Sliplining Bottom Draw-Offs

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SYNOPSIS Unlined bottom drawoffs in embankment dams are undesirable due to the high risk of internal erosion that may occur should the conduits fail structurally. There are a variety of lining techniques available, the experience of these usually coming from the sewer and water main rehabilitation industries. Although sliplining is a well-known technique, it needs to be carefully planned and executed when being used on embankment dams.

The paper will describe two case studies at reservoirs in Yorkshire. Both had unlined conduits passing through earth embankment dams with puddle clay cores that were constructed over 150 years ago. Inspections, under Section 10 of the Reservoirs Act 1975, recommended that the conduits were lined to reduce the risk of internal erosion. The practical experiences of these projects is explained, focussing in particular on the annulus grouting procedure, why it needs to be planned in detail, and what the areas of good practice are.