Emergencies, monitoring and surveillance, and asset management – a new approach

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SYNOPSIS This paper will describe how monitoring and surveillance programmes are changing. A series of case histories where emergencies have occurred and electrical resistivity surveys have been used to identify leakages and then target repairs will be described. These repairs have varied from grouting to diaphragm walling and the cases will demonstrate how the technique has, in some instances, saved millions of pounds.

A number of companies have investigated a number of their dams where leakages are thought or are known to exist. A number of approaches will be described. This is a new approach to surveillance and reservoir safety management – a proactive approach rather than a reactive approach.

The techniques are now being used as an Asset Management tool, with surveys being carried out every five years allowing a direct comparison in the condition of the dam at intervals, therefore enabling deterioration to be measured or confidence to be maintained.