

will only mention a couple that deal with the quantity of water as a result of research that we have done at Indiana University under Mr. Don. M. Corbett.

This previously cited Department of the Interior report mentioned our work on page 64 which showed that surface mining activity had a beneficial hydrologic effect by continuing to provide streamflow during dry weather when streams in unmined areas went dry for periods of several weeks. This observation was corroborated in western Kentucky in the summer of 1967 by the U.S. Geological Survey, which is the same agency that had published the report on Beaver Creek in eastern Kentucky that reached opposite conclusions.

In eastern Kentucky their conclusions were that the surface mining industry accentuated sedimentation, it aggravated the flood problem, et cetera. In western Kentucky the same agency, and also we in Indiana, have found that apparently not only is water supply created and supplied at low flow times of the year to the streams, but also these ridges of strip mining material act as flood retarding structures at certain times of the year. This again just points out the differences in the physical environment, the different conditions that must be taken into account.

The other sacred cow has to do with the quality of water produced in the surface-mining process.

Tuesday, I believe it was, one of the speakers equated yellow boy, the yellowish brown precipitate on the bottom of streams, with acid. Now, we in Indiana University and the Federal Water Pollution Control Administration people have found that this association does not necessarily hold true.

A stream that runs yellow may have a precipitated mixture of colloidal iron hydroxide and iron carbonates but it does not have to run high in acid or sulfate.

On the other hand, a stream that looks very clear could be a stream of bad acid, pH, or bad sulfate, even if it doesn't have a yellow color. This, I believe, is another one of our sacred cows that we have to be aware of.

Anyway, although we all recognize that acid-mine drainage is coming from surface-mined areas, it does have many sources, such as old mine shafts, mine-haulage roads, old mine-waste piles, and so forth, and it need not be caused by the present surface-mining process if the recommendations of both the coal industry and the State regulatory agencies are being followed.

Nevertheless, despite these many sources, the causes of acid-mine drainage can be isolated by a careful study.

Here I think I would like to briefly mention a statement by Secretary Udall a couple of days ago. He said that in Appalachia it poisoned most of the rivers there. This was his quote. "The most poisonous effect I know of is acid-mine drainage. In Appalachia it poisoned most of the rivers there."

But I looked over the Appalachia study, which is embodied in U.S. Geological Survey Circular 526, again because I didn't recall that statement in there. I found that this study showed that in only 60 percent of the reconnaissance locations in that study, and they admitted it was a reconnaissance study because of the great need here, the water did not meet the drinking water standard of the Public Health Service. This is cited in the abstract to that re-