



## NEUTRON SCATTERING APPLIED TO ENVIRONMENTAL WASTE CONTAINMENT

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A major environmental problem in Australia occurs at mine sites, where rock dumps and tailings dams are still causing problems many years after the mines have ceased operation. ANSTO has developed a method of producing a neutral barrier in-situ, which reduces water flow through the waste material. This in turn prevents water carrying waste products out into the wider environment. Both the loose grained sand substrate and the Neutral Barrier produced are crystalline and therefore amenable to diffraction techniques. In recent laboratory experiments neutron scattering has been used to confirm the presence of the barrier and measure the amount of calcite forming the barrier, at centimetre depths below the surface. The results of these measurements will be presented.