboratory need practical- application in the field. It is

not sufficient that only legislators, inspectors, coal operators, and consultants understand application principles to reduce AMD. The man driving the bulldozer or the crew applying the treatment must comprehend the why's and how's so that the job is done correctly. Again, all the research results in the world are worth nothing if the findings are not applied properly. So first, there is a need to make information available to important people.

Secondly, there must be communication, between these groups. It is important that there is a person available and on the minesite with the operators frequently. Yet, he must be connected with the University and to researchers doing reclamation and AMD work. As problems develop, this individual can go the site (with or without inspectors), inventory the situation, and offer approaches to solve, the problem or contact tile people who may know what needs to be done. These contacts may be consultants, other operators or researchers. This individual could also be involved in development of research goals and programs by interacting with researchers and informing them of problem areas. The coal industry should and must be involved in directing research toward specific problems in acid mine drainage, and encouraged to test such research under actual mining condition,". Researchers must recognize the capabilities of mining companies and their limitations in equipment and cost to implement such techniques. Enforcement people should be acquainted with viable alternatives for reclamation, and be willing to allow new techniques on a small scale for testing on minesites. So secondly, there must be communication between organizations associated with AMD.

These are two major goals I feel must be addressed immediately. Literature and information written in the past and being written presently on AMD should be evaluated, screened, condensed, and presented in publications available to interested individuals. Then, we all would be current on AMD research findings and the state-of-the-art technologies being used to control the problem. Maintaining and communication between organizations is also important.

The cooperative approach to land reclamation and AMD control requires all organizations involved (including operators, inspectors, consultants, and researchers) to unite and coordinate our efforts in reducing and eventually solving the AMD problem. As time passes and I increase my understanding and experience with AMD, my role will be to provide information, and coordinate activity between the several organizations concerned with acid mine drainage.