

later by processors of brine deposits. In both cases the extraction through wellholes of either oil or brine liquors left the processors with the problem of getting rid of large quantities of unwanted salt water. When State regulatory authorities called a halt to the discharge of this salt water into streams the processors took the obvious step of returning this liquid back into the earth via disposal wells.

The relative ease and economy of this practice has captured the attention of other industries with a liquid waste disposal problem. As a result such wastes as spent acid are being pumped underground. While this may solve the immediate problem of preventing stream pollution it raises the question if adequate safeguards are being employed to the prevention of ground-water pollution. According to the U.S. Geological Survey there is a paucity of knowledge about the movement of underground water.

The public policy issue presented is this: Do our State and Federal regulatory agencies currently possess sufficient knowledge to provide assurance that present and proposed deep-well waste disposal installations will not ultimately produce irreparable quality deterioration of ground-water resources? If the answer is "No," then prudence would suggest that governmental authorities discourage this practice.

*Mine acid drainage control.*—Efforts to devise and apply measures for the control of acid drainage from abandoned and active coal mines, with only a few exceptions, represent, until recently, a dismal record of frustration and ineffectiveness.

Pragmatic approaches toward amelioration of mine acid pollution had their origin in the 1930's when air sealing of mines was recommended by the Public Health Service to provide unemployment relief during the economic depression of that period. Following this, the States of Pennsylvania and Indiana encouraged application of various empirical measures, such as strip mine submergence, chemical neutralization and drainage diversion in efforts to minimize the adverse effects of mine acid. More recently the Ohio River Valley Water Sanitation Commission (Orsanco) promulgated control measures in the eight-State area under its jurisdiction based on an elaboration of the empirical practices that were found to be effective in Pennsylvania and Indiana.

If it did nothing more, this action by Orsanco dispelled the psychology of defeatism which has shrouded attempts to deal with the problem. It brought forth an acknowledgment from the coal industry that practical means did, in fact, exist to ameliorate mine drainage pollution. This prompted State legislatures to remove the legal exemption from control obligations that heretofore had been enjoyed by the coal industry.

Quite recently, several Federal agencies have displayed an unusual amount of interest in the mine acid problem, among them the Public Health Service, the Bureau of Mines, and the Geological Survey. The availability of research funds—supplemented with Appalachia moneys—has resulted in a host of surveys, investigations, and demonstration projects.

It now appears that competition for identification with mine drainage control rather than appraisal of opportunities for coordinated effort is the distinguishing characteristic of these endeavors. Con-