

Roadford Dam - 20 years of monitoring

J.K. HOPKINS, Black & Veatch, Haywards Heath, UK

J.M. REID, TRL Limited, Wokingham, UK

J. McCAREY, South West Water, Exeter, UK

C. BRAY, South West Water, Exeter, UK

SYNOPSIS Roadford dam, located in the south west of England, is one of only six dams in the UK that have upstream asphaltic concrete membranes. The embankment is constructed of a low grade rockfill. The dam was extensively instrumented during construction and many of these instruments are still being monitored 20 years after installation. The paper discusses the instrumentation and geochemical monitoring, and the value of the observations in assessing dam performance. Monitoring has indicated the chemistry of the drainage waters has remained within acceptable limits and is related to rainfall and water level, and varies over wide ranges. These unique long term measurements demonstrate the value of a well designed system and conscientious monitoring on the part of the owner.