

ABSTRACT

“One Year Later” ...An Update on Mosul Dam

William B. Empson, Lead Engineer, Mosul Dam Task Force, US Army Corps of Engineers

William.b.empson@usace.army.mil

Eric C. Halpin, Deputy Dam Safety Officer for Dam and Levee Safety, USACE HQ, US Army Corps of Engineers

Eric.c.halpin@usace.army.mil

David B. Paul, P.E. Special Assistant for Dam Safety, US Army Corps of Engineers

david.b.paul@usace.army.mil

The consequences from failure of Mosul Dam would be catastrophic for the country of Iraq. The US Army Corps of Engineers (USACE) has been involved with the project since 2003 and currently is providing technical assistance to the Government of Iraq (GoI) for remediation of the dam. Construction of the dam began in 1981 with closure in June 1984. First filling of the reservoir was initiated in the spring of 1985. Seepage was immediately observed due to the high permeability of the karstic foundation units and solutioning of interbedded gypsum and anhydrite layers within the foundation.

The Ministry of Water Resources (MoWR) has been grouting the foundation during different periods since 1985. The Government of Iraq (GoI) has awarded a contract to the Trevi Group for foundation grouting and repair of the Bottom Outlet (low level outlet). The GoI has designated the USACE to be their Engineer and provide oversight of the contract. A detailed Risk Analysis (RA) has been completed by USACE to advise on further dam safety actions. The USACE is working closely with the Ministry of Water Resources (MoWR) and Trevi to plan and execute the work. The existing instrumentation system is being also being evaluated and upgraded to provide for assessment of the performance of the dam. The presentation will summarize the results of the ongoing remedial grouting program and potential additional risk reduction measures that may be implemented.