

REMARKS OF WILLIAM F. DARMITZEL

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Mining has gained a national reputation as a significant cause of water pollution, and in some parts of the country the reputation has a reasonable basis in fact. In New Mexico, however, a number of factors combine to present a picture which is significantly different from what exists east of the Mississippi. Let me hasten to add that I will not be spending my time on this program trying to prove that mining can be excluded from 208 planning, but I do intend to try to show that we are not as bad as we are frequently painted.

Potential water pollution from mining is primarily from two sources: Surface disturbances and mine discharges.

Under surface disturbances there are four types that may cause water pollution:

1. Waste Dumps - This is the material that is removed from both surface and underground mines which is considered waste because it contains mineralization in very small quantities and is not recoverable. In many instances there are sulfide materials which can combine with rainfall to create an acid drainage. Fortunately or unfortunately, in New Mexico we do not have sufficient rainfall to make this a problem in most areas of the state. There can also be other minerals present in the waste dumps which could be leached out by rainfall that would be detrimental to ground water, but again in most instances there is insufficient rainfall to cause a problem.
2. Tailings - This is the material left from the milling process in which the ore is ground to a very fine consistency and the mineral is removed from the waste, which is usually disposed of as a slurry by discharging into tailings ponds where the solid material is deposited and the water is either collected or evaporated. Tailings always contain traces of the sought after mineral along with other minerals and chemicals. Pollution can occur by seepage through the tailings pond or from the washout of the tailings dam. Because of the limited rainfall, we have little danger from washout of dams, but seepage through older tailings ponds which were not lined with clay or other material can be a problem in New Mexico.
3. Low Grade Ore Stock Piles - These have about the same potential for polluting water in New Mexico as do the waste dumps. There are minerals which could be leached out and run off into a stream or could get into ground water, but the limited rainfall keeps this from being much of a problem.

4. Strip Mining - In many areas of the country there have been problems with siltation from the erosion of strip mined land which was not properly reclaimed. Again, we believe that New Mexico's Coal Strip-mining Act will prevent inadequate restoration, and along with the limited rainfall, strip mined lands will probably contribute less to the erosion and siltation problem than the land did in its natural condition.

The other potential source of water pollution from mining is from mine discharges:

1. Dewatering - When mining is conducted, water may be encountered and must be removed from the mine. This water may contain pollutants naturally and these may be increased or added to while the water is in the mine. This discharge then becomes a pollution source and will have to be treated before release. For those mining activities which encounter water in their mining activities, and the mining process increases the amount of pollutants contained in the water discharged in the dewatering, those mines will have to develop some reasonable process for the treatment of this water.
2. Mine Drainage - In many parts of the country inactive or abandoned mines continue to produce water in sufficient quantities that it runs out of the mine opening. These waters often contain dissolved minerals which pollute surface or underground water. Usually this is not a problem in New Mexico. In most instances abandoned or worked out mines do not have water flowing from the mine opening.

In general, the scarcity of water in New Mexico has eliminated major water pollution potential over large areas and leaves mostly specific and individual pollution problems to solve.

In conclusion it is our view that the two mining areas which have already been selected for special study - the brine disposal in the potash basin near Carlsbad and the uranium belt near Grants - are probably the areas which most nearly meet the requirements of 208 and that the other situations which exist or might arise can be adequately handled under the existing water quality law and regulations covering both surface and underground waters.