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Modification of mineral liner to improve its long-term stability

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abstract The discussion about the long term stability of mineral waste deposits excludes the effect of coupled processes in mechanics and hydraulics which can be summed up as follows: mechanical and dynamic energy inputs during compression result in higher soil homogenization and particle reorientation, positive pore water pressure values and consecutive normal shrinkage behaviour together with tensile crack formation. Some alternatives are discussed and the consequences for a more impermeable mineral liner due to residual shrinkage behaviour, entrapped air and a very tortuous pore system are explained.

keywords capping, cracking, landfill, mineral liner, shrinkage