

## A SHAFT SEAL SYSTEM FOR THE WASTE ISOLATION PILOT PLANT

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### ABSTRACT

As part of the demonstration of compliance with federal regulations, a shaft seal system has been designed for the Waste Isolation Pilot Plant. The system completely fills the 650-m shafts with components consisting of the common engineering materials, each of which possesses low permeability and longevity, and can be constructed using available technology. Design investigations couple rock mechanics and fluid flow analysis and tests of these materials within the natural geological setting, and demonstrate the effectiveness of the design.