

Unsafe Radwaste Disposal at WIPP

David T. Snow

Consultant, 9813 W. 83rd Ave., Arvada, CO 80005

Summary

At WIPP, radioactive waste is being disposed of permanently in drums and boxes placed in rooms excavated in the Salado salt beds. Like all other excavations below the water table, the repository will saturate, and dissolved radioactivity can ultimately escape via boreholes, shafts or fractures to the overlying Rustler evaporites. The most evident aquifer in the Rustler, the Culebra dolomite, is claimed by DOE to provide such slow transport that the Rustler can be considered an adequate barrier to waste migration. But performance assessment modeling, based on insufficient exploration data, unsupportable deductions and faulty assumptions led to that claim. This paper asserts that the Rustler formation overlying and down-gradient of the WIPP repository will not provide the claimed geologic containment because karst conduits are present that will facilitate rapid, ephemeral flow. If disposal is not halted and timely rectified, escaping radioactivity may reach Nash Draw within a thousand years, contaminating the Pecos River and Rio Grande. Until a suitable disposal site or method is engineered, a monitored retrievable storage facility may offer the only alternative.

©2022 – Solution Mining Institute
Full Paper is Available in the SMRI
Library(www.solutionmining.org)