

The Influence of Inspection and Monitoring on the Phased Construction of the Barragem de Cerro do Lobo

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SYNOPSIS. The SOMINCOR S.A. Neves Corvo mining complex is located near Castro Verde in southern Portugal. The mine commenced processing copper and tin ores in 1988, the storage capacity for the resulting residues (tailings) and process water supply being provided by the Barragem de Cerro do Lobo. This embankment, constructed between 1988 and 2005, comprises a complex zoned rockfill dam designed to store the sulphidic tailings generated during ore processing sub-aqueously to prevent acidification. The embankment periphery has been extensively instrumented for both operational and performance monitoring, and throughout both construction and operation has been subject to independent annual inspection. The paper demonstrates the benefits of independent inspection, combined with instrumentation and monitoring to meet the requirements of safety and stability as well as the constraints of environmental compliance and mine tailings storage requirements.