

The failure of the Mostišt ě embankment dam

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SYNOPSIS. The Mostiste Dam on the Oslava River is a rockfill dam with a relatively thin inclined impervious core. The maximum dam height is 29 m and its crest length is 292 m. The Mostiste Dam was completed in 1960 and at that time it was the first compacted rockfill dam in the Czech Republic (CZ). Leakage first occurred in 1996 in the grouting gallery which indicated that its impervious core sealing might have been impaired. The results of follow up surveys carried out up to the end of 2004 demonstrated the progressive worsening of the problem. As a result, the reservoir level has been significantly lowered since the end of 2004. In May 2005, the governor of the region proclaimed a state of emergency to protect the lives and property of inhabitants downstream from the dam.

The Mostiste reservoir normally serves as a source of drinking water for more than 70 000 inhabitants. Therefore, the remedial works concept design had to respect the requirement that water supply remained uninterrupted without any dramatic reduction.

This paper provides an analysis of the failure's initiation and gives information about the remedial measures accepted. The extra-operational procedure - the gradual filling of the reservoir accompanied by careful monitoring - should be carried out during the winter and spring of 2006 depending on hydrological conditions. The authors hope to be able to summarize the results of this test operation during the oral presentation at the conference.