

Lisheen Mine



Client: Anglo American Plc
Location: County Tipperary, Ireland
Date: 2006-2007

The Lisheen mining operations involve an underground lead/zinc mine with a surface processing plant for the ore.

In 2006, ATC Williams, then trading as Australian Tailings Consultants, was commissioned by the mine to provide advice on advanced closure planning for the tailings storage.

During the course of this work, it became apparent that more data was required on the physical properties of the tailings and the expected behaviour during closure in order to successfully develop a closure plan.

We subsequently undertook a comprehensive program of sampling and laboratory testing to provide this information. Overwater sampling from a barge was carried out to obtain samples of deposited tailings, together with other in-situ testing. The samples were shipped back to our specialist Melbourne laboratory where testing and analysis of the results took place.

The study presented important information regarding the sub-aqueous depositional behaviour of the tailings, in particular the high degree of segregation that had occurred into coarse and fine fractions, the achieved densities and the current consolidation state.

The results have enabled Anglo American to optimise ongoing depositional strategies leading up to closure, and have provided clearer predictions of post-closure behaviour.

This study has allowed Anglo American to satisfy local environmental regulations with a closure strategy that minimises cost and enhances the long-term rehabilitation prospects of the tailings storage.